Report of the Inter-departmental Committee on Physical Deterioration.

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INTER-DEPARTMENTAL COMMITTEE ON PHYSICAL DETERIORATION.

REPORT

OF THE

INTER-DEPARTMENTAL COMMITTEE

ON

PHYSICAL DETERIORATION.

VOL. I.—REPORT AND APPENDIX.

Presented to both Houses of Parliament by Command of His Majesty.



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MR. J. G. LEGGE, H.M. Inspector of Reformatory and Industrial Schools.

MR. H. M. LINDSELL, C.B., Principal Assistant Secretary to the Board of Education.

COLONEL G. T. ONSLOW, C.B., R.M.L.I., Inspector of Marine Recruiting.

MR. JOHN STRUTHERS, C.B., Assistant Secretary to the Scotch Education Department.

DR. J. F. W. TATHAM, M.D., F.R.C.P., of the General Register Office.

MR. ERNEST H. POOLEY, Barrister-at-law, *Secretary*.

TERMS OF REFERENCE.

The original TERMS OF REFERENCE to the Committee were:—

To make a preliminary enquiry into the allegations concerning the deterioration of certain classes of the population as shown by the large percentage of rejections for physical causes of recruits for the Army and by other evidence, especially the Report of the Royal Commission on Physical Training (Scotland), and to consider in what manner the medical profession can best be consulted on the subject with a view to the appointment of a Royal Commission, and the terms of reference to such a Commission, if appointed.

These TERMS OF REFERENCE were subsequently explained and enlarged, as follows:—

(1) To determine, with the aid of such counsel as the medical profession are able to give, the steps that should be taken to furnish the Government and the Nation at large with periodical data for an accurate comparative estimate of the health and physique of the people; (2) to indicate generally the causes of such physical deterioration as does exist in certain classes; and (3) to point out the means by which it can be most effectually diminished.

REPORT.

To the Lord President of the Council.

My Lord Marquess,

1. The Committee appointed by your Lordship's predecessor, the Duke of Devonshire, late Lord President of the Council, under His Grace's order of reference of the 2nd day of September, 1903, beg leave to report that they have sat on twenty-six days for the purpose of hearing evidence and that they have examined sixty-eight witnesses, from England, Scotland and Ireland, of whom fifty-four were men and fourteen women. Out of this number, twenty-three (twenty men and three women) held official positions, either under His Majesty's Government or under Local Authorities throughout the Kingdom, in connection with Local Administration, Schools and Factories; thirteen of the official witnesses were members of the medical profession, which besides was represented by twenty-one other witnesses, seven of whom were specially nominated to give evidence by the Royal Colleges of Physicians and Surgeons and by the British Dental Association; two witnesses were noted anthropologists, two were Members of Parliament, and the remainder were either independent authorities or representative of well-known organizations and charitable institutions.

2. For convenience sake this Report is divided into three parts, the first consisting of an examination into the evidence deducible from the War Office figures and a statement of the steps required to obtain reliable *data* for determining questions of national physique, the second and largest part dealing with the causes and indications of degeneracy in certain classes of the community and the means by which it may be arrested, and the third part containing a summary of the principal recommendations which the Committee desire to make.

Part I.

3. Before the Committee proceeded to take personal evidence they deemed it their duty under the terms of their reference to consider what information of a documentary character was available which could throw any light upon the questions they were directed to investigate.

4. The Memoranda issued by the War Office upon the responsibility of the Director-General of the Army Medical Service and the Inspector-General of Recruiting were necessarily the first to engage their attention. It appeared that soon after the publication of these Memoranda the Secretary of State for the Home Department had addressed a communication to the Royal Colleges of Physicians and Surgeons respectively, asking for observations on a proposed inquiry into the causes which have led to the rejection in recent years of so many recruits for the Army on the ground of physical disability, and the possible measures by which this state of things might be remedied. By the courtesy of the Secretary of State the Committee were furnished with copies of the replies of both Colleges, which, with subsequent correspondence, will be found in the Appendix. Appendix I.

5. It is sufficient to state here that these replies appeared to point to the following conclusions: (1) that the evidence adduced in the Director-General's Memorandum was inadequate to prove that physical deterioration had affected the classes referred to; (2) that no sufficient material (statistical or other) was at present available to warrant any definite conclusions on the question of the physique of the people by comparison with *data* obtained in past times; (3) that a partial investigation, as for instance into the condition of the classes from which recruits are at present mostly drawn, might be very misleading, however carefully conducted, and might give rise to erroneous conclusions on the general question unless checked by expert knowledge.

6. The Royal College of Physicians were, however, disposed to think that an inquiry into the present physical condition of the nation would be of great value; but the Royal College of Surgeons, on the other hand, did not see any particular need for any such investigation on a large scale, deeming that the well-known facts relating to public health were sufficient to dispel anxiety.

7. Both Colleges having laid stress upon the fact that the figures included in the Memorandum of the Director-General did not appear to them to support the view that an increasing deterioration in physique is taking place in the classes of the population from which military recruits are chiefly drawn, and the Royal College of Physicians having failed to obtain information through the Home Office which might explain the apparent contradiction between the general tone of the Memorandum and the figures given, the Committee thought it expedient to ask the Secretary of State for War to obtain from the Director-General some further explanation of his views and also to furnish any information in the possession of his Department that threw light upon the figures included under Head 1 of the first Table in the original Memorandum, comprising "labourers, servants, husbandmen, etc.," from which classes by far the largest number of recruits were drawn. To the first request the Secretary of State for War was good enough to respond at once, and in a Memorandum, which was supplemented by some valuable tables bearing on the existing state of facts, Sir William Taylor expressed the opinion that the idea of "progressive physical deterioration" had occupied a much too prominent position in the minds of those who had had to consider and report as to the advisability of inquiry. The Director-General went on to say:

Appendix I. & VI.

> "I consider that it is impossible to obtain reliable statistical or other *data* regarding the conditions that have existed in the past; and, consequently, as no reliable *data* are obtainable for purposes of comparison, I do not see how the question can be dealt with from the progressive deterioration point of view. Whether or not there has been, or is, progressive physical deterioration among the classes now in question is a matter of very great importance, no doubt; but, in my opinion, it is not the chief question from a practical standpoint. To my mind the principal question for the Committee is to inquire into the causes and present extent of the physical *unfitness* that undoubtedly exists in a large degree among certain classes of the population. The question dealt with in my original Memorandum was not that there was evidence of progressive physical deterioration of the race, either in whole or in part, but that it is a most disturbing fact that from 40 to 60 per cent. of the men who present themselves for enlistment are found to be physically unfit for military service. Even if the proportion is no greater than in the past, surely it is a state of matters worthy of the closest investigation, and one which no thinking man can wish to see continue. Moreover, it would be out of keeping with the progressive spirit of the times we live in for us to be content with the consolation that we are no worse off than we were fifty or even twenty years ago. I trust that the inquiry may end in suggestions that will lead to the institution of measures which will result in bringing about a marked improvement of the physique of the classes from which our recruits are at present drawn."

8. The Committee proceeded to forward copies of this Memorandum and the accompanying Tables to the Royal Colleges of Physicians and Surgeons respectively, with the request that they would take them into consideration; and while favouring the Committee with any observations it was desired to make, would be careful to state whether the perusal of the supplementary matter so furnished suggested the modification in any degree of the opinions previously expressed on the subject.

9. In their replies, it was noted by both Colleges that some little misapprehension had been caused by the tenour of the first Memorandum as to the question which it was intended to place before them, but the College of Surgeons did not think it had appreciably affected their judgment, which remained the same after a perusal of the second Memorandum. The College of Physicians, on the other hand, while adhering to the opinion "that sufficient *data* were not available for forming a judgment on the extremely complex question of the occurrence or not of progressive degeneration in the classes from which recruits are mainly drawn," expressed themselves in favour of "an inquiry into the present extent and causes of the alleged physical disability for military service of certain classes of the population."

10. In supplement of the request for a more detailed sub-division of the classes denominated "Labourers" in the Recruiting Returns, under which head agricultural labourers and street loafers are included without discrimination, it was subsequently suggested to both the Admiralty and the War Office that the sub-heads might with advantage follow the classification shown in the Census Summary Volume for 1901, and the Committee have reason to believe that the Admiralty have already adopted the suggestion.

11. In their efforts to obtain information of a statistical or tabulated character which might form the basis of a comparative survey of the health and physique of the population the Committee were not very successful. As a matter of fact, no such information on a comprehensive or systematic scale exists.

12. Disjointed and partial inquiries have taken place from time to time in connection with which measurements of a number of persons were made, but these inquiries were not instituted in any relation to each other nor conducted on similar lines, so that the results obtained are of very little use for the purpose of comparison.

13. In 1873, at the instance of the Local Government Board, Dr. Bridges and Mr. Holmes investigated the conditions of employment in the Textile Factories in regard to its effect on the health of women, children, and young persons, in the course of which some 10,000 children were examined and measured, the principal indications of degeneracy noted, and certain general conclusions summarised. Had such an investigation been repeated decennially valuable material would have been collected for the purpose of the present inquiry; but as it was, it did little more than establish, in respect to the limited area covered, that the factory children of factory parents (urban and suburban) compared unfavourably with children in non-factory districts (urban and rural), and that the rate of mortality, particularly infant mortality, was unduly high in factory districts.

14. A few years later the British Association for the advancement of Science was responsible for a more ambitious effort in the same direction. A Committee, whose labours extended over five years, 1878–1883, was appointed for the purpose of making a systematic examination of the height, weight, and other physical characters of the inhabitants of the British Isles and collecting the results. During the period covered facts relating to the stature and height of 53,000 persons of all ages and both sexes were collected, 8,585 of whom were adult males, distributed as follows: England, 6,194; Scotland, 1,304; Wales, 741; Ireland, 346; but here again no later investigations on a considerable scale offer adequate material for comparison. In order to make such a comparison effective the samples must, in the first instance, be numerous enough; each must be taken in sufficient numbers, not less than a thousand, from districts so small that there is no sensible variation in the type of people within its boundaries; and the classes whose average dimensions are given must be carefully differentiated, so as to present, as far as possible, homogeneous material to the investigator. The British Association Report shows that there is a considerable difference in the average dimensions of the different classes of the population. The average stature, for example, of boys between the ages of eleven and twelve at public schools was 54·98 inches, while of boys of the same age at industrial schools it was only 50·02. There was thus a difference of 5 inches in the average stature of boys belonging to the two extreme classes measured. The difference in the statures of the two extreme classes of adults was not so great, being only 3½ inches, but it was still considerable.

15. The bearing of these facts upon the taking of samples for comparison at different dates is obvious, and in only four cases since 1883, so far as the Committee are aware, have measurements been taken, by the aid of which a more or less legitimate comparison may be made with the figures then obtained, but in no case on any considerable scale.

16. Thus in the British Association's statistics it is found that the average stature of 109 adult males taken from the counties of Aberdeen, Banff, Elgin, and Nairn was 68·04 inches; in 1895–1897 measurements of 364 of the rural and urban population of East Aberdeenshire were obtained, showing an average stature of 68·02 inches. In the second case, where the conditions of accurate comparison are more nearly fulfilled, the British Association Report gives the average stature in the period 1874–75 of boys at Marlboro' College between the ages of 14 and 16 as 61·4 inches, whereas statistics for boys of the same age in the period 1899–1902 show an average stature of 61·96 inches, an increase of ·56 in 25 years. In the third case the British Association Report gives the average stature of 635 adult males from Connaught as 68·72 inches; Messrs. Cunningham, Haddon, and Browne have measured in Connaught, mostly on the West Coast, about 200 adult males with an average stature of 67·41 or 1·32 inches less than the other, but owing to the small numbers measured the possible variation of difference in samples is 1·05. To the extent, therefore, that the difference of the two averages exceeds this figure there may be evidence of deterioration, but it is not conclusive, as there is no guarantee that the racial type and class was the same at both dates. In the fourth case, a physical census in Industrial Schools in 1901 (the results of which, after being laid before the Royal Commission on Physical Training in Scotland, were corroborated by a further census in 1903) enables a comparison to be made with the height, weight and chest measurement of children forming the lowest class in physical development dealt with in the British Association's report of 1883. The result of the comparison, for what it is worth, clearly indicates improvement in the physical development of this class at the ages of 11 and 14.

17. A list of the principal groups of anthropometric statistics, other than those already mentioned, which have been collected in the British Isles since 1883, will be found in the Appendix, but they are of no use for the purposes of this inquiry.

Appendix IX.

18. In pursuance of the scheme of procedure dictated by the terms of their reference, the first evidence invited by the Committee was that of the Director-General of the Army Medical Service, Sir W. Taylor, and of the late Inspector-General of Recruiting, General Borrett, to which it will be necessary to allude at some length, together with that of General Sir Frederick Maurice, which was given on the same day in the same connexion.

19. It may be as well here to state a general criticism on the value of the War Office figures, to which prominence was given by a later witness. In the opinion of Professor Cunningham, perhaps the most unreliable evidence is that which is obtained from the recruiting statistics,

Cunningham, 2188.

> "Because the class from which the recruits are derived varies from time to time with the conditions of the labour market. When trade is good and employment plentiful it is only from the lowest stratum of the people that the Army receives its supply of men: when, on the other hand, trade is bad, a better class of recruit is available. Consequently the records of the recruiting department of the Army do not deal with a homogeneous sample of the people taken from one distinct class."

Further confirmation of this view is to be found in the striking disparity from year to year of the educational qualifications of recruits as disclosed in the Returns.

20. It is only fair to Sir W. Taylor to say that he most emphatically disclaimed any responsibility for the deductions that had been drawn from the figures published by his department. He appeared to attach very little value to the figures, and in reply to a question calling attention to a passage in the Report of the Inspector-General of Recruiting, where that officer speaks of the gradual deterioration of the physique of the classes from which recruits are principally taken, he said, "He is not justified in that. We have no *data* on which to form that opinion."

Taylor, 10.

21. An apparent improvement in the last quinquennial period, as compared with that immediately preceding it, is accounted for by instructions issued to recruiters in 1897, to weed out those who present themselves, instead of sending them all on to the medical examiner, and the influence of the war on the character of the recruits is another disturbing element in any deductions that can be drawn from recent figures.

22. On the other hand, increased stringency in the requirements as to teeth has materially swelled the percentage of rejections for the last two years. In this connexion a table handed in by the Director-General may here be noted. This table, gives the ratio per 1,000 of the rejections under the four principal causes for the years 1901, 1902. These causes are, Want of Physical Development; Defective Vision; Disease of the Heart; and Bad Dentition; the ratio differing considerably according to the various classes of recruits tabulated. Appendix VI.

23. It is, the Committee believe, recognised on all hands that dental caries does not necessarily or even commonly coincide with physical degeneracy in other respects, nor is it a defect that is peculiar to any particular class; while defective vision, which in most cases means want of acuity, and can easily be remedied by glasses, cannot with any more justice be associated with depressed physique.

24. In this last connexion it may be as well to note here that Mr. John Tweedy, President of the Royal College of Surgeons, and a high authority on ophthalmic surgery, gave it as his opinion that where some lack of normal acuity was associated with a sound eye, it was undesirable to make it a ground of rejection, and that in all cases of comparatively slight deviation from the minimum standard of distant vision further investigation should be made, and, if expedient, the defect supplied by equipping the recruit with glasses, the objections to which course he did not think of any great weight; for, as he reminded the Committee, Tweedy, 3799-3808.

> "While every soldier is theoretically expected to fight, in practise many thousands of soldiers take no part in action, and there are innumerable duties to be performed during peace and even on a campaign which these men might properly perform as efficiently as those who have perfect sight." Tweedy, 3808 (Addendum).

25. Both the Director-General and the late Inspector-General of Recruiting were fain to admit, on being pressed, that the real lesson of the recruiting figures was the failure of the Army, under present conditions, to attract a good type of recruit. Indeed, General Borrett gives up the case for wide-spread deterioration when he says, "It is a pity that the physique of the recruit-giving class is as poor as it is, so as to cause such a large percentage of rejections for the Army;" and again when in answer to a question whether "the men who want to be soldiers" were not those people who have no opening in life, or have no occupation, and who drift to the recruiter in the vague hope that they may be passed, he replies, "There are a great many of that kind, no doubt; I must confess a great many are that way." In another part of his evidence he describes them as very largely "Rubbish," and Sir W. Taylor could not deny that even if the number rejected by the recruiters was as large as some people suppose, it might merely imply that a great many Borrett, 163. Borrett, 179. Borrett, 166.

> "Not fit for or disinclined to permanent work present themselves to the recruiting sergeant on the chance of being passed, and that the condition of those rejected is only representative of the state of the wastrels of the large towns who live by casual labour." Taylor, 20.

26. As another witness observed, it is the years after leaving school that determine so many lives; by the time the boy has reached seventeen he has shown either self-improvement or self-deterioration, in which last case you may get him for a soldier. At seventeen, he goes on to say, Eichholz, 560-2.

> "You are landed with the failures, and the lack of self-improvement which they have exhibited is largely bound up with their physical condition. At seventeen they become street loafers—practically the only available source of recruiting for the army."

27. Mr. Charles Booth gives a vivid description of these persons in the 4th Volume of the Series on London Labour:

"These men hang about for the 'odd hour' or work one day in the seven. They live on stimulants and tobacco, varied with bread and tea and salt-fish. Their passion is gambling. Sections of them are hereditary casuals; a larger proportion drift from other trades. They have a constitutional hatred to regularity and forethought and a need for paltry excitement; they are late risers, sharp-witted talkers, and, above all, they have that agreeable tolerance for their own and each other's vices which seems characteristic of a purely leisure class, whether it lies at the top or the bottom of Society."

28. Some figures furnished by Dr. Alexander Scott make it clear that there is a wide difference between the physical condition of the class referred to in the preceding paragraphs and that of the working classes proper. Of 83 candidates drawn from factories in the western district of Glasgow who presented themselves for the Army and 7 for the Navy (90 in all) 85 were accepted. One of the men rejected had presented himself with the same result at four different recruiting stations, a circumstance which suggests a line of possible explanation for a considerable proportion of rejections generally.

29. In short, the examination of the official representatives of the recruiting system left upon the minds of the Committee the conviction, confirmed as it was by the evidence of other witnesses, that it would be as reasonable to argue from criminal statistics to the morals of the great mass of the people, as it would be to argue to their physical conditions from the feeble specimens that come under the notice of recruiting officers.

Appendix VIII.

30. An independent examination of the Director-General's figures, undertaken by the authorities of the Metropolitan Police, brought them to the conclusion that "the calling of a soldier has ceased to attract the class of men who formerly enlisted, and as a consequence a larger proportion of the residuum of the population come under the notice of the Army Recruiting Authorities."

31. This conclusion appears borne out by the complaints of commanding officers as to the physique of many of those enlisted, and tends to explain the drain from desertion among those who find themselves disappointed in the hopes of an easy existence.

32. It must be understood that in so expressing themselves the Committee have in view the quality of the rejected candidates for enlistment. So far as they can judge, the efforts that are now being made to obtain a good character with every recruit are likely to result in raising the standard not merely of those actually accepted, but even perhaps of those who present themselves to the recruiter.

33. The evidence of Sir Frederick Maurice did not modify the impression produced by that of the two preceding witnesses, nor could the Committee accept the basis of the alarmist statement for which he is responsible, that of those who wish to be soldiers only two out of five are to be found in the ranks at the end of two years. Sir Frederick obtains this result by taking the 34·6 percentage of rejections by medical examiners, and the 2·1 percentage of those cast before the completion of two years, and adding thereto a purely conjectural percentage as to those previously rejected by the recruiters.

Maurice, 297, 8.

34. It was stated by Sir W. Taylor that no record whatever of these latter was preserved, but the Committee think that if this could be done without involving too much labour, it might be useful to dispel false impressions as to the actual number. Looking, however, to the condition of the classes from which, as it has been seen, these people issue, the proportion, even if as stated by Sir F. Maurice, is not so very disquieting; indeed, a very competent medical witness took the view that having regard to the circumstances under which the British Army is recruited, the fact that 40 per cent. of those that present themselves to the recruiting officers become

Taylor, 15, 16

Eichholz, 563.

good soldiers is more to the credit of the physique of the people than the fact that under the German system of conscription only 16 per cent. of those liable to serve are rejected.

35. The Committee had the advantage at the same time of inspecting certain figures touching Naval and Marine recruits, which were furnished by the Admiralty through Colonel Onslow and will be found in the Appendix. Appendix VII.

36. A close comparison between Admiralty and War Office Statistics is hardly possible, as in the first place the Naval regulations for medical examination are more stringent, especially as regards eyesight and teeth, while on the other hand the great bulk of recruits for the Naval Service are probably drawn from a higher social level.

37. All Naval and Marine recruits must produce a good record of character from a reliable source. All must be fairly well educated, no illiterates being accepted, and arithmetic is required of Artificers and Artisan Ratings, who must also be certified skilled at their trade, while Boys, who form about 37 per cent. of the recruits, come from a decidedly superior class. Even in the case of Stokers and Marines, who are more on a par with Army Recruits, the standard of measurements ensures that they are not drawn from the "wasters."

38. Under these conditions, of 14,848 candidates who had passed the recruiters as satisfying the standards of height and chest measurement, and were subsequently medically examined in Royal Marine Recruiting Districts in 1902-3, 25·7 per cent. were rejected, as against 23·1 per cent. for the Army, and in three years, 1900-03, of 21,916 examined in London alone, 32·1 per cent. were rejected.

39. While deeming it their duty to make certain criticisms on the significance of the figures supplied by the War Office, the Committee are not insensible of much that is grave in the state of things disclosed, and that calls for fuller information and more complete inquiry, and to that end they early proceeded to consider what steps should be taken to furnish the Government and the nation at large with periodical *data* for an accurate and comprehensive comparative estimate of the health and physique of the people.

40. It appeared to them that the machinery of the ordinary type of Royal Commission was both unsuitable and inadequate; it has been seen that there are not sufficient facts obtainable from the labours of past investigators to be made the subject of comparison with any that a Royal Commission might elicit, and its *modus operandi* would be both slow and costly. What seems to be wanted is some permanent organization, not necessarily on a large or expensive scale, which, under expert direction, and in collaboration with all the Departments of State concerned, shall be charged with the duty of collecting and tabulating facts which throw light upon the situation, and thus provide means by which those interested in the subject may at any moment satisfy themselves of the progress of the nation one way or another.

41. Every witness who was examined on the subject testified to the great value of such facts in determining questions relative to the physique of the people. Though opinions differed as to the amount and method of observation necessary, it was admitted on all hands that anthropometric records were the only accredited tests available, and that if collected on a sufficient scale they would constitute the supreme criterion of physical deterioration or the reverse. It was also held that the school population and the classes coming under the administration of the Factory Acts offered ready material for the immediate application of any system that might be devised.

42. The Committee found that by a singular coincidence the British Association for the Advancement of Science had, at their last congress, determined to resume the work which they had undertaken with such interesting results in the years 1878–83, and that a Committee had been appointed to organize Anthropometric Investigation, on the basis of (1) establishing uniform standards; (2) ascertaining which measurements are likely to prove the most fruitful in result; and (3) formulating broad lines of co-operation. The Committee lost no time in placing themselves in communication with the Chairman and Secretary of the British Association Committee, and both these gentlemen, Professor D. J. Cunningham, of the University of Edinburgh, and Mr. J. Gray, were good enough to attend and explain how they thought such a Bureau of Information might be formed, and the duties it should be called upon to perform. A scheme will be found in the Appendix for which they are jointly responsible, though Mr. Gray went with greater detail into questions of organization and cost.

Appendix II.

43. In the evidence with which he prefaced a description of this scheme, Professor Cunningham expressed one or two scientific opinions of great value in their bearing on the subject-matter of the Committee's investigation. After referring to the manner in which poverty, with its squalor, its bad feeding and its attendant ignorance as to the proper nurture of the child, depresses the physical standard of the lower classes, he went on to say,

Cunningham, 2210.

"In spite of the marked variations which are seen in the physique of the different classes of the people of Great Britain, anthropologists believe, with good reason, that *there is a mean physical standard, which is the inheritance of the people as a whole, and that no matter how far certain sections of the people may deviate from this by deterioration (produced by the causes referred to) the tendency of the race as a whole will always be to maintain the inherited mean.* In other words, these inferior bodily characters which are the result of poverty (and not vice, such as syphilis and alcoholism), and which are therefore acquired during the lifetime of the individual, are not transmissible from one generation to another. To restore, therefore, the classes in which this inferiority exists to the mean standard of national physique, all that is required is to improve the conditions of living, and in one or two generations all the ground that has been lost will be recovered."

It is this constancy of physical dimensions under normal conditions that furnishes the scientific basis upon which depends the whole value of anthropometric statistics, as a test of physical deterioration.

44. In reply to a question whether, in his experience, as an anatomist, he had noted any changes in structure unfavourable to development, Professor Cunningham said,

Cunningham, 2219.

"No, with the one exception of the teeth. It is an obvious fact that the teeth of the people of the present time cannot stand comparison in point of durability with those of the earlier inhabitants of Britain. Those who have the opportunity of examining ancient skulls cannot fail to be struck with this."

Later he proceeds,

Cunningham, 2225.

"In the white races of Europe the jaws are undergoing a slow process of shortening. The stunted character of the wisdom or backmost teeth, the small amount of space allotted to them, their variability, their late appearance, and indeed their frequent failure to appear at all, bespeak this change in the jaws. Through it the teeth are reduced in size, more crowded together, and therefore more liable to disease. Indirectly this may tend to favour the early degeneration of the teeth which is so marked a feature of the present age; but I take it that the real cause of this degeneration is the striking change which has taken place in the character of the food."

45. In proceeding to explain his scheme for the establishment and working of a Central Anthropometric Bureau, Professor Cunningham asked leave to treat the matter under three headings :—

Cunningham, 2245, *et seq.*

I. Consultative Committee.

46. To obtain absolute uniformity in the methods of procedure in each of the three countries it would be advisable, he thought, to appoint an Honorary Consultative Committee, which should consist of three members, one from each of the three kingdoms. These appointments should be

honorary, but the ordinary allowances for travelling expenses should be granted. The members of this Committee should be anthropologists of acknowledged reputation who are acquainted with the structure of the human body and the laws which regulate its development and growth. They should be likewise men of weight and influence. The duties of the Committee would be:—1. To determine the measurements and observations to be made; 2. To determine the instruments to be employed; 3. Along with the Director of the Central Bureau, to construct the form of card by which the observations are to be recorded; and 4. Each in his own country to advise and assist the permanent officers in any cases of difficulty that might arise, and above all to interest the people at large in the work.

II. Central Bureau.

47. The Central Bureau should be established in London, and should be organised somewhat upon the same plan as the Geological Survey Office. It would probably be necessary to appoint a Director and Deputy Director. One of these should be an anthropologist acquainted with the anatomy and development of the human body, and with experience in anthropometrical work; the other should be a statistician trained in modern scientific methods. A statistical department would also require to be organised in the Bureau. The work carried out in this office would be the following: 1. To keep the standard instruments and issue all the instruments required in the inquiry; 2. To issue the cards on which the observations are to be recorded to those engaged in the measuring, etc.; 3. To arrange surprise visits at intervals to different schools, etc., with the view of determining whether the surveyors were obtaining accurate results; 4. To receive the cards after they have been filled up, to classify them, to prepare the requisite statistical tables, and publish a yearly report; 5. To form in London a centre where the different classes of the people may be measured, and a centre also where the surveyors or measurers may be instructed in the methods of making their observations, and in those anatomical details which are requisite for the acquisition of accurate results; and 6. To disseminate information on anthropometrical work and create an interest in the public in regard to the importance of maintaining the national physique.

III. Surveyors or Measurers.

48. The real difficulty in devising a working scheme consists in determining how the measurements are to be taken and how the survey shall be carried out.

49. With regard to the measurements to be taken, Professor Cunningham thought that, in the event of the establishment of a Central Bureau, the decision as to what particular facts it would be expedient to note and classify might with advantage be relegated to the Consultative Committee. The measurements and tests would require to be selected with great care and judgment, and they should not be too numerous. Probably, the following would be sufficient, though information regarding parentage, district of birth, and conditions of living should also be obtained.

1. Height.
2. Chest girth (*a*) maximum.
   (*b*) minimum.
   This gives the range of the thoracic play, which is important.
3. Weight.
4. Head—length—breadth—height.
5. Breadth of shoulders (callipers).
6. Breadth of hips (callipers).
7. Vision Tested (1) by Snellens' type.
   (2) by different colours.
8. Degree of Pigmentation.

The witness considered the eighth test of importance, in order to correct what might otherwise be erroneous deductions from racial peculiarities.

50. With regard to the method of survey, Professor Cunningham's scheme contemplates the appointment of a staff of skilled surveyors as measurers. The survey would be gradual and continuous, and each country (England, Scotland and Ireland) would be mapped out into a definite number of districts, severally to be the field of investigation for each year during a decennium; not only would care have to be taken to obtain samples in sufficient number and of a fairly representative type, but such districts would have to be so delimitated as to secure so far as possible an homogeneous mass of material for periodic examination.

51. By the time the whole country had been covered, the survey would be recommenced at the same point and be proceeded with in the same order so that sets of facts, collected under as far as possible similar conditions and relating to the same areas would decennially be at the disposal of the State and serve as a basis for comparison, in the absence of which all witnesses agreed that allegations as to physical degeneracy must remain matter of impression or conjecture.

52. The Committee deemed it of special importance to obtain the opinions of the Royal Colleges of Physicians and Surgeons on the scheme as a whole, and were particularly careful to ask them to state the minimum number of tests they thought sufficient. The College of Surgeons was the first to report as follows :—

"Having regard to the fact that no trustworthy statistics or other *data* are available for the purpose of comparing the physical condition of the nation at the present time with that which obtained in the past, or for forming the basis of a comparison with that which may obtain in the future, the Council of the Royal College of Surgeons are of opinion that the adoption by Government of a scheme for an Anthropometric survey of the United Kingdom, such as that proposed by Professor Cunningham, is greatly to be desired.

"The scheme appears to the Council to be well calculated to elicit those facts, of which a knowledge is essential to the formation of any opinion as to the physical improvement or deterioration of the race, and they, moreover, believe that the results of the investigation would be of great scientific value and interest.

"With regard to the measurements and tests to be used, the Council approve those recommended by Professor Cunningham. They, however, think that the value of the investigations would be increased by the addition of the measurement of the lower extremities from the crest of the ilium."

53. After prolonged consideration, the College of Physicians informed the Committee :—

"They are of opinion that the value of having trustworthy statistics and other *data* available for the purpose of comparing the physical condition of the population from time to time cannot be over-estimated.

"Whilst approving the measurements and tests suggested in paragraph 14 of Professor Cunningham's memorandum, they consider that in the case of children the circumference of the head should be ascertained as well as the other measurements.

"The College desire to bring to the notice of the Physical Deterioration Committee their opinion that the scheme for carrying out the Anthropometric survey—occupying ten years in its completion—would fail to give satisfactory standards for comparison for many years to come; they would, therefore, represent to the Committee the desirability that the Physical Census should be completed within a shorter period; and they further consider that it will be advantageous to the State that every child admitted to a Primary school should have its height, weight, and certain other data annually recorded during attendance at school."

54. Without pledging themselves, therefore, to an approval of the plan proposed in all its details the Committee are emphatic in recommending the creation of an organisation on the lines indicated; and regard it of the highest importance towards the collection of authoritative information on the subject of the present inquiry that the survey should be undertaken at the earliest possible moment.

55. The Committee fully recognise the value of the scheme submitted by Professor Cunningham and Mr. Gray, but they are impressed with the importance of the concluding observations of the College of Physicians, representing the desirability of the Physical Census being completed within a shorter period, and pointing out the advantage of recording the physical

facts connected with every child admitted to a Primary School. This has led the Committee to consider whether some modification in the scheme which has been described above would not be feasible. Mr. Gray himself appeared Gray 3407—3419 to admit in the course of his examination that the machinery might be simplified, and the area of observation reduced, without injury to the objects the Committee had in view, as for instance by restricting to some extent the number of tests and measurements to be applied, by the employment, where possible, of School Teachers and Certifying Factory Surgeons, of course at a suitable fee, in lieu of professional Surveyors, and by limiting the observation of particulars relating to children of school age to two periods of their school life. The Committee cannot help feeling that some such modification of the scheme will cover the most fruitful field of investigation, and afford results which can be published annually. It is needless to conceal the fact that in all probability it will not be easy to induce people of all classes to submit to investigation. In the work which was carried out in Ireland this was a constant source of trouble, and in many cases, even with the assistance of the parish priest, it was only possible to obtain a comparatively small number of observations. On the other hand, there can be little difficulty in getting the facts as to elementary school children, especially if the Committee's recommendation in favour of a closer medical inspection of such schools be adopted. Nor will there be greater difficulty in obtaining the facts as to children when they leave school for the factory, or pass from the stage of children to that of "young persons," as defined by the Factory Acts. As it is, an immense number of children and young persons (over 375,000) are annually examined by the Certifying Factory Surgeons, and it will obviously be easy for the Factory Surgeon, when conducting his medical examination, to take the physical measurements decided upon. The Committee admit the need of scientific accuracy, but they hold that Certifying Surgeons and selected School Teachers may be relied upon to carry out definite instructions with the requisite care, and they are fortified in this belief by the declaration of Mr. Francis Galton in a communication to the Anthropometric Committee of the British Association, that "a vast deal of effort is wasted in minuteness of measurement."

56. While, then, they are in complete accordance with Professor Cunningham's view that the precise measurements to be taken can best be settled by the Consultative Committee referred to above, the Committee think that, as regards the actual survey, the main attack should be on the youth of the country. They recommend that two ages be selected at which every child in school attendance should be measured by a teacher or other officer selected by the Education Authority for the purpose, the particulars being recorded on a card provided by the Central Bureau. They recommend further that on every examination of a child or young person by a Certifying Surgeon the same particulars should be recorded. If this recommendation is carried out, the staff of professional Surveyors to be attached to the Central Bureau will be a limited one; their functions, important enough, being to advise where advice is sought in any quarter, or to check results where such a course seems called for at headquarters.

57. This recommendation will not militate against a more comprehensive and specialist survey, spread over a longer period, of the population of the country at large, or of definite districts. Indeed, the Committee are of opinion that such a survey will be of great value for the purpose of establishing and maintaining a standard for the guidance of the persons who may be engaged collecting *data* in schools and factories; and in an even higher degree for the purpose of obtaining statistics, based on careful sampling of various classes of the population, which shall serve as a standard of reference by which the results obtained in any particular case may be, in a sense, measured.

58. Allusion has been made to the probable difficulty of inducing the grown-up population to submit themselves in large numbers to an investigation; still, were the Bureau established and the Government thereby to indicate its interest in the work, the investigation would be placed upon a more favourable footing; the operations in the schools would familiarise people with the method, while there is a large number of associations or corporate bodies throughout the country who will probably co-operate readily enough. The following list

is not put forward as an exhaustive one, but illustrates the argument. First of all there are the Government offices, covering an immense number of employees, some of them including women as well as men: the Admiralty and War Office, General Post Office, Inland Revenue and Customs, Home Office, Board of Trade, Local Government Board, Board of Education, Civil Service Commission. Then there are County Councils and Municipalities, the Police, large manufacturers, hospitals, chambers of agriculture, trade unions and benefit societies, universities and public schools.

59. Insurance companies have not been included in the above list, since they stand upon a footing of their own, but special attention may be called to them as possibly a valuable source of information with regard to the physical characters of the adult population, could their cordial co-operation be secured. It should be easy to convince people that no secrets will be revealed: the record will not be one of names.

60. Finally, the Committee may here make a suggestion, in connection with their recommendations as to the medical examination of school children, that it should be a function of the Consultative Committee and the Central Bureau to standardize any tests used by local authorities, such as Education Committees, for testing the eyes, ears, or teeth.

61. The Committee have not thought it necessary to lay stress upon the scientific value of the results that will be obtained, but this is indicated in Cunningham, 2260-2 Prof. Cunningham's evidence; it is perhaps needless to add that if these recommendations are accepted by the Government, the British Association will gladly see themselves superseded in the matter.

62. In addition to the Anthropometric measurements of the people, it appears to the Committee in the highest degree desirable that a co-ordinate record should be kept concerning the health of those sections of the people whose sickness is treated at the public expense. Of great value for some purposes are the Registrar General's Statistics concerning the mortality of the whole population without distinction of social status; but, for the reason that no particulars are given on the latter point, these statistics are of little value in the present connection. However, as regards sickness that is not necessarily fatal, it appears that for many years past there has practically run to waste in this country an enormous mass of information, which, had it been arranged and analysed on suitable lines, would have been simply invaluable to the Committee at the present juncture. The records of sickness referred to are contained in the official returns of Poor Law Medical Officers, and also in the registers of the various hospitals and other charitable institutions throughout the country. And, as the Poor Law returns, at all events, relate exclusively to the very social stratum of the people among whom physical degeneration is most likely to occur, their value as a means of measuring the health of that stratum can scarcely be over-rated. Unfortunately, however, the official forms issued to Poor Law Medical Officers were designed for other purposes and without reference to the health of the paupers, and consequently, as may be seen by inspection, the information they contain is unsuitable for the purpose under consideration.

Kerr, 838-842.
Anderson, 1557-1562.
Cunningham, 2417-2421.
Collie, 4014-6.
Hutchison, 10072-4.

63. Many expert witnesses have acknowledged the importance that would attach to a properly classified record of sickness as complementary to the Anthropometric measurements now recommended by the Committee. As these returns are made weekly for every Poor Law district in the land, all that is required, in order to fit them for the purpose suggested, is that the forms of return should be modified accordingly. Inasmuch as these returns are required by the Central Authority as part of the routine duty of Poor Law Medical Officers, their modification in the manner suggested would be attended with little, if any, additional public expense. The Committee, therefore, strongly recommend that the assistance of the Local Government Board should be forthwith obtained, with a view to setting on foot and maintaining from year to year a register of sickness treated by the Poor Law Medical Services (not confined to infectious diseases) and by the other institutions mentioned. The Committee further believe that, with a view

to rendering the returns thus obtained serviceable for the purpose in hand, their tabulation and analysis might usefully be entrusted to the General Register Office, which possesses a staff and other machinery appropriate for the work.

64. The Committee also believe that in connection with the Anthropometric Survey, which they recommend, an Advisory Council might, with great advantage, be brought into existence, representing the Departments of State within whose province questions touching the physical well-being of the people fall, with the addition of members nominated by the medical corporations and others, whose duty it should be to receive and apply the information derived from the labours of the Bureau with the whole weight of Government authority and scientific prestige behind them.

65. It would be their function to advise the Government on all legislative and administrative points in respect of which State interference in these matters was expedient; to them might be remitted for consideration and report all the problems affecting public health which the requirements of a complex social organisation are constantly bringing to the front; and their advice would doubtless be useful in guiding the action of the official representatives of this country at the deliberations of any international Bureau of public health, such as that the establishment of which was favourably entertained by the recent Brussels Congress, and which has been the subject of discussion at later conferences.

66. By Article 25 of the recent French law of Public Health (Loi du 15 Fevrier, 1902) *Le Comité consultatif d'hygiène publique de France* was constituted and invested with specific duties towards the Government and the local administration. Its composition, which is of a very representative character, will be found in the Appendix. To this Committee, with its seat at Paris, all the local Councils look for guidance and regulation. By these means the sanitary administration of the whole country receives a uniform impulse, and the best resources of the State in matters of public health are placed at the service of the humblest administrative unit. Appendix X.

PART II.

I. Introductory.

67. It has now been seen that there are no sufficient *data* at present obtainable for a comparative estimate of the health and physique of the people, and the Committee have indicated the measures that, in their opinion, should be adopted in order to supply the want, but before concluding their task they deemed it their duty, under the fuller explanation of their commission, by which their Order of Reference was supplemented, to consider the causes and conditions of such physical degeneration as is no doubt present in considerable classes of the community, and to point out the means by which, in their opinion, it can be most effectually diminished, and more especially to discuss this aspect of the question as it affects the young during the three periods of infancy, school age, and adolescence.

68. It may be as well to state at once that the impressions gathered from the great majority of the witnesses examined do not support the belief that there is any general progressive physical deterioration.

69. The evidence of Dr. Eichholz contains a summary of his conclusions on this point, so admirably epitomising the results of a comprehensive survey of the whole subject, that the Committee cannot do better than reproduce it in full at this stage of their report:—

" (1) I draw a clear distinction between physical degeneracy on the one hand and inherited retrogressive deterioration on the other. (2) With regard to physical degeneracy, the children frequenting the poorer schools of London and the large towns betray a most serious condition of affairs, calling for ameliorative and arrestive measures, the most impressive features being the apathy of parents as regards the school, the lack of parental care of children, the poor physique, powers of endurance, and educational attainments of the children attending school. (3) Nevertheless, even in the poorer districts there exist schools of a type above the lowest, which show a marked upward and improving tendency, physically and educationally—though the Eichholz, 435.

rate of improvement would be capable of considerable acceleration under suitable measures. (4) *In the better districts of the towns there exist public elementary schools frequented by children not merely equal but often superior in physique and attainments to rural children.* And these schools seem to be at least as numerous as schools of the lowest type. (5) While there are, unfortunately, very abundant signs of physical defect traceable to neglect, poverty, and ignorance, it is not possible to obtain any satisfactory or conclusive evidence of hereditary physical deterioration—that is to say, deterioration of a gradual retrogressive permanent nature, affecting one generation more acutely than the previous. There is little, if anything, in fact, to justify the conclusion that neglect, poverty, and parental ignorance, serious as their results are, possess any marked hereditary effect, or that heredity plays any significant part in establishing the physical degeneracy of the poorer population. (6) In every case of alleged progressive hereditary deterioration among the children frequenting an elementary school, it is found that the neighbourhood has suffered by the migration of the better artisan class, or by the influx of worse population from elsewhere. (7) Other than the well-known specifically hereditary diseases which *affect poor and well-to-do alike*, there appears to be very little real evidence on the pre-natal side to account for the widespread physical degeneracy among the poorer population. There is, accordingly, every reason to anticipate RAPID amelioration of physique so soon as improvement occurs in external conditions, particularly as regards food, clothing, overcrowding, cleanliness, drunkenness, and the spread of common practical knowledge of home management. (8) In fact, all evidence points to *active, rapid improvement, bodily and mental, in the worst districts*, so soon as they are exposed to better circumstances, even the weaker children recovering at a later age from the evil effects of infant life. (9) Compulsory school attendance, the more rigorous scheduling of children of school age, and the abolition of school fees in elementary schools, have swept into the schools an annually increasing proportion of children during the last thirty years. These circumstances are largely responsible for focussing public notice on the severer cases of physical impairment —just as, at a previous stage in educational development, they established the need for special training of the more defined types of physical deficiency—the blind, the deaf, the feeble-minded, and the crippled. (10) The apparent deterioration in army recruiting material seems to be associated with the demand for youthful labour in unskilled occupations, which pay well, and absorb adolescent population more and more completely year by year. Moreover, owing to the peculiar circumstances of apprenticeship which are coming to prevail in this country, clever boys are often unable to take up skilled work on leaving school. This circumstance puts additional pressure on the field of unskilled labour, and coupled with the high rates of wages for unskilled labour, tends to force out of competition the aimless wastrel population at the bottom of the intellectual scale, and this, unfortunately, becomes more and more the material available for army recruiting purposes. (11) Close attention seems to be needed in respect of the physical condition of young girls who take up industrial employment between the ages of fourteen and eighteen. The conditions under which they work, rest, and feed doubtless account for the rapid falling off in physique which so frequently accompanies the transition from school to work."

70. Testimony is almost unanimous as to the improving conditions under which the denizens of large towns are called upon to exist. Rookeries are being dispersed, enclosed yards opened out, cellar-dwellings and back-to-back houses are disappearing. One-roomed, two-roomed, and three-roomed tenements, with more than two, four, and six occupants respectively are diminishing; the figures for the years 1891 and 1901 under each class in the Administrative County of London and in Lancashire are as follows:—

—	One-roomed tenements with more than two occupants.		Two-roomed tenements with more than four occupants.		Three-roomed tenements with more than six occupants.	
	1891	1901	1891	1901	1891	1901
London	56,727	40,762	55,020	50,304	24,586	23,979
Lancashire (Administrative County, together with 15 County Boroughs)	5,007	4,256	16,004	10,277	8,704	6,437

from which it appears that the rate of improvement has been more marked in London in regard to the overcrowding of one-room tenements, and in Lancashire in respect of the other two classes. With an increase of wages a fall in the prices of food, coal, and clothing has taken place, more than counterbalancing the rise in rent, which, in itself, is largely due to the higher wages paid in the building trade.

Loch, 10121–10154.

71. Mr. C. S. Loch, in his interesting evidence, furnished the Committee with reasons for believing that improved resources have been accompanied by an upward movement in social ability or competence, with the result that a certain amount of advantageous expenditure has gone in better houses, and in the purchase of more food, and of food particularly good for children, and he also thought the same conclusion might be drawn from the large decrease in child pauperism.

Loch, 10178.

72. Further, the water supply has been enormously improved, both in purity and quantity; legislation has greatly extended the liabilities of

owners and occupiers under the Public Health Acts and the Housing Acts, and under the said series of Acts wide powers have been placed in the hands of local authorities for cleansing unhealthy areas, closing insanitary houses, preventing overcrowding, abating nuisances and enforcing generally a higher standard of sanitation; machinery exists for the inspection and purification of cowsheds and dairies, pauperism has diminished, better and more complete accommodation is provided for the sick poor, the conditions of labour touching young persons and women, in factories and workshops, have been greatly ameliorated, and all the children of the State in workhouse schools, reformatories and industrial institutions, are started in life under far better auspices than formerly.

73. On the other hand, in large classes of the community there has not been developed a desire for improvement commensurate with the opportunities offered to them. Laziness, want of thrift, ignorance of household management, and particularly of the choice and preparation of food, filth, indifference to parental obligations, drunkenness, largely infect adults of both sexes, and press with terrible severity upon their children. The very growth of the family resources, upon which statisticians congratulate themselves, accompanied as it frequently is by great unwisdom in their application to raising the standard of comfort, is often productive of the most disastrous consequences. "The people perish for lack of knowledge," or, as it is elsewhere put, "lunacy increases with the rise of wages and the greater spending power of the operative class; while a falling wage-rate is associated with a decrease of drunkenness, crime, and lunacy." Local authorities, moreover, especially in the rural districts, are often reluctant to use their powers, and in these circumstances progress, unless stimulated by a healthy public conscience in matters of hygiene, is slower than might be wished. Appendix XXVII., 7

74. An apt illustration of the widely different views held by competent observers is afforded by the interesting evidence of Mr. J. B. Atkins, London Editor of the *Manchester Guardian*, who, with a view to investigations of his own on the subject, has collected a large body of testimony, some of which he was good enough to lay before the Committee, showing in immediate juxtaposition what may be perhaps best described as the empirical and statistical methods of arriving at a conclusion. Atkins, 2863-3122.

75. The operation in different directions of the aforesaid ameliorative tendencies, and of the influences that incline towards the arrest of progress, combined with the spread of education, has, as Dr. Eichholz pointed out, had the effect of stratifying the population and concentrating the classes that require special treatment:

"There is an upper class, well-to-do and well cared for, to whom our methods afford every chance of mental and physical improvement. They come out well, and furnish a population probably not excelled by any in this country or in any other. At the other end of the scale we find the aggregation of slum population, ill-nourished, poor, ignorant, badly housed, to a small extent only benefited by our methods of training. They are the degenerates for whom this enquiry is presumably instituted. Between these two is the third and largest stratum consisting of the average industrial artisan population in which the breadwinners are in regular employment. It is the aggregation of the slum population which is largely responsible for the prominent public notice called to their physical condition." Eichholz, 429.

76. In a similar vein, Dr. R. J. Collie, one of the medical staff of the late London School Board, says—

"Physical infirmity is practically confined to the poorest and lowest strata of the population, whose children are improperly and insufficiently fed and inadequately housed, and where parents are improvident, idle, and intemperate." Collie, 3907.

77. If this be so, as the Committee are inclined to think, the task of dealing with a concentrated rather than a scattered evil manifestly presents fewer physical difficulties.

78. The Committee have advisedly abstained from framing an estimate of the number of persons living under depressed conditions on the basis of the calculations made by Messrs. Booth and Rowntree. First, they have not the Booth, "Life and Labour in London." Rowntree, "Poverty."

means of doing so; and, secondly, the different estimates of the number of underfed children, which they have had to consider, seem to show that there must be some very variable element which interferes with the acceptance of such conclusions as resting on generally accepted *data*. It may be stated also that Mr. Loch, in the course of his evidence, questioned the method on which the calculations leading to these conclusions had proceeded, and he subsequently put in a Memorandum explaining the grounds of his dissent. This Memorandum, which confirms the Committee in the belief that the matter is attended with great difficulty, will be found in the Appendix, and is a valuable contribution to the literature on the subject.

Appendix III.

II.—Urbanization of the People.

79. Turning to the general causes in operation that are calculated to arrest and depress development, the collection of the majority of the population in the large towns is the most evident and most considerable; but even here the evil is not so great as the form in which it is commonly stated might suggest.

80. According to the classification adopted in the Census returns for England and Wales the urban population is 77 per cent. of the whole, whereas fifty years ago it was only just over 50 per cent. It is the fact that for every person who in 1851 lived in a town, about three are so situated at the present time, but it must be remembered that the term "urban" merely means those districts that for the purposes of local administration have an urban organization, and that a large portion of the urban population is living under conditions as healthy as any that obtain in rural districts, and indeed enjoys superior advantages, owing to the greater completeness of sanitary legislation for such areas, and the higher conception of duty that governs their administration. Further, it is the case that towns have now a death-rate which is lower than was that of rural districts fifty years ago.

81. If a comparison could be made between the numbers living in slum quarters now and in the middle of the last century there might be some nearer approach to an effective conclusion as regards the results of urbanization, making due allowance for the improvement of life, even under the most degraded conditions, that has undoubtedly taken place. To this fact both Drs. Chalmers and Niven, Medical Officers of Health for Glasgow and Manchester respectively, testify on the strength of the evidence supplied by the vital statistics touching such quarters. In opposition to such testimony it is not sufficient to say, as one witness did, that he attaches little importance to an improvement of vital statistics, because it is simply raising an inferior limit. The theory that the processes by which life is preserved are themselves a cause of degeneration, by prolonging the lives of the unfit, is open to the criticism that of all the discriminating agencies to produce the survival of the fittest disease is the worst, for the injury to those that survive is so serious that all measures which combat disease tend to improve the race. But be the circumstances what they may on this point, there is reason to fear that the "urbanization" of the population cannot have been unattended by consequences prejudicial to the health of the people, and these have been considered under the three heads of (i.) *Overcrowding*, (ii.) *Pollution of the atmosphere*, and (iii.) *The conditions of employment*.

Chalmers, 5050. Niven, 6273.

Rees, 4240.

Maurice, 293.

i. *Overcrowding.*

82. Overcrowding still stands out most prominent with its attendant evils of uncleanliness, foul air, and bad sanitation.

83. The problem is by no means a new one, however its conditions may have become aggravated in recent times. "So long ago as the year 1598 the Privy Council addressed a letter to the Justices of Middlesex, inveighing against the owners of tenement houses for the abuses they encouraged; "the remedie whereof cannot be sufficientlie provided in havinge an eye to these persons that take those howses, beinge so great a nomber, and they cannot

be justlie corrected untill they be taken with some offence, but in severe punyshinge those landlords that lett out those small tenements (parcells of howses and chambers) unto unknowne and base people and from weeke to weeke, not regardinge what the persones are that take the same, but to rayse a vile and unconscionable lucre."

84. This is not quite the official language of the present day, but among the opinions collected by the most modern investigator occur the following: Booth: "Life and Labour in London.

"Overcrowding is the great cause of degeneracy"; "Drink is fostered by bad houses"; "Crowded homes send men to the public house"; "Crowding the main cause of drink and vice."

85. The permanent difficulties that attach to the problem reside, as the same witness has shown, in the character of the people themselves (their feebleness and indifference, their reluctance to move, and their incapability of moving), and in the obstacle this presents to the best directed efforts on the part of the local authority to employ their powers. Booth, 891.

86. It has been suggested that interference "by administrative action and penalties at each point at which life falls below a minimum accepted standard" is the way by which the problem must be approached, and the occupation of overcrowded tenements seems to afford the best opportunity for the application of the doctrine. The evil is, of course, greatest in one-roomed tenements, the overcrowding there being among persons usually of the lowest type, steeped in every kind of degradation and cynically indifferent to the vile surroundings engendered by their filthy habits, and to the pollution of the young brought up in such an atmosphere. The general death-rate in these tenements in Glasgow is nearly twice that of the whole city, and the death-rate from pulmonary tuberculosis is 2·4 per thousand in one-roomed tenements, 1·8 in two-roomed tenements, and ·7 in all the other houses. In Finsbury, again, where the population of one-roomed tenements is 14,516, the death-rate per thousand in 1903 was 38·9, yet the rate among occupants of four or more rooms was only 5·6, and for the whole borough 19·6. Similarly a comparison between the population of Hampstead and Southwark, in respect of their ability to withstand disease and death, shows an expectation of life very largely in favour of Hampstead, at birth the relative figures being 50·8 and 36·5 years, at five, 57·4 and 48·7, illustrating the waste of material during the first years of life. From another table, furnished by Mr. Shirley Murphy, the Medical Officer of Health for the administrative County of London, it appears that in seven groups of districts with an increasing amount of population living in overcrowded tenements the infant death-rate has followed the increase; that is to say, in districts with under 10 per cent. of the population living under these conditions the death-rate was 142 per thousand, and then, as the proportion of people living in overcrowded tenements increases, so does the infant death-rate, going from 180 to 196, and then to 193, and then going on to 210, 222 and 223. Booth: "Life and Labour in London." Chalmers, 5991. Chalmers, 6022. Hawkes, 12952. Murphy:—Appendix XIII. Appendix XIII.

87. Facts like these show where the root of the mischief lies, and surely the time is ripe for dealing drastically with a class that, whether by wilfulness or necessity, is powerless to extricate itself from conditions that constitute a grave menace to the community, by virtue of the permanent taint that is communicated to those that suffer under them, and of the depressing effect that the competition of these people exercises on the class immediately above. The Committee think that with a view to setting a term to these evils the Local Authority should, in the exercise of their power to treat "any house or part of a house so overcrowded as to be dangerous or injurious to the health of the inmates" as a nuisance, and for the abatement of the same, notify that after a given date no one-roomed, two-roomed, or three-roomed tenements would be permitted to contain more than two, four or six persons respectively. The change might be brought into operation gradually, so as to treat the worst cases first, and render it easier to provide for the displaced families, but in every case handled it must be made plain that in the event of non-compliance recourse would be had to the compulsory closing of the tenement in question.

88. The problem of dealing with the persons affected would have to be faced, but this could be done with more confidence seeing that the difficulty involved is a terminable one and that security would be taken against a reproduction of the conditions that rendered action of the kind necessary. In this connexion Mr. Loch strongly advocated the firm grasp of the nettle. By taking the worst centres firmly and sternly in hand he believed in a piecemeal solution of the whole problem, and instanced the readiness with which in old days common-lodging-houses grew up with an increasing demand on the part of their *clientèle*, as showing how very instantaneous the supply would be when the demand was clearly expressed. The fact of these lodging-houses being now under the control of the County Council would greatly facilitate the process. Means would probably be found through the ordinary channels of supply and demand or within the sphere of municipal activity for housing all but the irreclaimably bad, and in the last resort the State acting in conjunction with the Local Authority would have for its own sake to take charge of the lives of those who, from whatever cause, are incapable of independent existence up to the standard of decency which it imposes.

Loch 10155-10164.

Chalmers 6 604-6013. Cameron 11024-11034, 11070-4. Ormsby 12593-5. 1260-95.

89. "Colonel" Lamb, of the Salvation Army, was favourable to the adoption of similar methods, and suggested as an experiment the concentration on selected areas of every available agency for social reform, putting in a resident magistrate to enforce the law, which he believed was sufficient for the purpose, especially if the work of voluntary agencies were directed to the same end.

Lamb, 11483-11504, 11669-11674.

90. Some such expedients as have been suggested for disposing of habitual vagrants might also be adopted; the Committee are not prepared to indicate the exact lines upon which these ought to be modelled; a large latitude should probably be left to each locality in healing its own sores, but as a last resource compulsory detention in labour colonies would have to be resorted to, and the children of those made the subject of this experiment lodged in public nurseries, until their parents were improved up to the point at which they could resume charge.

Lamb, 11554-11786

91. The Committee took the evidence of "Colonel" Lamb, on the colony managed by the Salvation Army at Hadleigh, and paid the colony itself a visit of inspection, in the course of which they were much impressed by the order which prevailed in every branch of its administration, and by the opportunity the system appears to offer for the reclamation of some of the waste elements of society. They also had the advantage of reading the valuable Report of the Vagrancy Committee of the Lincolnshire Court of Quarter Sessions for Parts of Lindsey upon the colonies of the kind established in Belgium, and they consider that with proper co-operation between county authorities such colonies might usefully form an integral part of local administration.

92. A system of this sort once established and tested, it might not be impossible, having regard to the interest the community possess in the preservation of the young from contaminating and depressing influences, to apply similar treatment to the children of all parents who have proved unfit to discharge their obligations to those they bring into the world. With a view to the enforcement of parental responsibility the object would be to make the parent the debtor to society on account of the child and to empower the local authority to charge the former with the cost of a suitable maintenance, with the further liability in case of default of being placed in a labour establishment under State supervision, until the debt is worked off. It is not believed that any such extreme steps would be necessary in a very large number of cases; the fact of a few being so treated experimentally and the knowledge that the State had and might wield such power would exercise a most salutary effect in bringing home to parents the nature and extent of their liabilities, and might be expected to prove to the young a charter of immunity from the most crying evils by which they are at present oppressed.

93. It has been suggested that the system of municipal institutions prevailing in this country, under which the chief officers are elected annually, is not calculated to produce the vigilance and ability displayed in dealing with these problems in Germany, where the corresponding officers hold a more or less permanent position. This was the view of one very competent witness, Mr. T. C. Horsfall, who also advocated the adoption of what is known as the Elberfeld system, under which any citizen can be called upon by the municipality to act upon their behalf in much the same capacity as an officer of the Charity Organisation Society does in this country, and become the channel for the district under his charge of all information required by the Local Authority on matters touching the health of the people. In this way it is contended that a high standard of civic duty is inculcated, and the public conscience moved to reprobate social wrongs. On the other hand, a representative civic officer like Dr. Niven, of Manchester, declared that with the present machinery improvement was as rapid and well sustained as it was reasonable to expect, and many of those who were most impressed with the evils they saw around them took the view that they were the results of conditions which had in great measure been superseded, and that the course of the next few years would show a most decided amelioration.

Horsfall, 5629–5658.

Niven, 6280–3.

Booth, 1140–3. Rowntree, 5194–5, 5248. Loch, 10183–4.

94. In one respect Mr. Horsfall was able to show that an immense superiority rested with Germany. In England no intelligent anticipation of a town's growth is allowed to dictate municipal policy in regard to the extension of borough boundaries, with the result that when these are extended the areas taken in have already been covered with the normal type of cheap and squalid dwelling houses, which rapidly reproduce on the outskirts of a city the slum characteristics which are the despair of the civic reformer in its heart.

Horsfall, 5723–5741.

95. In some parts of Germany a different system appears to prevail. As soon as the original nucleus of a town has reached certain proportions, a broad zone with lungs something like the points of a star is drawn round it; within the zone and the avenues leading outward no population beyond a certain very limited density is allowed, and the increase of the town on the scale of population permitted in the centre is pushed back beyond this zone. No such town, therefore, in Germany, however large, would be without its proportion of open space in the immediate vicinity, and the lungs or avenues provide for the indraught of a due quantity of fresh air into the very heart of the city. Notwithstanding these precautions, the urbanization of the German people has been attended with some falling off in the physical characters of the conscript. Thus in the seven years between 1894 and 1901 the returns show that the fit have fallen 1 per cent., the unfit risen 1·3 per cent.

Shadwell:—Appendix XIV.

96. It must be remembered, in defence of our laxity in this respect, that the industrial development of Germany took place fifty years later than ours, when sanitary science with its multiform applications to the actual conditions of urban existence had come to be much better understood and practised, and that here we do not start *de novo*, but have in a large measure to undo the consequences of previous neglect.

97. In this connection it would be expedient to secure the co-operation of Local Authorities in contiguous areas that are becoming rapidly urbanized.

98. The means to be adopted are, no doubt, in the main palliative, but their combined effect may be none the less considerable. It has already been indicated how, by the gradual pressure of hygienic law and disciplinary penalties, the impetus of improvement may be given to the people themselves, and however slowly municipal action is compelled to move towards the extirpation of social ills, it can and must provide against their reproduction in areas over the development of which it is not too late to watch.

99. A prescient sense of the conditions to be fulfilled and heedfulness towards the consequences of their neglect may surely be exercised in all cases,

when the extension of borough boundaries offers an opportunity for the laying out of new urban quarters. The vigilant enforcement of proper building regulations, which should include the maintenance of airways of sufficient breadth towards the centres of large towns, and arrangements for their being properly planted with, if possible, two rows of trees on either side; the determination to bring home to both landlord and tenant the duty of maintaining a minimum standard of decency and comfort; the provision of cheap means of transit on a comprehensive scale between the outgrowths and centres of large towns; and possibly some revision of the basis of local taxation, whereby sites should figure more largely than buildings in framing assessments, with the consequent probable removal of large industrial concerns to less costly surroundings, might all in their several degrees tend to amelioration.

ii. *Pollution of Atmosphere.*

100. The attention of the Committee was prominently called to the effect on public health of the pollution of the atmosphere.

101. In dealing with the Manchester district one witness said—

Rees 4234, 4329, 4266.

"The pollution of the air is worse than ever." "I should trace much of the anæmia to the deprivation of sunlight and to the lessening of the vivifying qualities of the air." "You have execrable air for the people to breathe."

Another gave similar testimony—

Horsfall 5580.

"The condition of the air by its direct effect on lungs and skin is the cause of much disease and physical deterioration. By cutting off much of the scant supply of sunlight which is all that Manchester at best would be allowed by its gloomy climate to receive, it injures health." "The filthiness of the air makes those inhabitants of all parts of Manchester who value cleanliness most unwilling to ventilate their dwellings." "By killing nearly all vegetation and by its other effects, the foulness of the air contributes much to that general gloominess of the town which led Mr. Justice Day to say in explanation of the prevalence of drunkenness in the town, that to get drunk 'is the shortest way out of Manchester.'"

Horsfall 5580.

102. To this influence is attributed the removal of all well-to-do persons from the town, which the same witness stated to be a most fruitful cause of the ignorance and bad habits of the poor, and of the failure on the part of the authorities to take sufficient cognizance of those districts in which the poor are congregated without admixture of other classes.

Rees 4266–4282, 4309–4317, 4448–4456.
Horsfall, 5602–4, 5580.
Niven 6457–8.

103. The chief causes of this pollution are alleged to be the non-enforcement of the law for the prevention of smoke from factories, the imposition of inadequate penalties, the neglect to limit works which produce noxious vapours to special areas where they can be closely supervised and so do the least possible amount of harm; and lastly, the absence of any provision in the law compelling the occupants of dwellings to produce the least possible quantity of smoke.

Rees 4234–7.

Horsfall 5582–5591, 5608–9.

104. On the point of prosecutions, it was stated that there are people in Manchester who systematically pollute the air and pay the fine, finding it much cheaper to do so than to put up new plant. The trial of such cases before benches of magistrates composed of manufacturers or their friends creates an atmosphere of sympathy for the accused, and it was alleged that magistrates who had sought to give effect to the law encountered the indifference and sometimes the positive opposition of their colleagues. It was explained that although careless stoking is often responsible for the evil, the production of smoke is really the result of overdriven furnaces; with adequate room for boiler and furnace, and a well paid fireman under careful supervision, smoke can be prevented without any special appliances, but the greater part of the smoke is produced by furnaces that are too small for their work.

105. It is admitted, however, that a stricter enforcement of the law and a change in legislation, giving higher penalties, would produce a great improvement without imposing any serious burden on manufacturers.

The Committee think that cases of the kind should come before a stipendiary magistrate, and that it should be considered whether the responsibilities of the ordinary householder in regard to domestic smoke prevention might not also be dealt with gradually but firmly, as they understand is the case in Germany, for his present immunity from interference is said to produce a feeling of inequality that increases the reluctance to put the law in motion against the offending manufacturer. Horsfall 5592-4.

Local Administration.

106. These questions of air pollution and overcrowding raise directly the issue of the efficiency of local administration, and evidence of considerable variety was taken on this point. On the whole, it appears that the urban areas enjoy the greater advantage in this respect. Direct testimony was forthcoming that many local authorities are setting an example of persistent devotion to a high standard of civic duty, and others that for years were slack or indifferent are now said to have awakened to a sense of their responsibilities. Thus, in regard to the worst district in Manchester, Dr. Niven, the Medical Officer of Health for that city, stated—

"The conditions with regard to housing are very greatly improved. The majority of the worst type of houses have been entirely cleared away and a great many courts have been opened out. . . . Altogether, there has been a very great improvement in the condition of the houses in Manchester." Niven 6279.

107. It is admitted, however, that there are still 3,000 back-to-back houses in the city, and in the centre 206 common lodging-houses, which are described as insanitary, containing 5,831 inhabitants. Niven, 6324.

108. Again, Dr. Young, President of the Association of Certifying Factory Surgeons, presented the Committee with a body of reports collected from a large number of his colleagues confirmatory, as a whole, of the same view. Dr. Young is himself connected with Liverpool, and testifies very favourably to the work done by the municipal authorities in that city. Reports from Preston, Wolverhampton, and Sheffield tell the same tale in varying degrees, though in regard to the last named, evidence, to be mentioned later, shows that the awakening has been somewhat tardy. In Glasgow, where a generation ago the conditions of existence were perhaps harder and more depressing than in any other town in Great Britain, there is great improvement to record. In the opinion of Dr. Scott, Certifying Factory Surgeon in that city, the Corporation have done their very best. Rickets, which had reached terrible proportions twenty years ago, has been reduced, owing to the improvement effected in the conditions under which people now live. Dr. Chalmers, Medical Officer of Health in the same city, attributed to this improvement an increase in the expectation of life and, by implication, in the standard of vitality, and added that without the one-roomed house difficulty the death rate would be something like 18 or 19 per 1,000. "One talks" he said "of insanitary areas at the present moment, but although it is the same phrase, it means something different from what it did thirty years ago." What was wanted, he believed, was a concentration of attention on the population which has fallen below all reasonable standard of living. In regard to the pollution of the air by smoke and noxious vapours, he declared that a vigorous application of the Acts was systematically made. Young, *passim*. Young, 2082-2088. Scott, 1675. Chalmers, 5986. Chalmers, 6019. Chalmers, 5947. Chalmers, 6134. Chalmers, 6215.

109. Mr. Shirley Murphy explained the steps taken in London to ensure the enforcement of the bye-law, which under Section 94 of the Public Health (London) Act prescribes the number of cubic feet which each individual should have, but as the enforcement of this bye-law is primarily in the hands of the Borough Councils, its application is varying and irregular. The standard of 300 feet for a room occupied at night only, and 400 for a room occupied by night and day, is so low that in Mr. Murphy's opinion it ought to be enforced rigidly throughout London, and Murphy, 9383-9398.

to that end he stated that the County Council had been making very considerable efforts for a number of years, as it was a point to which they attached great importance. They have also done something towards the provision of dwellings and the clearance of insanitary areas, while their control of the common lodging houses has resulted in a marked improvement in the standard of living noticeable in those establishments, as the Committee can testify from a personal inspection of a considerable number.

110. On the other hand, Tyneside, Dundee, Edinburgh, the Staffordshire Potteries, and to some extent Sheffield, were mentioned as districts which in whole or in part had suffered from the neglect of the local authorities to deal with glaring evils. Dr. Neston, of Newcastle, says—

Young, 2082.

"There is undoubtedly great deterioration in the physique of our City population, and this is attributable to two chief causes, first a decadence in home life, which entails improper food and clothing, irregular habits (drinking and gambling), absence of order and thrift; second, the miserable housing and high rents which prevail; overcrowding, with its consequences, is an important factor in physical and mental degeneration. The fathers and mothers of the rising generation do not recognise, in their gravity, the obligations of paternity, which are left to the authorities, educational or parochial. There is an undoubted falling off in the physical condition of the infants vaccinated, and young persons presented for employment during the last quarter of a century, and this is due to the fact that they are the offspring of town-bred parents, who produce *sui generis*."

111. Mr. Harry Wilson, an Inspector of Factories, says—

Wilson, 1935.

"Personally the poorest specimens of humanity I have ever seen, both men and women, are working in the preparing and spinning departments of certain Dundee jute mills."

In reply to a question as to the sort of tenements these people occupy, he says—

Wilson, 1940–1.

"There are a great number of single-room and two-room tenements in Dundee, and big blocks having no privy accommodation at all except a common one in the yard."

Wilson, 1942–4.

Next to no effort had been made to improve this state of things.

112. In certain districts of Edinburgh no less than 45 per cent. of the

Mackenzie, 6923.

population, according to the information given by Dr. Leslie Mackenzie, Medical Inspector to the Local Government Board for Scotland, live in one-roomed or two-roomed dwellings, a fact which largely accounts for the sinister results attending the examination of the 600 children conducted by Dr. Mackenzie, under the direction of the Royal Commission on Physical Training (Scotland). In the district from which many of these children were drawn—the North Canongate—Mrs. Mackenzie, who assisted her

Mrs Mackenzie, 7036–7

husband at the aforesaid survey, told the Committee that 76 per cent. of the population lived under these conditions, and in these one or two-roomed dwellings there are often seven, eight, or nine children, besides the father and mother. To the question whether the City Council of Edinburgh has

Mrs. Mackenzie, 7038, 7040.

taken action, the witness replied, "Individual cases do not come within their purview until some one complains;" and to the further question, whether they took any steps to inform themselves of such abuses, the answer was "I do not know." If this is at all a correct representation of the case, the

Mackenzie, 6842.

statement of Dr. Mackenzie, that "Where the neglect of duty is a specific thing having relation to specific conditions, such as overcrowding or special nuisances," the powers of the Local Government Board are complete, is eloquent of a double neglect.

113. As to Sheffield, Mrs. Greenwood, one of the Sanitary Inspectors in that place, described the drainage as bad, many rubble sewers being still in existence, and the sanitary conditions shocking in respect of a large number

Greenwood, 8106–9.

of unpaved courts which receive the contents of the middens, and are therefore saturated with filth. There are also a large number of unwholesome dwellings, no fewer than 15,000 on the back-to-back system, most of

Greenwood, 8110, 8116, 8120.

them with no more than three rooms, and sometimes occupied by eight, ten, or even twelve persons. Therefore, it is not surprising to hear that "the

Greenwood, 8188.

number of deformed people is something terrible," and that infant mortality

Greenwood, 8233.

goes up in one district to 234 per 1,000. Referring to the action of the municipality, Mrs. Greenwood said, "They are very much behind the times,"

Greenwood, 8111, 8143.

and she thought they had only been awakened to activity by serious outbreaks of infectious disease. As an instance of dilatoriness, she mentioned

PHYSICAL DETERIORATION. --Medical Officer to report in due course upon the recommendations of the Inter-departmental Committee on Physical Deterioration which was referred by the Council to the Committee for consideration on 13th.December, 1904.

(3)	Advisory Council	Public Health.
(5)	Labour colonies and Public Nurseries	
(11)	Reports from local authorities.	
(13)	Medical inspection of factories.	
(16)	Workshops.	
(21)	Cooking grates.	
(22)	Adulteration.	
(23)	Infant mortality and employment of women.	
(28)	Milk supply.	
(30)	Milk depôts.	
(31)	Sterilisation and refrigeration.	
(44)	Crèches.	Edcn. P. H.& P. Control.
(17)	Alcoholism.	Edcn. & P. H.
(4) & (12)	Overcrowding	P.H. & Housing of the Working Classes.
(2)	Register of sickness	P.H. Asylums & P.Control.

22 AUG 1933

LONDON COUNTY COUNCIL.

Public Health Department,

8, St. Martin's Place, S.W.,

No. 23. 20th October, 1904.

REPORT by the Medical Officer on the report of the Inter-departmental Committee on physical deterioration.

The Committee are aware that the Inter-departmental Committee has now reported on the subject of physical deterioration. They state that -

"there are no sufficient data at present obtainable for a "comparative estimate of the health and physique of the "people".

They make a number of recommendations with a view to mitigating evils the existence of which is admitted "while awaiting the "necessary steps being taken to secure that body of well sifted "and accurate information without which it is impossible to "arrive at any conclusion of value as to the general problem."

Among these recommendations are the following to which the Committee may like to have their attention specially directed.

"(2) Register of sickness.

"It appears to the Committee in the highest degree desirable that a Register of Sickness, not confined to infectious diseases, should be established and maintained. For this purpose the official returns of Poor Law Medical Officers could, with very little trouble and expense, be modified so as to secure a record of all diseases treated by them. And, further, it ought not to be difficult to procure the co-operation of hospitals and other charitable institutions throughout the country, so as to utilize for the same purpose the records of sickness kept for such institutions".

Eastern School of Business & Commerce
22 AUG 1980

"(4) Overcrowding.

"The Committee believe that the time has come for dealing drastically with this problem. They advocate an experimental effort by the Local Authority in certain of the worst districts in the direction of fixing a standard and notifying that after a given date no crowding in excess of such standard would be permitted. It is believed that, if the thing were carried through without hesitation or sentimentality, means would be found through the ordinary channels of supply and demand, or within the sphere of municipal activity, for housing all but the irreclaimably bad".

"(8) Register of owners of houses.

"It should be the duty of the Local Authority in all towns above a certain size to establish and maintain an accurate register of owners; this is one of the first desiderata towards dealing with slum property".

"(21) Cooking Grates.

"It should be provided by law that every dwelling let for the occupation of a family, should include a grate suitable for cooking".

"(28) Milk supply.

"With a view to ensuring the purity of the supply of milk to the community, the Committee think that the measures indicated in paragraph 273 of the report should be taken; in default of the Local Sanitary Authority taking proper precautions, the County Council should in all cases be authorised to act, and it should be the duty of the Local Government Board to intervene in the ultimate resort".

"Paragraph 273.

"The remedies for this state of things are, first, the general application of the permissive provisions of the existing law under the Contagious Diseases (Animals) Act, 1878. The Local Government Board may make orders for:-

(i) Registration of cowkeepers, dairymen, etc.
(ii) Inspection of cattle in dairies, and for prescribing and regulating the lighting, ventilation, cleansing, drainage and water supply of dairies and cowsheds.
(iii) Securing the cleanliness of milk stores, milk-shops, and vessels.
(iv) Prescribing precautions to be taken for protecting milk against infection or contamination.
(v) Authorising a Local Authority to make such orders.

The Committee think that in the event of the Local Authority not making such orders the Local Government Board, who, it is understood, have already issued model bylaws for urban and rural districts respectively, should make the orders themselves: or if it was deemed preferable to bring indirect pressure to bear, the power now enjoyed by a Local Authority under the Infectious diseases (Prevention) Act, 1890, for prohibiting the supply of milk from an infected dairy might be extended so as to cover exclusion of supply

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from areas where provisions of the Contagious Diseases Animals Act are not in operation. Under either alternative the County Council should be empowered to act in default of the Local Authority, and in either case it should be the duty of the Local Government Board to intervene in the ultimate resort."

"(32) Midwives.

"The Committee desire to call the attention of Local Authorities to the provisions of the Midwives Act, 1902, which may be made an instrument of the greatest utility for the dissemination among mothers of proper knowledge and practical advice".

Upon these I would beg to make the following observations.

Register of Sickness.

The institution of a system of registration of cases of sickness in public institutions, poor law and other, has often been proposed. If it were decided that an administration should be designed for this purpose it would be necessary for some central authority to collect and collate the material.

At the present time the County Council receives returns as to all cases of infectious disease notified each week in London. With the sanction of the Committee these returns are tabulated in the Public Health Department and the tabular statement is sent to the Registrar General and published by him in his weekly, quarterly and annual reports.

It would not be difficult to adopt the same system with respect to cases of illness at public institutions except that where as the Council only receives its information as to infectious disease through the Metropolitan Asylums Board there would be obvious advantage in the information being received direct from the institutions concerned.

Overcrowding.

In London, Authorities are presumed not to permit more persons to occupy a room than a definite recognised standard would permit based upon the cubic space per person. It is however much the practice to serve notices when such overcrowding

is found. When tenement houses are registered under Section 94 of the Public Health (London) Act the authority can proceed at once for penalty. Effect could thus be given to the recommendation of the Inter-departmental Committee by the registration of Houses let in Lodgings and the application for a penalty whenever overcrowding is found.

Register of owners of houses.

This is a proposal which would require legislation. I think it would serve a useful purpose and, if accompanied by an obligation on superior landlords to enforce the repairing clauses of the leases, would have a far reaching effect in maintaining the sanitary condition of many houses.

Cooking Grates.

This subject has already been before the Committee. In a report I presented to the Committee in the present year, I stated that in a third of the tenements visited by the Council's inspectors the grates provided were not better adapted for cooking food than an ordinary bedroom grate. These tenements were in houses which had not been specially constructed for use as tenement houses.

Milk Supply.

These recommendations relate to administration outside London and are I think sound except that I do not believe that there will be efficient regulation of cowsheds in rural districts until the powers of control are vested in County Councils instead of rural district sanitary authorities.

Midwives.

This might well be made part of the curriculum of the training of midwives but beyond this it may be found possible to do something in this direction with existing midwives through the Council's newly appointed inspector. The matter will no doubt engage the attention of the Council's Midwives Act Committee.

To the
Public Health Committee.

(Sgd.) SHIRLEY F. MURPHY,
Medical Officer of Health.

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London County Council.

PHYSICAL DETERIORATION.

REPORT by the Clerk of the Council on the report of the Inter-Departmental Committee on Physical Deterioration.

(*Printed by order of the Public Health Committee, 20th October*, 1904.)

On 2nd September, 1903, the Lord President of the Privy Council appointed an Inter-Departmental Committee, consisting of Mr. Almeric W. Fitzroy, C.V.O., Clerk of the Council, *Chairman*; Colonel G. M. Fox, H.M. Inspector of Physical Training under the Board of Education; Mr. J. G. Legge, Inspector of Reformatory and Industrial Schools; Mr. H. M. Lindsell, C.B., Principal Assistant H.M. Secretary to the Board of Education; Colonel G. T. Onslow, C.B., R.M.L.I., Inspector of Marine Recruiting; Mr. John Struthers, C.B., Assistant Secretary to the Scotch Education Department; and Dr. J. F. W. Tatham, M.D., F.R.C.P., of the General Register Office, with instructions to make a preliminary inquiry into the allegations concerning the deterioration of certain classes of the population as shown by the large percentage of rejections for physical causes of recruits for the Army, and by other evidence, especially the Report of the Royal Commission on Physical Training (Scotland), and to consider in what manner the medical profession can best be consulted on the subject, with a view to the appointment of a Royal Commission, and the terms of reference to such a Commission, if appointed.

These terms of reference were subsequently explained and enlarged as follows :—

(1) To determine, with the aid of such counsel as the medical profession are able to give, the steps that should be taken to furnish the Government and the nation at large with periodical data for an accurate comparative estimate of the health and physique of the people; (2) to indicate generally the causes of such physical deterioration as does exist in certain classes; and (3) to point out the means by which it can be most effectually diminished.

The Committee sat on 26 days for the purpose of hearing evidence, and examined 68 witnesses from England, Scotland and Ireland, of whom 54 were men and 14 women. Of this number, 20 men and 3 women held official positions either under His Majesty's Government or under local authorities in connection with local administration, schools and factories; 13 of the official witnesses were members of the medical profession, which was also represented by 21 other witnesses, seven of whom were specially nominated to give evidence by the Royal Colleges of Physicians and Surgeons and by the British Dental Association; two witnesses were noted anthropologists; two were members of Parliament, and the remainder were either independent authorities or representatives of well-known organisations and charitable institutions.

The report which has now been presented by the Inter-Departmental Committee has, for sake of convenience, been divided into three parts, the first consisting of an examination into the evidence deducible from the War Office figures and a statement of the steps required to obtain adequate *data* for determining questions of national physique; the second and largest part dealing with the causes and indications of degeneracy in certain classes of the community, and the means by which it may be arrested; and the third part containing a summary of the principal recommendations which the Committee desire to make.

In dealing with Part I. of their Report (an examination into the evidence deducible from the War Office figures and a statement of the steps required to obtain adequate *data* for determining questions of national physique), the Committee decided, before proceeding to take personal evidence, to consider what information of a documentary character was available which would throw any light upon the questions they were directed to investigate, and in this connection they had before them the memoranda on the subject of the number and causes of rejection of recruits issued by the War Office upon the responsibility of the Director-General of the Army Medical Service and the Inspector-General of Recruiting; and, as shortly after the publication of these memoranda, the Secretary of State for the Home Department had addressed a communication to the Royal Colleges of Physicians and Surgeons respectively, asking for observations on a proposed inquiry into the causes which have, in recent years, led to the rejection of so many recruits for the Army on account of physical disability, and the possible measures by which this condition of things might be remedied, he placed at the disposal of the Committee copies of the replies from both Colleges, and in the opinion of the Committee these replies appeared to point to the conclusions that (1) the evidence adduced in the Director-General's memorandum was inadequate to prove that physical deterioration had affected the classes referred to; (2) no sufficient material (statistical or other) was at present available to warrant any definite conclusions on the question of the physique of the people by comparison with *data* obtained in past times; and (3) a partial investigation, as for instance, into the condition of the classes from which recruits are at present drawn, might be very misleading, however carefully conducted, and might give rise to erroneous conclusions on the general question unless checked by expert knowledge.

The Royal College of Physicians were, however, disposed to think that an inquiry into the physical condition of the nation would be of great value, but the Royal College of Surgeons did not see any particular need for such investigation on a large scale as the well-known facts relating to public health were sufficient to dispel anxiety.

In the evidence given respecting army recruiting it was pointed out that the personnel of recruits for the British Army was largely influenced by the state of the labour market and that consequently the records of the recruiting department did not deal with persons taken from one distinct class of society, also that the increased stringency in the requirements as to teeth has materially swelled the percentage of rejections during the past two years. It was, moreover, noticed that one man had presented himself at four different recruiting stations with the same result, a circumstance which suggested a possible explanation for a considerable proportion of rejections generally. The Committee expressed their conviction that the examination of the official representatives of the recruiting system, confirmed as it was by the evidence of other witnesses, proved conclusively that it would be as reasonable to argue from criminal statistics to the morals of the great mass of the people as it would be to argue to their physical conditions from the feeble specimens that come under the notice of recruiting officers.

The Committee, in considering the question of the number of rejections in Army recruits, also came to the conclusion that the machinery of the ordinary type of Royal Commission was both unsuitable and inadequate for the purpose of furnishing both the Government as well as the nation at large with periodical *data* for an accurate estimate of the health and physique of the people, and were of opinion that particulars on these points could best be obtained by the establishment of some permanent organisation such as a Central Anthropometrical Bureau, acting under the advice of a Consultative Committee of noted Anthropologists. The importance of obtaining a register of cases of sickness (not confined to infectious diseases) is also emphasised, and the formation of an Advisory Committee on Public Health is suggested.

With regard to part 2 of their report (the causes and indications of degeneracy in certain classes of the community and the means by which it may be arrested) the Committee at once point out that the opinions gathered from the great majority of the witnesses examined do not support the belief that there is any general progressive physical deterioration in the nation, physical infirmity being, as one witness puts it "practically confined to the poorest and lowest strata of the population, whose children are improperly and insufficiently fed and inadequately housed, and where parents are improvident, idle, and intemperate." If this statement be correct the Committee feel that remedial measures are comparatively easy of application as "the task of dealing with a concentrated rather than a scattered evil manifestly presents fewer difficulties." The collection of people in the large towns is doubtless one of the general causes which tend to arrest and depress development, and the evil effects of this urbanisation may be classified under three heads—over-crowding, pollution of the atmosphere, and conditions of employment.

In order to deal with over-crowding the Committee suggest that the local authority should notify that after a certain date no one-roomed, two-roomed, or three-roomed tenements will be permitted to contain more than two, four, or six persons respectively, the change being brought into operation gradually. The Committee, in this connection, specially refer to the marked improvemont in the standard of living in common lodging houses in London since they came under the control of the Council. They also suggest as a last resource the detention of habitual vagrants in labour colonies, and the temporary lodging of the children of such persons in public nurseries until their parents have been rendered fit to take charge of them. The Committee see no reason why every town above a certain size should not be compelled to keep a register of owners of all slum property, and it is also suggested that the local medical officers of health should be granted security of tenure of office. The report further states that the chain of responsibility should be made more complete so that minor authorities if negligent might be superseded by some superior body, as is the case in London. To this end every County Council should be required to appoint a Medical Officer of Health, who should devote his whole time to the duties of his office, and the local sanitary authority should furnish reports containing certain specified particulars.

The pollution of the air is next dealt with, and the report states that the chief causes of this pollution are alleged to be the non-enforcement of the law for the prevention of smoke from factories, the imposition of inadequate penalties, the neglect to limit works which produce noxious vapours to special areas where they can be closely supervised and so do the least possible amount of harm; and lastly the absence of any provision in the law compelling the occupants of dwellings to produce the least possible quantity of smoke.

With regard to the conditions of employment it appears that there is, if anything, rather a general improvement in the physique of the factory class, but the system of half-time employment of children is not conducive to their health. An extension of the powers of certifying factory surgeons is suggested so as to enable these officers to examine employees for purposes of qualification at a later age than 16, and to re-examine, when necessary, at definite intervals; the medical examination of young persons should be extended to cover their entry into coal pits; and attention is drawn to the apparent lack of regulation and control over small workshops, and to the absence of almost any medical examination of young persons and children employed in workshops generally.

In dealing with the question of alcoholism, attention is drawn to the close connection between bad housing and a craving for drink. The Committee are unable to decide whether drunkenness is on the increase, but state that there is an admitted increase in the drinking habits of women of the working classes. The report, however, goes on to point out that intemperance in working women seems to be confined to towns, and is rare in rural districts. The Committee state that they are convinced as a result of the evidence laid before them that the abuse of alcoholic stimulants is a most potent and deadly agent of physical deterioration, and they suggest that some general educative impulse is needed to bring home to the community at large the gravity of the evil and the extent to which it is within the power of the individual to remedy the present state of affairs.

The Committee also considered the depletion of rural districts by the exodus of the best types caused by the most capable of the population being allured to the towns, partly owing to the difficulty in obtaining cottages in the country and partly to the system of country education being

such as does not induce in the children an interest in their immediate surroundings. As a remedy the Committee hope that the scheme of the Garden City Association will prove successful, and hint at State help for such schemes if they are found to fulfil the expectations of their promoters.

Attention is drawn to the alleged tendency of superior stocks in all classes towards a diminished rate of reproduction, but the Committee are of opinion that this question can only be settled when tested by definite figures, and think it might be well to obtain accurate information thereon by means of a proper census.

The question of food is brought under review, with the result that the excessive use of bread and tea by the workers to the exclusion of more nutritive articles of diet is condemned, and in this connection the love of pleasure and gambling are said to be fruitful causes of the withdrawal from the working class budget of money which should be spent on food, whilst a judicious enforcement of compulsory attendance by girls at classes on cookery and other branches of domestic hygiene is suggested in the near future. The Committee also express the view that every tenement let for the occupation of a family should include a grate suitable for cooking, and they suggest that the Local Government Board should fix standards for all foods and drinks for the purposes of the law relating to adulteration.

The conditions attending the life of the juvenile population are next taken into consideration, and the first point dealt with under this heading is Infant Mortality, in connection with which suggestions were made to the Committee that all still-births should be required to be registered, and that the system of infant insurance should be restricted so as to cover actual expenses of burial only, but the Committee came to no conclusion in regard to the question of insurance, although they recommended the registration of still-births.

Hereditary Taint is the next point touched upon under this division, and it is suggested that the depressing effects of the life struggle on parents may be, in some measure, transmitted to their offspring. The employment of mothers late in pregnancy and too soon after childbirth is taken into consideration. The Committee are of opinion that the application of the existing law on this subject might be made more regular and elastic, and suggest the formation of voluntary agencies for helping mothers before, during, and after confinement to take care of infant life, even where such agencies already exist.

Another subject dealt with at this stage is the decrease in the breast feeding of infants, a condition which it is stated is common to all highly civilised people, and of reasons for which the medical profession are in ignorance. The use of modified cow's milk as a substitute is advocated instead of tinned milk.

The Committee also considered the question of defective milk supply, and suggested in order to guard against the consumption of tainted and filthy milk the general application of the permissive provision of the Contagious Diseases (Animals) Act, 1878. Since, however, the dangers of contamination are by no means passed when the milk has left the farm on which it has been produced, it being liable to contamination through the length of time taken in transmission, in the milk shops and in the homes of the consumers (particularly in the latter case, owing to the use of the feeding bottle with a long indiarubber tube which cannot be cleansed), the Committee can only suggest that the real remedy is to be found in a better social education of the community at large. The formation of milk depots, the machinery of registration and the employment of a number of health visitors are also mentioned as well as the submission to a body of experts of the question of the advantages of sterilization or prompt refrigeration of milk.

Dealing with parental ignorance and neglect, the report calls attention to the overlaying of infants caused by neglect or drunkenness (most of the cases occurring between Friday night and Monday morning), the leaving of children in a room with an unprotected fire, the lack of ventilation in dwelling houses, the noxious practice of giving infants indiarubber nipples to suck, the habit of allowing children to stay up very late in the evening, thereby causing them to obtain an insufficient amount of sleep, the indifference of mothers to the slighter ailments of their children, the improvidence of the poor, and the improper feeding of infants. These evils the Committee submit can only be overcome by the adoption of some great scheme of social education. They, however, lay stress upon the beneficial effects of a proper administration of the Midwives Act, 1902, the value of crèches, and the establishment of a body of health visitors, and suggest the issue of a circular on the whole subject to local authorities by the Local Government Board.

The School System also came under the review of the Committee, and attention was drawn to the keeping of children at desks which were not suited to their height, causing curvature, and to the use of a blackboard which, if the class be a large one, may be placed in such a position as to cause a strain upon the vision of some of the scholars; whilst with regard to infant schools the opinion of the Committee was that school attendance in *rural* districts should not be compulsory until a child had reached 6, or possibly 7, years of age, and should be discouraged, if not prohibited, until the child was 5 years old. The Committee also thought that physical recreation and exercise should be provided for, and that a greater elasticity should be allowed in the conditions upon which recognition as a certificated teacher was granted, in order to provide for a more thorough instruction of the young in cookery, hygiene and domestic economy. The view was also expressed that special magistrates should be appointed to deal with juvenile delinquents, and a medical inspection of school children was suggested.

Evidence was taken on the extent of underfeeding of school children, and on the extent of existing voluntary methods of providing food, and in regard to this problem, the Committee agree with the opinion of the Royal Commission on Physical Training (Scotland) "that the preparation and cooking of these meals (*i.e.*, meals for children who attend school habitually underfed), where it is found necessary to provide them, ought to be regarded as one of the charges incident to school management." The treatment of many of these children whose antecedents place them in the category of "retarded" is best managed, in the opinion of the Committee, by means of special

schools of the Day Industrial Schools type, but stress is laid upon the fact that it is the duty of parents to provide personal necessities such as food, clothing and lodging for their children, and the first aim in dealing with such matters should be to restore self-respect, and to bring home to the parents the duty of providing for their offspring.

Dealing with risks of contamination during adolescence, it was noted that girls are not so prone to tight-lacing as was formerly the case; also that there appears to be a general opinion that young women are growing larger in stature; the desirableness of obligatory attendance at evening classes in hygiene, domestic economy and physical exercise was touched upon; suggestion was made that if municipal crèches be established, girls over 14 years of age might be made to attend occasionally in order to obtain instruction in infant management.

With regard to boys, the Committee are of opinion that shelters, fitted with gymnastic appliances, should be provided by municipalities in all or some of their open spaces; that some grant should be made from the national exchequer in aid of all clubs and cadet corps conducted on approved lines; that all boys should be obliged to attend continuation classes in which drill and physical exercises take a prominent place; and that a central body should be established in each town to supervise voluntary agencies of all kinds, and to collect information and to give advice on the various kinds of employment open to young people upon leaving school. Juvenile smoking is shown to be on the increase, and is said to have a very deleterious effect upon its votaries, although no actual testimony is forthcoming to prove that early smoking diminishes growth. The Committee recommend the introduction of a Bill in Parliament prohibiting the sale of tobacco and cigarettes to children under the age of at least 16 years, and providing that licenses for the sale of tobacco and cigarettes should not be granted to shops frequented by children (*e.g.*, sweet-shops).

The concluding portion of the second part of the report deals with certain special subjects bearing on the general purpose of the inquiry, to which the attention of the Committee has been called.

Syphilis is first taken into consideration, and the general trend of the evidence is to show that this disease is an active agent in the production of congenital weakness and its accompanying degeneracy; it cannot, however, be said to be one of the causes of progressive deterioration, as most of the expert witnesses agreed that the malady was not on the increase in this country. The Committee draw special attention, however, to two points raised in the discussion of this subject:—

(i.) A suggestion that notification of the disease should be made compulsory, and (ii.) the inadequacy of hospital accommodation, especially for the poorer classes, for the treatment of venereal disease. It was pointed out that medical practitioners are reluctant to enter syphilis on a medical certificate as a cause of death, and the Committee would therefore desire to see all reference to "cause of death" eliminated from the death register, and express the conviction that the medical opinion as to the cause of death should be regarded as confidential. They also feel that a Commission of Inquiry into the whole matter should be appointed.

The next special subject dealt with is Insanity, of which syphilis and alcoholism are said to be the chief causes, and next to these, density of population appears to be conducive to mental disease. The Committee came to no decision in regard to the alleged increase in lunacy in Great Britain, but were of opinion that it is on the increase in Ireland, and recommend that an inquiry should be held at an early date as to the extent and character of the growth of lunacy in that country.

In considering the question of eyesight and hearing, no proofs of degeneracy were forthcoming, but the report states that there can be no doubt that the condition of the teeth of the people has become much worse of late years. There is, however, no reason to associate dental degeneracy with progressive physical deterioration, and the Committee decided to make to the Board of Education certain recommendations as to the teaching in schools of the care of the teeth, the enforcement of their daily cleansing, and systematic inspection and treatment of scholars by qualified dentists. In dealing with this subject it is curious to note that one witness points out that as a general rule the higher the social scale of the child the worse are its teeth.

Evidence was also given before the Committee on the subject of vagrancy and the condition of defective children, but the Committee have not thought it necessary to consider them in the report, as it is understood that they are to be the subject of separate inquiries.

The third portion of the report contains a summary of the principal recommendations, 53 in number, which the Committee desire to make. These recommendations are reproduced at full length at the end of this summary.

The Committee, in conclusion, express the hope that the facts and opinions they have collected will have some effect in allaying the apprehensions of those who, as it appears on insufficient grounds, have made up their minds that progressive deterioration is to be found among the people generally, and state that in the carrying out of their recommendations for the rectification of acknowledged evils, they do not rely so much upon any large measure of legislative assistance as in the overcoming of complacent optimism and administrative indifference, and feel that a large-hearted sentiment of public interest must take the place of timorous counsels and sectional prejudice.

Upon examination, the principal recommendations of the Inter-Departmental Committee can be arranged, from the standpoint of the Council, into three groups:—

(*a*) Matters affecting existing services of the Council.

(*b*) Recommendations which affect matters akin to existing services of the Council; and

(*c*) Matters which the Council might consider with a view to obtaining legislation.

Under the first heading may be classed:—

(*a*) Matters affecting existing services of the Council.

(1) *Anthropometric Survey.*

With a view to the collection of definite data bearing upon the physical condition of the population, the Committee think that a permanent Anthropometric Survey should be organised as speedily as possible upon the lines indicated in Part I. of the Report. In the

first instance, this Survey should have for its object the periodic taking of measurements of children and young persons in schools and factories, enlisting for this purpose the assistance, among others, of School Teachers and Factory Surgeons, supplemented by a small staff of professional Surveyors. Besides this, a more comprehensive and specialist survey, spread over a longer period, of the population of the country at large, might be undertaken.

This might be carried out in a modified degree by a voluntary examination of pupils in the Council's schools and educational establishments.

(6) *Building and Open Spaces.*

Local Authorities in contiguous areas which are in process of urbanisation should co-operate with a view to securing proper building regulations, in furtherance of which end the making of Building Bye-laws to be approved by the Local Government Board should be made compulsory on both urban and rural authorities; attention should also be given to the preservation of open spaces with abundance of light and air. By the use of judicious foresight and prudence the growth of squalid slums may be arrested, and districts which hereafter become urbanised may have at least some of the attributes of an ideal garden city.

The attention of the Building Act Committee and Parks Committee might be directed to this recommendation.

(8) *Register of owners of houses.*

It should be the duty of the Local Authority in all towns above a certain size to establish and maintain an accurate register of owners; this is one of the first *desiderata* towards dealing with slum property.

This recommendation should be brought to the notice of the Improvements Committee which is already dealing with the preparation of a ground plan of London.

(9) *Medical Officers of Health.*

A Medical Officer of Health in all areas above a certain population should be required to give his whole time to the work, and in no case, unless convicted of misconduct, should a Medical Officer of Health so engaged be removed without the consent of the Local Government Board.

This is practically in operation in London, there being only one medical officer of health who does not devote his whole time to the duties of his office. Medical officers of health in London cannot be removed without the consent of the Local Government Board.

(11) *Reports from Local Authorities.*

The Local Sanitary Authority in each district should be required to furnish to the Local Government Board, through the County Authority, reports according to certain specified requirements, which would show accurately what was being done, or left undone, in matters of sanitation and administration generally, and would thus form a basis of comparison between different districts. Armed with this information it should be the duty of the Central Authority to watch closely local administration, and to endeavour constantly to level up backward districts to the standard attained in the best administered areas.

The reports of the medical officers of the metropolitan boroughs are already sent to the Council, and the suggestion that they should be so prepared as to form a basis of comparison between different districts is well deserving of consideration.

(4) *Overcrowding.*

The Committee believe that the time has come for dealing drastically with this problem. They advocate an experimental effort by the Local Authority in certain of the worst districts, in the direction of fixing a standard and notifying that after a given date no crowding in excess of such standard would be permitted. It is believed that, if the thing were carried through without hesitation or sentimentality, means would be found, through the ordinary channels of supply and demand, or within the sphere of municipal activity, for housing all but the irreclaimably bad.

(12) *Law as to Insanitary and Overcrowded House Property.*

Nothing has been brought more prominently to the notice of the Committee than the ignorance that prevails, even in quarters which ought to be well informed, as to what the law and the powers it confers are. A statement on this subject was prepared for the Committee with the assistance of the Local Government Board; and it appears to them that the Board could not do better than issue it, with such additions as they think proper, to all Local Authorities.

The question of a circular to local authorities on the existing law and its enforcement might be considered by the Public Health Committee.

(14) *Over-fatigue.*

As a preliminary to any further legislation on the subject of hours of employment, particularly employment of women and children, it is, in the view of the Committee, highly desirable that there should be a strictly scientific enquiry into the physiological causation and effects of over-fatigue, as recommended by the Brussels Congress.

The Public Control Committee might consider this recommendation in relation to the Shop Hours and Seats for Shop Assistants Acts. The Council has power to spend money on investigations under the London County Council (General Powers) Act, 1893.

(17) *Alcoholism.*

The Committee believe that more may be done to check the degeneration resulting from "drink" by bringing home to men and women the fatal effects of alcohol on physical efficiency than by expatiating on the moral wickedness of drinking. To this end they advocate the systematic, practical training of teachers to enable them to give rational instruction in schools on the laws of health, including the demonstration of the physical evils caused by drinking. At the same time, the Committee cannot lose sight of the enormous improvement which has been effected in some countries, and might be effected in this country, by wise legislation.

(20) *Food and Cookery.*

For the purpose of bringing home to the people the importance of properly selected and carefully prepared food, there is much room for training of a socially educative character among girls and young women. To this end the teaching of cookery in schools should be guided by the principles laid down in Paragraph 232 of the Report. Even more may be done by mothers' meetings and lectures, and the distribution of leaflets on the subject. Continuation classes for girls beyond school age should be organised, attendance at which should be compulsory, subject to the exercise of a judicious discretion on the part of the School Authority.

These recommendations might be brought to the notice of the Education Committee.

(29) *Feeding of Infants.*

The Committee are impressed with the enormous sacrifice of infant life due to insufficient or improper feeding. The ultimate remedy lies in that social education already described, and the Committee advocate the systematic instruction in continuation classes of girls in the processes of infant feeding and management. They also recommend the issue to mothers in every district of leaflets on the rearing of babies, similar to those used in Sheffield and Wakefield; this could be done by the municipality, by voluntary associations, or by the Registrar on the registration of every infant.

The attention of the Education Committee might be directed to the suggestions for continuation classes, and as to issuing leaflets for the use of registrars and others.

(31) *Sterilisation and Refrigeration.*

Having regard to the acute difference of medical opinion as to the effects of sterilisation, the Committee recommend an investigation into the whole subject by a small body of experts. Milk, when drawn from the cow, should at once be refrigerated to a temperature of 40 degrees Fahrenheit.

The Public Health Committee may think this a proper subject for inquiry. The expenditure could be defrayed under the London County Council (General Powers) Act, 1893.

(32) *Midwives.*

The Committee desire to call the attention of the Local Authorities to the provisions of the Midwives Act, 1902, which may be made an instrument of the greatest utility for the dissemination among mothers of proper knowledge and practical advice.

The Special Committee recently appointed should have their attention directed to this recommendation.

(33) *Training of Mothers—Health Associations.*

While laying special stress on the need for education of the young in matters of hygiene and domestic economy, the Committee believe even more may be done in the direction of training the mothers of the present generation in these matters. To this end, Health Societies on the lines of the Manchester and Salford Ladies' Health Society should be formed all over the country. Enough has been said of the value of the system by competent judges to justify the Committee in urging upon every locality the adoption of similar methods. They would further suggest to the Local Government Board the expediency of issuing to Local Authorities a circular explaining the objects to be sought and the means by which they can best be attained.

This is also a matter for the consideration of the Education Committee.

(33) *Games and exercises for school children.*

It is desirable that more attention should be given, with the assistance, where possible, of voluntary agencies, to organising games for school children, and for that purpose much greater use should be made both of school and public playgrounds than at present. But the Committee are of opinion that no scheme of games alone can ever be made general enough to supply the place of methodical physical training, and they hope that the course of physical exercises referred to in paragraph 308 will find general acceptance with Local Authorities. While they consider that such exercises should, when possible, be taken in the open air, they would urge upon Local Authorities the expediency of providing play-sheds or rooms other than the ordinary class-rooms in which the exercises may be conducted regularly without interruption from the weather.

(37) *Cookery, hygiene, and domestic economy.*

Instruction in these matters should, as far as possible, be made compulsory on the elder girls at school, and care should be taken that it is placed in the hands of properly qualified

teachers, to which end it is expedient that some State aid should be given under proper conditions to schools of cookery at which teachers are trained, and that hygiene in its various branches should be made an essential element in the course of training for all teachers.

(38) *Partial exemption from school.*

It should be considered whether the present law might not be modified so as to make it possible for a child under fourteen years to obtain partial exemption from the obligation to attend school, on no other condition than that of continuing to attend school up to a later age for certain specified periods and for special subjects of instruction.

(39) *Special schools for "retarded" children.*

The Committee think that special schools of the Day Industrial School type might, with advantage, be established for the temporary treatment of children who are not up to normal school standard and are yet not so defective as to warrant treatment as "mentally deficient."

(41) *Medical inspection of school children.*

The Committee are emphatic in recommending that a systematised medical inspection of children at school should be imposed as a public duty on every school authority, and they agree with the Royal Commission on Physical Training (Scotland) that a contribution towards the cost should be made out of the Parliamentary Vote. With the assistance of teachers properly trained in the various branches of hygiene, the system could be so far based on their observations and records that no large and expensive medical staff would be necessary. The lines on which the inspection should be conducted are laid down in paragraphs 323-326 of the Report.

(42) *Feeding of elementary school children.*

The Committee recommend that definite provision should be made by the various Local Authorities for dealing with the question of underfed children in accordance with the methods indicated in paragraphs 358-365 of the report. The Committee, it will be seen, do not contemplate any one uniform method of procedure, but think that regard should be had to the varying circumstances of different localities. They also suggest safeguards against economic abuse.

(43) *Physical exercise for growing girls.*

If physical exercise of a recreative character were included in the curriculum in the obligatory evening continuation classes for girls, the establishment of which has already been recommended, it would be likely to add greatly to the value and ultimately, it may be, to the popularity of such classes.

(47) *Physical exercise for growing boys.*

Lads should be made to attend evening continuation classes, in which drill and physical exercises should take a prominent place; and, with a view to the encouragement of clubs and cadet corps, exemption from the obligation might be granted to all enrolled and efficient members of such organisations as submitted to inspection and conformed to the regulations qualifying them for public aid.

(52) *Teeth, Eyes, and Ears.*

The Committee are of opinion that the care of the teeth should receive special attention in the teaching of the elements of hygiene in schools, that daily cleansing of the teeth should be enforced by both parents and teachers, and that systematic inspection of the teeth, eyes, and ears of school children should be undertaken as part of that general medical inspection which has already been recommended.

The recommendations on these subjects should all be considered by the Education Committee.

(45) *Open Spaces and Gymnastic Apparatus.*

It should be the duty of Local Authorities to provide and maintain open spaces in some proportion to the density of the population, and such spaces, or some of them, should include shelters fitted with gymnastic apparatus. Every effort should also be made to put such apparatus to the best possible use by placing it in charge of a competent instructor.

The attention of the Parks and Open Spaces Committee should be drawn to this recommendation.

(50) *Syphilis.*

The Committee recommend the appointment of a Commission of Inquiry into the prevalence and effects of syphilis, having special regard to the possibility of making the disease notifiable and to the adequacy of hospital accommodation for its treatment.

This question is one for the consideration of the Public Health Committee. The Council has power to make the disease notifiable in London, with the consent of the Local Government Board

Under the second heading are the following:—

(*b*) Recommendations which affect matters akin to existing services of the Council.

(2) *Register of Sickness.*

It appears to the Committee in the highest degree desirable that a Register of Sickness, not confined to infectious diseases, should be established and maintained. For this purpose the official returns of Poor Law Medical Officers could, with very little trouble and expense,

be modified so as to secure a record of all diseases treated by them. And further, it ought not to be difficult to procure the co-operation of hospitals and other charitable institutions throughout the country, so as to utilise for the same purpose the records of sickness kept by such institutions.

(10) *County and District Councils.*

With a view to strengthening the chain of responsibility in matters of local administration, County Councils should be empowered when necessary, after a reference to the Local Government Board, to act in default of urban (other than municipal boroughs) and rural sanitary authorities within the area of their administration, for all purposes of the Public Health and Housing Acts, to which end the appointment of Medical Officers of Health who would give their whole time should be made obligatory on County Councils.

This would have the general effect of extending to the country the law in force in London.

(15) *Coal Mines.*

The medical examination of young persons should be extended so as to cover those employed in coal mines.

(18) *Education in Rural Schools.*

With a view to combating the evils resulting from the constant influx from country to to town, the Committee recommend that every effort should be made by those charged with the conduct and control of rural schools to open the minds of the children to the resources and opportunities of rural existence.

(19) *Rural Housing and Allotments.*

Local Authorities in Rural Districts should apply themselves to remedying the dearth of cottages which exists in many parts of the country, by the exercise of their powers under Part III. of the Housing Act, 1890, as amended by the Act of 1900. If necessary, these powers might be supplemented by the introduction of some such machinery for putting them in motion as is contained in the Labourers' (Ireland) Acts, 1883-1903. It should also be seriously considered whether the experiment, for which there are legislative facilities, of dividing land into small holdings, might not be tried more frequently.

(22) *Adulteration.*

It would be highly expedient that the Local Government Board should be authorised to fix a standard of purity for all foods and drinks, in the same manner as standards for milk and butter have been fixed by the Board of Agriculture.

A resolution on this subject, passed at the recent conference of representatives of Metropolitan Borough Councils convened by the Council, has been communicated to the Local Government Board and the Board of Agriculture.

(34) *Elementary Schools in Ireland.*

It appears that the elementary school system prevailing in Ireland urgently requires amendment in regard to warming of schools and hygienic conditions generally.

(35) *School attendance in Rural Districts.*

The Committee think that school attendance in rural districts should not be compulsory till the age of six or possibly seven, and should be discouraged, if not absolutely prohibited under five.

(51) *Insanity in Ireland.*

The Committee recommend that investigation should be undertaken at an early date into the extent and character of the increase of lunacy in Ireland.

Under the heading third may be classified :—

(*c*) MATTERS WHICH THE COUNCIL MIGHT CONSIDER WITH A VIEW TO OBTAINING LEGISLATION.

(3) *Advisory Council.*

The Committee are emphatic in recommending the creation of an Advisory Council, representing the Departments of State within whose province questions touching the physical well-being of the people fall, with the addition of members nominated by the medical corporations and others, whose duty it should be, not only to receive and apply the information derived from the Anthropometric Survey and the Register of Sickness, but also to advise the Government on all legislative and administrative points concerning public health in respect of which State interference might be expedient; and to them might be remitted for consideration and report all the problems affecting public health which the requirements of a complex social organisation are constantly bringing to the front. Such a Council, the composition of which might be modelled to some extent on *Le Comité Consultatif d'hygiène publique de France*, would be, the Committee believe, of great assistance, especially to the Local Government Board, and would be calculated to supply the knowledge and stimulus which are necessary in order to give to the Public Health side of the Board's administration a prominence which the multiplicity of its other functions may have tended to obscure, and to attract to its work that measure of public interest and support which has perhaps been lacking hitherto.

(5) *Labour Colonies and Public Nurseries.*

It may be necessary, in order to complete the work of clearing overcrowded slums, for the State, acting in conjunction with the Local Authority, to take charge of the lives of those who, from whatever cause, are incapable of independent existence up to the standard of decency which it imposes. In the last resort, this might take the form of labour colonies on the lines of the Salvation Army colony at Hadleigh, with powers, however, of compulsory detention. The children of persons so treated might be lodged temporarily in public nurseries or boarded out. With a view to the enforcement of parental responsibility, the object would be to make the parent a debtor to society on account of the child, with the liability, in default of his providing the cost of a suitable maintenance, of being placed in a labour establishment under State supervision until the debt is worked off.

This question will probably be raised at the forthcoming conference of Sanitary Authorities of England and Wales convened by the Council as to the spread of disease by vagrants.

(7) *Smoke Pollution.*

The Committee strongly advocate that cases of pollution of the air by smoke and noxious vapours in manufacturing districts should be heard by a stipendiary magistrate. A stricter enforcement of the law, and a change in legislation, giving higher penalties, would produce a great improvement without imposing any serious burden on manufacturers. It should also be considered whether the responsibilities of the ordinary householder in regard to domestic smoke pollution might not be brought home to him.

This recommendation might be brought to the notice of the Public Control Committee.

(13) *Medical Inspection of Factories.*

The existing powers of Certifying Factory Surgeons should be extended (1) so as to enable them to examine employees for purposes of qualification at a later age than sixteen, (2) so as to enable them to re-examine, when necessary, at definite intervals. Further, even if it be necessary that Inspectors of Factories and Medical Officers of Health should have, to some extent, co-ordinate powers with regard to insanitary conditions in factories, an arrangement should be made whereby each authority should notify to the other any defects that may be apparent, although coming within the other's province. Similarly it should be the Certifying Surgeon's duty to notify to the Factory Inspector or the Medical Officer of Health, as the case may be, such defects as may come under his notice.

Factories in London, with certain exceptions, do not come within the jurisdiction of the Sanitary authorities as regards sanitary conditions, although workshops do. Legislation, therefore, would be required to bring factories within such jurisdiction.

(16) *Workshops.*

The inspection and supervision of these, as distinguished from factories, should be strengthened. On the question whether this work should be undertaken by the Local Authority or the Home Office, the Committee are not in a position to make a definite recommendation. But one point in particular that calls for consideration is the propriety of making employment of children and young persons in workshops, dependent, as it is in factories, on a medical certificate.

In London, the inspection and supervision of workshops and homes of outworkers, as regards their sanitary condition, come within the province of the Sanitary Authorities. The suggestion as to medical certificate is one that apparently would involve further legislation.

(21) *Cooking Grates.*

It should be provided by law that every dwelling let for the occupation of a family, should include a grate suitable for cooking.

This point might well be considered in connection with proposed legislation as to tenement houses.

(23) *Infant Mortality and Employment of Women.*

In order to arrive at some conclusion as to the connection between these two, (1) the infant mortality rates should be localised for particular areas in industrial towns, (2) general infant mortality rates for selected industries throughout the country should be taken, (3) the occupations, (if any) of all mothers (married or unmarried) should be shown in the Registrar-General's records.

Possibly this may involve further legislation.

(24) *Still-births.*

Still-births should be registered.

(25) *Medical certificates as to Cause of Death.*

A medical certificate as to the cause of death should invariably be required before the death of any child, or indeed of any other person, is registered. Moreover, the medical certificate should be regarded as confidential, and its contents should never be divulged by the Registrar, as is permissible at present, to the friends of the deceased. It should be sent by the local Registrar direct to the Registrar-General.

This question has been under the consideration of the Public Control Committee and the Council has pressed the advisability of legislation on the subject.

(26) *Employment of Women in Factories.*

The Committee do not think that the period during which employment after confinement is prohibited could be extended without counterbalancing disadvantages. But the law should certainly be strengthened, so as to place upon the employer the burden of obtaining proof that the required period has elapsed since the confinement of the women he employs, or, in the alternative, so as to prohibit future employment in the absence of (1) a medical certificate that it will not be prejudicial to their physical well-being, and (2) proof that reasonable provision is made for the care of their infants. This might take the form of a crèche, or be secured by the recognition for the purpose of a duly licensed body of women.

(28) *Milk Supply.*

With a view to ensuring the purity of the supply of milk to the community, the Committee think that the measures indicated in paragraph 273 of the Report should be taken; in default of the Local Sanitary Authority taking proper precautions the County Council should in all cases be authorised to act, and it should be the duty of the Local Government Board to intervene in the ultimate resort.

This would require further legislation and would tend to protect London from impure and infected milk being sent from the country.

(30) *Milk Depôts.*

It is of great importance that the milk supply should pass through as few hands as possible, and that milk vendors should not be general dealers whose sale of milk is confined to a few quarts. In order to effect these objects, milk depots should be formed in every town, obtaining their supply direct from the farms. The Committee believe this could be done without recourse to direct municipal action, but they think that in all improvement Bills promoted by Local Authorities, the insertion of provisions dealing with the milk supply within their area should be insisted on.

This question is now under the consideration of the Public Health Committee.

(41) *Medical Inspection of School Children.*

The Committee are emphatic in recommending that a systematised medical inspection of children at school should be imposed as a public duty on every school authority, and they agree with the Royal Commission on Physical Training (Scotland) that a contribution towards the cost should be made out of the Parliamentary Vote. With the assistance of teachers properly trained in the various branches of hygiene, the system could be so far based on their observations and records that no large and expensive medical staff would be necessary. The lines on which the inspection should be conducted are laid down in paragraphs 323-326 of the Report.

(42) *Feeding of elementary school children.*

The Committee recommend that definite provision should be made by the various Local Authorities for dealing with the question of underfed children in accordance with the methods indicated in paragraphs 358-365 of the Report. The Committee, it will be seen, do not contemplate any one uniform method of procedure, but think regard should be had to the varying circumstances of different localities. They also suggest safeguards against economic abuse.

These are matters for the consideration of the Education Committee.

(44) *Crèches.*

Wherever it was thought desirable, owing to the employment of married women in factories, or for other reasons, to establish municipal crèches, girls over fourteen might be made to attend occasionally, and the teaching of infant management to such girls should be eligible for aid from the grant for public education.

This question is under the consideration of the Public Health Committee in connection with a resolution passed at the recent conference of representatives of metropolitan borough councils on the Public Health (London) Act.

(49) *Juvenile Smoking.*

The Committee recommend that a Bill should be brought before Parliament at an early date, having for its object, (1) to prohibit the sale of tobacco and cigarettes to children below a certain age ; (2) to prohibit the sale of tobacco and cigarettes in sweet shops frequented by children.

There remain a few miscellaneous recommendations, as follows :—

MISCELLANEOUS.

(27) *Provident Societies and Maternity Funds.*

Charitable efforts in manufacturing towns might well be directed towards endowing and maintaining insurance organisations to which employees, assisted by voluntary subscriptions, could contribute while at work, and from which they might receive assistance during the period of confinement and afterwards.

(40) *Special Magistrate for juvenile cases.*

In all cases touching the young where the assistance of a magistrate is invoked, he should, where possible, be a specially selected person sitting for the purpose.

(46) *Clubs and Cadet Corps.*

Having regard to the enormous value to the physique of growing lads of these institutions, and to the possible saving of expenditure in other directions resulting therefrom, the Committee are of opinion that some grant should be made from the National Exchequer in aid of all clubs and cadet corps in which physical or quasi-military training, on an approved scheme, is conducted, subject to public inspection.

(48) *Organisation of existing institutions for the welfare of lads and girls.*

In order to organise existing efforts on a comprehensive and effective basis, the Committee would like to see a central body, in touch with municipal activity, established in every large town, and charged with the duty of supervising and directing voluntary agencies with a view to bringing them up to a minimum standard of efficiency.

(53) *Vagrancy: Defective Children.*

The Committee wish to record their belief that the proposed inquiries into these subjects will be of great value.

Spring Gardens, S.W.
20th October, 1904.

G. L. GOMME,
Clerk of the Council.

one insanitary area for which a provisional order was obtained fifteen years ago, and which is not cleared yet. There is certainly an improvement, sh added, during the last five years, but even now the building bye-laws are not as stringent as they ought to be, and, in the opinion of a great many, the Corporation are not pushing on things as they ought. Greenwood, 8131. Greenwood, 8154, 8129.

114. The severest exposure of neglect was given by Miss Garnett, the head of a settlement of philanthropic ladies in the Staffordshire Potteries. According to her evidence, more than two bedrooms in a house are rarely to be found in that district, and these houses are sometimes occupied by eight adults. "I should think," she said, "the local authority in the Potteries was as inefficient as you could find anywhere." Most of the bad houses are owned by members of the local bodies, and the sanitary inspectors are too much in awe of their employers to carry out their duty. The only hope of a change, short of a drastic interference from headquarters, lay, in her opinion, in a registration of the owners of slum property and the rendering the Medical Officer of Health independent of the local authority. The normal type of municipal organization was, as has been stated, criticised by one witness as deficient in the elements of good government, owing to the fact that the principal officer was the creation of annual election, whereas in Germany local administration was treated as a profession; but looking to the excellent results that are obtained in certain places, it would seem that it is not so much the instrument that is in fault as the impulse behind it. Garnett, 9087–8. Garnett, 9096. Garnett, 9136, 9147. Horsfall, 5629.

115. It is, moreover, often forgotten that police control, which in Germany is the saving factor of the position, is there much stronger than in this country: a fact which is largely attributable to compulsory military service, the disciplinary effect of which touches every point of administration.

116. The reluctance to incur necessary expenditure, insensibility to the pressing nature of the evils themselves, and the difficulties inseparable from any serious effort towards their removal, are the main causes of the neglect which the Committee have noticed. In some cases the interests of manufacturers and property owners have been alleged to interfere with the proper exercise of the functions of local administration, and behind the whole system there is no sufficient driving power to secure that adequate pressure shall be brought to bear on the careless or indifferent.

117. It has been represented to the Committee that one of the first *desiderata* towards dealing with slum property is an accurate register of owners, and there seems no reason why in all towns above a certain size it should not be the duty of the local authority to make and preserve such a register. Garnett, 9142–7.

118. Another change which might effectually reinforce the cry for improvement in many places would be to grant security of tenure to the Medical Officers of Health, who as a rule hold office at the goodwill of the Local Authority. Such security is enjoyed in Scotland and in London, and the Committee, who had the advantage of hearing the evidence of Mr. Lithiby, Assistant Secretary of the Local Government Board, on the point, think that in no case, unless convicted of misconduct, should a Medical Officer of Health, not engaged in private practice, be removed without the consent of the Local Government Board, and that in all areas above a certain population he should be required to give his whole time to the work. Rowntree, 5237–5241. Horsfall, 5630–3. Niven, 6465–6474, 6485–6493. Fosbroke, 6721–4. Garnett, 9095–7, 9136–9141, 9176–9, 9310–3. Lithiby, 13489–13527.

119. It appears, moreover, that the chain of responsibility should be made more complete, so that minor authorities, if notoriously negligent, might be superseded by some superior body with a wider outlook and a more sensitive sanitary conscience. In London a power resides with the County Council to step in upon neglect of the Metropolitan Borough Councils to discharge their duties under any part of Part II. of the Housing Act, 1890, and the Committee think it would be expedient if in certain circumstances County Councils were empowered, after a reference to the Local Government Board, to act in default of any urban (other than a municipal borough) or rural sanitary authority within the area of their Ashby, 8823–6. Loch, 10285–8.

administration, for all purposes of this Act and the Public Health Acts. To this end it would be necessary to amend the Act of 1888, by rendering it obligatory on every County Council to appoint a Medical Officer of Health, who should be required to give his whole time to the work.

120. It remains to be considered whether, apart from direct representations on the subject which might call for special examination, any general criterion of neglect ought to be laid down, the fact of which should make it the duty of the higher authority, either local or central, to intervene.

121. On the establishment of an anthropometric survey, the disclosure of any marked declension in physical characters might be one such criterion, an abnormal death rate continued for two or three years or the recurrence of serious epidemics might be another; but the Committee are inclined to view with particular favour a suggestion of Mr. C. S. Loch, that the local sanitary authority should be made to furnish information according to specified requirements, which would show what was being done or left undone in the matter of sanitation, and the administration of the law relating to overcrowding and so on. Mr. Lithiby, it is true, stated that, according to the present practice, returns were made by the Medical Officer of Health, which often led to enquiry and the rectification of gross abuses, but the Committee think that the responsibility of the local administration in this regard ought to be emphasized, and consider Mr. Loch's proposal a useful one from that point of view.

Loch, 10258.

Lithiby, 13530-13541.

122. The particulars required for the purpose of such a return might include the infant death rate, the number of cellar and back-to-back houses, an enumeration of one-roomed, two-roomed and three-roomed dwellings, with the tale of occupants in each dwelling, and the minimum amount of cubic feet allowed for each person, the character of the water supply and sewerage arrangements, and the means for the disposal of refuse, and any cognate matters, information on which would afford a clue to the character of the administration.

123. No reasonable objection could be taken if on a comparison of the returns a gradual effort was made to screw up the efficiency of local government to the standards of its best exponents in town and country. As Mr. Loch said elsewhere—

Loch, 10171.

"There are many conditions for the prevention of which a local authority is working and in regard to which a central authority could do a great deal to assist. It can inspect and it can work on the natural method of promoting good conditions by the process of imitation."

And he went on to urge—

Loch, 10174-5

"That possibly by a more systematic application of the law on definite lines, in conjunction with the support of the central authority, the staff work could go very much further";

and in certain directions he would look for valuable volunteer help, as for instance in the form of sanitary visitors.

124. The public health is obviously a question of the highest general concern, and, to the extent that local independence militates against its security, the principle of local self-government must be subordinated to more important interests. The motive governing domestic legislation of recent years has been a devolution on the Local Authority of powers as extensive as possible. The Committee have a firm belief in the soundness of this principle, but they hold no less strongly that an important function remains for the Central Government as representing the nation at large, viz: to watch the play of local administration throughout the country, and to bring influence to bear on backward districts, with a view to levelling them up to the standards attained in what are by general consent the best administered areas. They venture to doubt whether this latter consideration has received due prominence. The mass of routine work in which the Local Government Board is immersed, affords it little time for the consideration of questions of public policy in the sphere of health, and may render it slow to assume the responsibility of applying new principles of administration; but it is in these

directions that opportunities for improvement lie, and the Committee think the Board would find in the knowledge and stimulus of such an Advisory Council as has been suggested a most useful auxiliary.

125. The Committee are strongly of opinion that recourse should be had to the methods they have described, and as a first step they think that the making of Building Bye-laws to be approved by the Local Government Board should be made compulsory on the several authorities, urban and rural.

126. The recent French Law on Public Health (*Loi du* 15 *Fevrier*, 1902) has already been mentioned, but it rests on such logical and intelligible principles that some further account of it at this stage may not be out of place. Henri Monod: "La Santé Publique."

127. In the view of its framers it was held to be axiomatic (1) that the whole of any administrative area is threatened by the insalubrity of any of its parts, and (2) that the inhabitants of any *commune* have a right to be protected against the negligence of its municipality.

128. In applying these principles, the framework of the local organization provided by the law presents some obvious advantages. While looking to the local authority to be the executant of those changes which are demanded in the interests of public health, it recognises that that authority is often without the competence or independence to decide upon their nature or extent, and that these questions must be determined by a freer body of expert opinion. There is thus established a hierarchy of powers for the purpose in close connection with, but independent of, the local administration, terminating in "*Le Comité consultatif d'hygiène publique*," which has its seat in the capital and is the supreme adviser of the Minister of the Interior in matters of this character.

129. In immediate connection with this Committee in each department is the "*Conseil d'hygiène départmental*," composed of from ten to fifteen persons, of whom two must be "*Conseillers Généraux*," three doctors of medicine, one a pharmacist, one an engineer, one an architect, and one a veterinary surgeon; by and with the advice of this body it is the duty of the *Conseil Général* to map out the whole department in "*circonscriptions sanitaires*," and provide each *circonscription* with a "*commission sanitaire*," from five to seven in number, of whom one must be a "*Conseiller Général*" elected by his colleagues, and the others experts appointed for a term of years by the *préfet* in the same way as the expert members of each *Conseil d'hygiène départmental*.

130. These *Commissions Sanitaires* form the inspecting and advising body, by whose influence pressure is brought to bear upon negligent municipalities; they can either act (1) on the report of the *maire* of the *commune*, moved thereto by the complaint of occupiers, neighbours, the *bureau d'hygiène* of any town that has one, or the police; (if the *maire* refuses to forward the complaint, the persons interested may address themselves to the *préfet*, who proceeds to charge the commission with the duty of making inquest); or (2) upon the direct instruction of the *préfet*. In the last case, the occasion of his intervention is prescribed by the law.

131. By the terms of Art 9—

"Lorsque pendant trois années consecutives le nombre de décès dans une commune a dépassé le chiffre de la mortalité moyenne de la France, le préfet est tenu de charger le conseil départmental d'hygiène de procéder, soit par lui-même, soit par la commission sanitaire de la circonscription, à une enquête sur les conditions sanitaires de la commune."

132. If as the result of this enquiry certain works are said to be necessary they must be carried out, though further resistance on the part of the municipality may necessitate recourse being had to the *Comité consultatif d'hygiène publique*, and, finally, to a decree of the President *en Conseil d'Etat*.

133. All towns of over 20,000 inhabitants are obliged to have a *bureau d'hygiène*, and also most of the communes that possess a thermal establishment.

134. The general effect of these provisions is to combine the various administrative units of the country into one homogeneous organization, inspired by similar ideals and recognizing a common obligation. A sense of sanitary responsibility is awakened and a solidarity of interests established between all classes of the community in furtherance of better conditions of public health.

135. The completeness of the system established under this law, its homogeneity and flexibility, bring into relief the gaps in the chain of responsibility permitted by the happy-go-lucky methods popular in this country. Nowhere, however, is pressure from outside or from above more constantly necessary owing to the multiplicity of independent administrative units.

136. Nothing has been brought more prominently to the notice of the Committee than the ignorance that prevails even in quarters that ought to be well informed as to what the law and the powers it confers are. A statement on this subject was prepared for the information of the Committee, with the assistance of the Local Government Board; and it appears to them that the Board could not do better than issue it, with such additions as they think proper, to all Local Authorities.

Appendix IV.

137. The Committee are given to understand that the pressure from above, which in many cases they consider so necessary, is very intermittently employed; indeed, in some spheres of the Board's possible activity, it was allowed by Mr. Lithiby that the powers conferred are held in permanent suspense. Thus in no case, with a view to compelling the enforcement by the local authority of "any provisions of the Act which it is their duty to enforce," has the Board ever made an order under s. 299 of the Public Health Act, 1875, limiting the time for the performance of their duty by the local authority; nor has an order, so the Committee believe, ever been issued under s. 31 of the Housing Act, 1890, (Part II.), even if, as seems doubtful, any such order is enforceable.

Lithiby, 13670.

138. It is not for the Committee to say that the Board is in no circumstances justified in dispensing with the exercise of functions to the discharge of which it is called by the Legislature, but they are concerned to learn that in matters so closely touching Public Health as are covered by the parts of the statutes mentioned, there appear to be insurmountable obstacles to the use of the powers of the Board.

iii. *Conditions of Employment.*

(*a*). *Character of Employment in relation to physique.*

139. With the changes in occupation attending the rapid urbanization of the people, it is obvious that the conditions of employment must enter largely into the causes that determine physique.

140. No one will deny that coincident with the large increase in the number of factory workers great amelioration has taken place in the circumstances of labour, but causes prejudicial to health cannot be altogether eliminated, and under the most favourable conditions degenerative agencies will continue at work. Moreover, it seems to be the case that the advance has been more in the direction of combating the effects of dangerous trades, which, after all, only affect a comparatively small section of the working population. Describing the life of a boy of fourteen in a textile district, who has probably been bred in unwholesome environment and nourished on unnatural food, Mr. Wilson, H.M. Inspector of Factories, said :—

Wilson, 1927, 1930.

"The hours will be long, fifty-five per week, and the atmosphere he breathes very confined, perchance also dusty. Employment of this character, especially if carried on in high temperatures, rarely fosters growth or development; the stunted child elongates slightly in time, but remains very thin, loses colour, the muscles remain small, especially those of the upper limbs, the legs are inclined to become bowed, more particularly if heavy weights have to be habitually carried, the arch of the foot flattens and the teeth decay rapidly."

141. He continues :—

"The girls exhibit the same shortness of stature, the same miserable development, and they possess the same sallow cheeks and carious teeth. I have also observed that at an age when girls brought up under wholesome conditions usually possess a luxuriant growth of hair, these factory girls have a scanty crop which, when tied back, is simply a wisp or 'rat's tail.'"

But he added the impression that, generally speaking, females withstand the evil effects of adverse environment slightly better than males from birth to at least maturity, a circumstance which may to some extent be counted among the causes that arrest the transmission of these effects to the next generation. Wilson, 1931.

142. It was noted by the same witness that occupations had a profoundly selective effect, the strongest following the calling where their physical powers will have the maximum advantage in wage earning, and the weakest drifting to those where their lack of vigour will tell least against them. By this pressure the weaker vessels are constantly recruiting those fields of employment least capable of fostering development, and the poorest in physique are those met with in the lowest paid and unskilled textile operations. Another witness put this clearly, and stated that there was a regular gradation through the factories of the more or less inefficient boys, who could not get better employment by reason of their poor physique, and this has been more apparent since the operation of the Factory Act of 1901, because employers are more careful than formerly to weed out unsuitable candidates. Wilson, 1934–5. Young, 2054–7, 2069.

(*b*). *General Conditions of Factory Employment.*

143. It must not be assumed, however, that factory life is necessarily injurious to persons of normal health; indeed, Miss Anderson, H.M. Principal Lady Inspector of Factories, went so far as to say that within proper limits as to hours and periods, and with such hygienic surroundings as are attainable, it may be a means of improving the health of women and girls of the poorer classes. Anderson, 1466–8, 1580–4.

144. Dr. Young, whose evidence has been already mentioned, furnished the Committee with opinions collected from various factory surgeons throughout the country as to the comparative physique of the factory class : the general direction of those opinions (with exceptions) was to the effect that there was no general deterioration at the present time, but rather a gradual improvement ; and such was Dr. Young's personal impression. Young, 2076–2091, 2117.

145. Dr. Young also thought that the system of factory surgeons had been productive of beneficial results, not only in the rejection of cases not fit for employment, but also in the moral influence exercised by the surgeons in the way of cleanliness and decency ; it was further stated that the latitude granted under the last Factory Act to assign candidates for employment in factories to certain industries, or certain departments of an industry, was working very well and likely to be fruitful of good. Young, 2122. Anderson, 1523–8.

146. Miss Anderson indicated very clearly the difference in the functions of factory inspectors and certifying surgeons, pointing out that the former are better able to speak of the "conditions affecting health in the factories than of the results in the workers' state of health." The duty of the certifying surgeon is to certify as to the qualification of children and young persons for employment, to inquire into accidents and certain cases of notifiable disease, to re-examine persons under sixteen (if required by the inspector), and to report to the Secretary of State as to health generally. Anderson, 1444–6.

Anderson, 1489–1509, 1544–1554. Appendix XV.

147. Miss Anderson gave a classification of the sources of injury to health, life and limb, from factory employment, as follows :—

1. Accidents.
2. Poisoning and damage from toxic agents, or excessive dust, fumes, &c.
3. Over-fatigue.
4. Defective ordinary hygiene.

Scott, 1781, 1860.

As regards the first two, men suffer most; as regards the third, women. And on this head Miss Anderson, as well as Dr. Scott, thought there had not been a sufficient amount of scientific study. At the Brussels Congress it was recommended that Governments should do all in their power to further an enquiry into over-fatigue. In many cases hours are too long for women, and in some industries, especially the clothing trade and dressmaking, there are not sufficient pauses for food. Laundries and food-preserving industries give an example of too long hours; and excessive strain by carrying heavy weights takes place in food-preserving works, bleach and dye works, earthenware and china works, and various metal trades. Besides this the worker must often contend with extremes of temperature and often with the humid atmosphere which is inseparable from some forms of industry.

148. Generally, however, Miss Anderson pointed out that remedies were being applied by law, and year by year better applied, to remove these defects; and she suggested that we had by no means had time yet to see the full effects which might be expected from the Factory and Workshop Act, 1901.

Garnett, 9065–8, 9129–9133.

149. Miss Garnett approved of the provisions of this Act, but did not think they were properly applied in the Staffordshire Potteries; the worst offenders were the small manufacturers who had risen quickly. Mr. Wilson did not think legislative interference had reached its maximum; and he, too, pointed to the terrible strain of long hours; in some cases, even for children, the hours of work being twelve, with two hours off for meals. He also instanced the lack of ventilation in work-rooms where people are engaged in sedentary occupations. Dr. Legge thought exposure to injurious dust the worst feature of factory life, and that employment in a humid atmosphere gradually undermined the health, but he admitted that we were working on the right lines towards reform in these matters.

Wilson, 1964–6, 2035–8.

Legge, 5829–5837.

150. In regard to the important point of ventilation, Section 7 of the Act of 1901 provides that—

"In every room in any factory or workshop sufficient means of ventilation shall be provided and sufficient ventilation shall be maintained."

There is no definition of the word *sufficient*, but the Secretary of State has power by Order to prescribe a standard of sufficiency for any class of factories or workshops. Since the passing of the Act of 1901, only one such order has been made, and this merely fills up a gap created by the repeal of previous enactments. By this Order, dated February 4th, 1902, a minimum of 600 cubic feet of fresh air per hour is prescribed for each person employed in every textile factory, not being a cotton-cloth factory, in which atmospheric humidity is artificially produced by steaming or otherwise, and in which no special rules in regard to humidity are in force. Besides the fact that the above Order is limited in its application, no standard of ventilation in terms of gaseous impurity has hitherto been prescribed, partly in consequence of a difference of opinion between the Ventilation Committee and various bodies, such as the Society of Medical Officers of Health; so that bad ventilation in many cases still cries for a remedy. Instances of such cases were given by Mr. Rowntree, in whose own works there are large rooms where 500 girls are employed and the air is changed every seven minutes, and is passed through water screens.

Rowntree, 5191.

151. The question of employment of women in relation to child-bearing was much discussed, but can be better considered in relation to child life.

Other effects of the employment of women are the tendency it sometimes has to encourage men to loaf while their wives earn the wages, and actually to cut men out of work; also the tendency to encourage neglect of home and children. The number of women employed in factories is not diminishing relatively to the population, but, except in the laundry industry, there is no significant increase. Miss Anderson thought that in some districts the general tendency of factory life was to disincline young persons for home responsibilities. Garnett 9345–9367. Anderson, 1617, 8, 1619–1624.

152. Dr. Scott deprecated the system of half-time employment under the Factory Acts as not conducive to the health of the children. The amount of half-time is, however, reduced at the present day; for instance, in Dundee which, along with Paisley, is practically the only town in Scotland where this form of employment prevails, it does not affect more than 1,200, whereas, in 1896, 2,800 children were so employed. Mr. Wilson gave some measurements of children employed in factories compared with average measurements, greatly to the disadvantage of the former. Scott, 1667, 8, 1786–1797. Wilson, 1921–5, 1936.

153. While admitting for the most part that the provisions of the Factory Act are on the right lines, various witnesses had an important improvement to suggest, namely, an organised Medical Inspection of Factories; that is to say, an extension of the existing powers of certifying factory surgeons (1) so as to enable them to examine employees for purposes of qualification at a later age than sixteen (this Miss Anderson would limit for the present to eighteen or twenty-one), (2) so as to enable them to re-examine, when necessary, at definite intervals, and (3) so as to include the general powers of medical officers of health in regard to insanitary conditions. In this connection the danger of phthisis and other forms of tuberculosis in factories was emphasised by Dr. Scott and Dr. Young; and Dr. Young would make notification of these diseases in factories compulsory. Young, 2165–8. Anderson, 1523–1530, 1446–1451. Scott, 1762–5, 1829–1831. Scott, 1715–1721. Young, 2146–7.

154. Dr. T. M. Legge, Medical Inspector of Factories, intimated that the greater part of his time was taken up in dealing with trades specially scheduled as dangerous; and the fact seems to be that, while the risks in these trades have been greatly reduced, it is now time to devote more attention to the working of the general provisions of the Factory Act, and to getting those provisions supplemented where necessary. Legge, 5810–1.

155. The appointment of women inspectors in greater abundance than at present was also advocated; and Dr. Young mentioned that in Hudson's Soap Works and the Diamond Match Works the appointment by the employers of special lady superintendents has had great influence for good on the health of the employees. Young, 2103. Garnett, 9314–9527.

156. Dr. Scott was strongly of opinion that the medical examination of young persons should be extended so as to cover their entry into coal pits. The only present condition is that they must be a certain age, and according to his evidence, "It does not matter to the managers whether they are scrofulous, rickety, phthisical or anything else—they get them into the pit." Dr. Young also instanced coal miners as a class liable to degeneration. Scott, 1721. Young, 2116.

157. The Committee desire to endorse generally these recommendations.

(*c*) *Small Workshops and Home Work.*

158. There appears to be a lack of regulation and control over small workshops; though they come to some extent under the provisions of the Factory Act, they contrive to escape notice, and are often not visited at all. Dr. Scott called attention to the fact that the certifying surgeon examines children and young persons in factories but not in workshops, whereas these last are not, in his experience, as healthy as factories. It appears that there are practically no examinations by certifying surgeons of children and young persons in any kind of workshop. In factories such an examination is com- Legge 5911, 2. Scott, 1653–5.

pulsory (section 63 of the Factory Act, 1901). In workshops it is only undertaken at the request of the occupier (section 65 of the same Act), save in particular cases where the Secretary of State makes a special order under section 66. As a matter of fact, no such order, the Committee understand, has been made. The result is that, as shown by the statistics published in the report of the Chief Inspector of Factories, for 1901, while 376,278 children and young persons were examined in factories, only 413 were examined in workshops. As the case stands, there is practically nothing to prevent a child rejected for factory work from at once finding employment in a workshop. No doubt one of the reasons for this is the multiplicity of workshops, of which the Committee understand there were under inspection in 1901 143,065, as against 97,845 factories. Obviously the extension of the certifying surgeon's inspection of children and young persons to cover employment in workshops, would be a formidable undertaking, but the Committee are of opinion that the matter is one which calls for the earnest consideration of the department concerned.

159. Local authorities have now the power to deal with places where "homework" is being carried on, in a systematic way, and it appears that in some places this is being done. But in regard to small workshops Mr. Booth pointed out that they are not included within the purview of Sec. 108 of the Act of 1901, and with a view to counteracting the neglect under which, as has been said above, these establishments suffer, he advocated a double system of licence by which both the owner of the premises and the employer might be made responsible.

Booth, 1020-3, 1110-4.

III. Alcoholism.

160. Next to the urbanization of the people and intimately associated with it, as the outcome of many of the conditions it creates, the question of "drink" occupies a prominent place among the causes of degeneration. The close connection between a craving for drink and bad housing, bad feeding, a polluted and depressing atmosphere, long hours of work in overheated and often ill-ventilated rooms, only relieved by the excitements of town life, is too self-evident to need demonstration, nor unfortunately is the extent of the evil more open to dispute.

161. The evidence laid before the Committee teems with testimony as to the disastrous operation of these causes. Dr. Scott puts alcohol first among the influences that retard improvement.

Scott, 1777, 8.

"They are living on it, some of them, and the lower you go the worse it is."

And Mrs. Mackenzie expressed the general view when she said—

Mrs. Mackenzie, 7068.

"I think that if the drink question were removed, three-fourths of the difficulty and the poverty and degradation altogether would go along with it."

162. Not only is poverty the result of drink, but it becomes an active agent in promoting it.

Niven, 6297.

"People who have not enough food turn to drink to satisfy their cravings, and also to support their enfeebled hearts by alcohol";

or, as another witness said—

Jones, 10814.

"The poor often drink to get the effects of a good meal. They mistake the feeling of stimulation after alcohol for the feeling of nutrition."

They turn to it to blunt their sensibility to squalor, and it reacts in deadening all desire for improvement. On the other hand, Sir L. Ormsby noticed more drunkenness among the artizan population in Dublin owing to the fact that being in receipt of good wages they had a larger margin to spend in drink.

Ormsby, 12732.

163. As to whether drunkenness is on the increase it is not perhaps easy to speak. Dr. Eichholz, in his investigation into the condition of the children in a poor school in Lambeth, was informed that there were not more

Eichholz, 436.

than twelve parents out of two hundred who did not "fortify themselves by the irregular use of alcoholic stimulants." Dr. Niven gave a list of occupations with which intemperance was more particularly associated; but Manchester witnesses seemed to think that, on the whole, there was less general drunkenness. Mr. Fosbroke, Medical Officer of Health to the Worcester County Council, believed there was less among agricultural labourers, and, with exceptions in certain districts, this is probably true of England as a whole; both Scotch and Irish witnesses declined to testify to any considerable improvement within their experience, though the worst conditions are probably limited to the towns small and great.

Niven, 6288–9, 6297–8.
Rees, 4342–9.
Worthington, 7316.
Bostock, 7443.
Fosbroke, 6550.
Scott, 1777–1780.
Cameron, 10989.
Kelly, 11316–11320.

164. In one respect, however, and that in a direction pregnant with evil, there is an admitted increase. The tendency of the evidence was to show that drinking habits among the women of the working classes are certainly growing, with consequences extremely prejudicial to the care of the offspring, not to speak of the possibility of children being born permanently disabled. Factory labour is mentioned as a predisposing cause, and Miss Garnett noted the pernicious effects of drink clubs on the young girls employed in the Potteries. Dr. Wiglesworth instanced the depressing influence of pregnancy as a cause with many, and the general effect of town life in creating a demand for excitement and lessening the force of public opinion was mentioned by others. Sir Charles Cameron, Medical Officer of Health for the City of Dublin, attributed to similar causes a marked increase in general intemperance in that city. On the other hand, intemperance among young women in rural districts is believed to be rare.

Eichholz, 436.
Scott, 1780.
Rees, 4347.
Rowntree, 5047–9.
Smith, 8503–4.
Lamb, 11519.
Wilson, 1945.
Young, 2108.
Garnett, 9079–9086, 9171–2.
Jones, 10823.
Eccles, 10712.
Wiglesworth, 8985.
Cameron, 10986–9.
Close, 2766–7

165. Besides the large mass of general evidence tendered on the subject, the Committee had the advantage of hearing two special witnesses who presented themselves as the result of concerted action on the part of a group of medical men who have been particularly interested in the effects of alcohol.

166. Of these gentlemen—fourteen in number—five represented the alienist side, four were hospital physicians, two hospital surgeons, one a medical officer of health, one a workhouse medical officer, and one the medical officer of a medical mission: with them were associated four laymen, Mr. J. Henderson, representing the National Temperance League, Mr. Stafford Howard, Director of the United Kingdom Temperance and General Provident Institution, and the Secretaries of the Central Temperance Legislation Board and the National Temperance League. Following upon the deliberations of a Conference so constituted, certain authoritative statements were submitted to the Committee, upon which it was proposed to base evidence on the relationship of alcohol to physical deterioration, and Mr. McAdam Eccles and Dr. Robert Jones were selected as witnesses.

Appendix XVI.

167. The first point on which Mr. Eccles laid stress was the physical action of alcohol on tissues. Illustrating this by the results of experiments on vegetable growths, animal protoplasm, and the development of certain eggs, he argued that the action upon the cells of the entire body is similar in character and operative in the same adverse manner. These facts are held to be of special importance, when the great increase of drinking among women already described is realised. It is true, as was pointed out, that history affords instances of drunken nations whose vitality does not seem to have been greatly interfered with, but this is assumed to have been the case because the mothers of the race were sober, and the conclusion is stated that,

Eccles, 10656, Appendix XV

"If the mother as well as the father is given to drink, the progeny will deteriorate in every way and the future of the race is imperilled." Appendix XVI., 12.

168. Mr. Eccles submitted some striking figures (1) from Dr. Tatham's letter to the Registrar General, (2) from certain Insurance Tables, to prove the effect of alcohol in shortening life. According to the first it has been ascertained that of 61,215 men between 25 and 65, 1,000 die in one year, but of

Appendix XVI., 2, 3.

61,215 publicans no less than 1,642 die in one year, while of Rechabites (abstainers) only 560 die. Under the second head the higher vitality of temperance lives is shown by the fact that, whereas out of 100,000 persons aged 30, some 44,000 would, according to the average rates of mortality, survive to the age of 70, over 55,000 abstainers might be expected to reach that age, or 25 per cent. more.

Jones, *passim*. Appendix XVI., 4

169. The lunacy figures, which were dealt with by Dr. Jones, show a large and, in some cases, an increasing number of admissions of both sexes which are due to drink, and an increase of general paralysis among lunacy patients tells the same tale.

170. Special causes appear at work in particular places: thus in Nottingham, where so many women are employed in lace factories, twice as many women as men are received into the asylum whose insanity is ascribed to drink. In Sunderland, on the other hand, where the prosperity of the mechanic and the miner is evidenced by higher wages and abundant work, the proportion reaches 38·6 per cent. for men as compared to 20 per cent. for women. But even these figures are surpassed in Scotland. From the report of the Gartloch Asylum for the City of Glasgow the percentage of males was 45 and of females 26·8.

171. The influence of climate has, of course, to be considered in connection with these figures. In marked contrast to the foregoing, we find the case of Cornwall, which for men and women gives a combined average of under 2 per cent., and of rural Kent, which gives a combined average of 3·8 per cent.

172. In summing up the influences of alcoholism Dr. Jones states—

Appendix XVI., 4.

"Alcohol perverts the moral nature, affects the judgment, and impairs the memory; it moreover especially affects the motor system and creates an enormous loss to the community through destroying the productiveness of the skilled craftsman."

He goes on—

"In regard to the effects of alcohol upon the descendants, anything which devitalizes the parent unfavourably affects the offspring, *and clinical experience supports this in the lowered height, weight, and impaired general physique of the issue of intemperate parents.* It also records the fact that no less than 42 per cent. of all periodic inebriates relate a history of either drink, insanity or epilepsy in their ancestors."

Appendix XVI., 8.

171. In further illustration of this point it is stated as the result of observation of the offspring of female chronic drunkards in Liverpool prison, (1) that the death rate among the infants of inebriate mothers was nearly two-and-a-half times that among the infants of sober mothers of the same stock; (2) that in the alcoholic family there was a decrease of vitality in successive children, *e.g.*, in one family the earlier born children were healthy, the fourth was of defective intelligence, the fifth an epileptic idiot, the sixth still-born, nature at last providing its own remedy; (3) that taking women of the same class, with 125 children of 21 drunken mothers, 69 died under two years = 55 per cent., while of 138 children of 28 sober mothers, 33 died under two years = 23·9 per cent.

172. Both Mr. Eccles and Dr. Jones testified to the vulnerability of alcoholic persons to syphilis and tuberculosis, and to their general liability to all forms of what in common parlance are called inflammatory disorders; such persons also suffer much longer from the effects of any malady, thus involving their dependents in prolonged privation.

173. As the result of the evidence laid before them, the Committee are convinced that the abuse of alcoholic stimulants is a most potent and deadly agent of physical deterioration.

174. The mere statement of the contributory causes indicates some, at any rate, of the lines along which remedial effort may work effectually.

Every step gained towards the solution of the housing problem is something won for sobriety. Direct proof was forthcoming of men, who had been addicted to alcohol, passing into better surroundings, with the result that they realized the fact and found it a help to them in struggling against their weakness. The provision of properly selected and carefully prepared food ranks next in value, and to this end, as will be shown later, there is much room for training of a socially educative character among girls and the younger generation of women.

175. Large classes must, however, from one cause or another, be compelled to obtain their food ready cooked, and in this connection it is eminently desirable that increased facilities should be furnished. It may take time to bring into existence many restaurants of the type required, but there seems no reason why something should not be done at once to transform the nature of the ordinary public-house and render it a place where food of a suitable kind should be as readily procurable as beer. The Committee look to the operations of such Associations as Lord Grey's to promote these objects. The want of easily accessible and attractive means of recreation makes the public-house the only centre of social relaxation. English towns are usually ill-supplied with planted footways where, in genial weather, the working man and his family can resort for the enjoyment of the open air and intercourse with neighbours. The opportunities offered to the young to find pleasure and stimulus in physical exertion are inadequate and ill-chosen. Evidence will be referred to in another place, showing that the effects of physical training on young men are to convince them that in abstinence is to be sought the source of muscular vigour and dexterity; but means of obtaining this training on a comprehensive and systematic scale are sadly lacking.

176. Beyond all expedients of this sort, which can only operate in mitigation of the evils they are designed to meet, the Committee are impressed with the conviction that some general educative impulse is in request which will bring home to the community at large the gravity of the issue and the extent to which it is within individual effort to promote and make effective the conclusions of expert opinion.

177. In view of similar dangers on the other side of the Channel, the French Government have adopted the plan of circulating throughout the schools, barracks, and post offices, etc., of the country a document (quoted in full in Dr. Eichholz' evidence) setting forth in a few well-written and cogent sentences the evils of indulgence in alcoholic stimulants. Eichholz, 507–512.

178. In this country, no doubt, much has been accomplished in this direction by the efforts of the various Temperance and Total Abstinence Societies whose organisation is more widespread and longer established than in France; but it is nevertheless worthy of consideration whether the efforts of such societies might not usefully be supplemented by State action in furtherance of the dissemination of temperance literature.

179. The systematic training of teachers in the laws of health, and rational instruction in schools, embracing, but not confined to, an explanation of the effects of alcohol on the system, would do much to prepare the way for the comprehension and appreciation of more direct temperance instruction, which to be effective must be given at a later age. This more direct instruction might be imparted in various ways, *e.g.*, by lectures on public health organized by the municipality or by the different health and temperance societies. Associations like the Manchester and Salford Ladies' Health Society, which the Committee would gladly see in every large city, could give special attention to saving young mothers from the temptation to drink, and health visitors of all kinds should be charged with the duty of combating the evil by every means in their power.

180. It is outside the scope of the Committee's responsibility to recommend any large changes in the laws for the regulation of the liquor

traffic, but it will not be presumptuous for them to call attention to what has been done in other countries by legislation.

Appendix XVI, 11

181. The statements submitted by the Conference above referred to (paragraph 166) include some remarkable diagrams prepared by Dr. Legrain, Superintendent of the Asylum at Ville Evrard, Paris, showing the increase of consumption of spirits in France and Belgium since 1830, and coincidently therewith an upward trend of the consequences of drink, such as accidental deaths and suicides, lunacy and common crimes, and notably, as to France, a definite increase of the percentage of conscripts refused as unfit for service. Thus, in France, the consumption of proof spirits containing 50 per cent. alcohol in 1830 was 2·2 litres per head; in 1898 it had risen to 10·16 litres; the rejection of conscripts was 21 per cent. in 1830, and in 1895 it had risen to 32 per cent.

182. Diagrams are also given illustrating a totally different state of things in the countries where the consumption of drink, owing to wise legislation, has been steadily decreasing, viz., Norway and Sweden. In the last named, the reverse of the picture presented by France is complete, seeing that besides a diminution in crimes, suicides and deaths from alcoholism and syphilitic diseases, the percentage of conscripts refused has been steadily reduced, showing an elevation in the standard constitution of the people. Thus in Sweden the consumption of spirits containing 50 per cent. alcohol in 1830 was 46 litres, and in 1890, 6 litres per head. The percentage of rejection of conscripts in 1845 was 34·46, and in 1885, 19·61.

183. The Committee cannot but commend these facts to the most serious attention of the Government.

IV. Depletion of Rural Districts by the Exodus of the Best Types.

184. Another factor in the alleged deterioration of the people, connected like the last with their aggregation in towns, is said to be the withdrawal from the rural districts of the most capable of the population, leaving the inferior types to supply their place and continue the stock, the evil being often aggravated, in the opinion of some, by the drifting into the country of the debilitated town population, which is crowded out by the inrush of more vigorous elements.

185. There appears on the face of it to be considerable probability that both these movements are in operation. The effect of certain conditions of town life on the weaker members of the community, and the selective tendency of certain classes of employment which creates a demand for men of greater physical efficiency than is to be found as a rule in a town-bred population, are constantly drawing upon the resources of the rural districts, and it is presumably the men of most energy and possibly of finer physique that respond to the allurements offered them.

186. Thus after describing the splendid men to be found working as navvies, pig-iron carriers in blast furnaces, bleaching powder packers, cement workers, labourers in steel plate mills, and steel smelters, occupations which are not only exceedingly arduous, but throw a severe strain on the powers of endurance and speedily sift out the inefficients, Mr. Wilson says:—

Wilson, 1934.

"The vast majority of these workers are country bred and have grown to maturity in farm or outdoor work."

187. Mr. Fosbroke, Medical Officer of Health to the Worcestershire County Council, whose evidence was exclusively concerned with the conditions of health in the rural district with which he is familiar, had no doubt that notwithstanding better wages, better housing, and better feeding, the physique of the agricultural labourer had deteriorated owing to the

depletion of the rural population by the exodus of the best types into the towns. In practical proof of this allegation he stated :—

"That thirty years ago it was the commonest thing for a labourer to carry two and a quarter cwt. of corn up a ladder ; now you very seldom see it. Farmers tell me the same." Fosbroke,6539-6543.

And again :—

"Generally the farmers say that the men are of a weaker type altogether. The more robust men go into the towns."

188. He admitted that drunkenness and specific diseases menacing to human life and vitality were diminishing, and believed this falling off in physique solely due to the fact that the stronger types move out of the country and leave reproductivity to the poorer. He had, however, to own that he knew of no investigation into physical characters that bore out his opinion ; indeed, such facts of the kind as were obtainable pointed in the other direction. There is no difficulty in keeping up the standard of the police, and an experienced medical officer of a post office at Worcester, who had been under the impression that there was deterioration, found on going into the whole of his records that this was not so, when he took the average heights and weights and chest measurements, and so on. Fosbroke,6536-6558.

189. This admission coming from a witness whose own beliefs it belied, seems to the Committee to furnish very cogent reasons for the institution of the Anthropometric survey which they recommend ; the condition of the rural population as a reservoir of national strength is of first-rate importance, and yet on a point so crucial the opinions of an intelligent and candid observer are liable to be upset by a fragment of scientific evidence.

190. It is with a view to correct impressions, however acquired, and to get at the bedrock of fact, that the Committee so earnestly look to the results of methodical enquiry on the lines suggested. In the confidence that by no other means can these questions be satisfactorily determined the Committee are supported by the testimony of every competent witness.

191. There cannot, however, be any controversy as to the expediency of arresting, where possible, the exodus to which such baneful results are attributed. Nothing, perhaps, would be so likely to force upon the urban communities the necessity of healing their own sores, and bringing up a healthy population within their own limits, as the cessation of the influx of vigorous bodies to take the place of the crushed and broken by the wheels of city life.

192. No great body of evidence was submitted as to how this might be done, but Mr. Fosbroke himself mentioned one most successful experiment of the Worcestershire County Council, under the Small Holdings Act, by which 147 acres of land had been purchased and resold to small holders in plots varying from two to eight acres, loans being made to them at the same time for building houses. Mr. Fosbroke also testified to the value of allotments in the same direction, in diminishing mendicancy, interesting the rural population in the cultivation of the soil, and increasing their appreciation of country life. Fosbroke, 6565–6570.

193. The Committee may here record their opinion that the school might be made a most valuable agent towards the attainment of these objects, and they are not without hope that the recent Education Act, by bringing all forms of secular instruction under a popularly elected local authority, may greatly contribute to that end.

194. It must not be supposed that they contemplate any change by which the rural school should become a less efficient agent for the equipment of the promising scholar whose manifest destiny is to seek elsewhere a more fitting field for his activities. But for one such, numbers are tempted to incur the competition of town life with no better prospect than to swell the ranks of

unskilled labour, owing to lack of interest in their home surroundings and to no effort being made to open their minds to the resources and opportunities of rural existence, and to the saner and more wholesome atmosphere that pervades it.

195. The Committee accordingly have great sympathy with the view expressed by the late M. Felix Pécaut :—

"First of all, teach the children to take an interest, not only in books, but in the life of the fields. Teach them gardening, and how to keep bees, the making of cheese, and the management of a dairy. Show them the reason of these things, their cause, and the possible improvements. Above all, in educating your little rustics do not impose an ideal from without; work your reform from within. Make your scheme of education deliberately rural; be sober, just; teach them courage, and the contempt of mere ease and well being; give them a wholesome, ample way of looking at things; instil the taste for an active life, the delight in physical energy."

The Committee would commend this passage to the special consideration of those charged with the conduct and control of rural schools.

196. Another cause which, it is stated, tends to swell the stream of emigration towards the town, is the difficulty of obtaining cottages. Mrs. Arthur Lyttelton said, "The people cannot get cottages; they leave the country because they cannot get cottages." The very activity of the Sanitary Authority in removing sources of mischief contributes to this result. There are many houses, according to Mr. Fosbroke, really unfit for habitation which, if you were to try to bring them up to a proper standard, you would only succeed in closing, and there would be nothing else to take their place. He went on to say he could name one district where a whole series of houses had been closed because the landlord would not do anything, and these formed part of a large estate.

Lyttelton, 5386.

Fosbroke, 6577–6589.

197. The Committee think that in such circumstances means should be found for bringing pressure to bear on the Rural Sanitary Authority for the adoption of Part III. of the Housing Act, 1890, to which end provisions would seem necessary similar to those contained in the Labourers (Ireland) Acts, 1883-1903. The Committee understand that since 1900, when the powers of Rural Authorities under the Act of 1890 were extended, only two District Councils have actually built cottages.

Thompson's "Housing Handbook."

198. A statement of Mr. Rowntree's may here be given with advantage.

Rowntree, 5039.

"I am associated with a little scheme in York conducted by private enterprise where we are trying to get people to move out. We are building cottages about a mile from the boundary of the city, each cottage having a garden, and we find that we can build an artistic cottage thoroughly well built of the best materials with a large living room and scullery, bath, three good bedrooms, and a garden, to let at 4s. 6d. a week, the tenant paying rates, to show 4 per cent. on capital."

199. There is one movement that may properly be mentioned in this connection, which, though it has not for its object the arrest of emigration townward, may have such effect.

200. The Garden City Association is designed to induce manufacturers to remove their plant and their workpeople into newly developed areas in the country where every hygienic safeguard will be applied to the aggregation of an industrial population, and that aggregation so controlled within due limits that rural conditions may be permanently associated with urban life.

201. The Committee had the advantage of hearing evidence on this subject from Mr. Ralph Neville, K.C., the chairman of the Company formed for the object, who described in detail the intentions of the Association in laying out an estate of 3,800 acres which has been bought for the purpose in the neighbourhood of Hitchin. These are briefly :—

Neville, 4771.

(*a*) "The provision of a minimum space, say one-tenth an acre for each family; (*b*) covenants against overcrowding; (*c*) provision of an agricultural belt around the town; (*d*) reasonable measures to prevent smoke—Mond gas to generate electricity, etc.; (*e*) in a town surrounded by

its own agricultural estate, on which intensive culture would prevail, fresh fruit, vegetables, and milk would be cheap and abundant."

202. Mr. Neville claimed for this scheme the promise of considerable support from London manufacturers, and explained its advantages in these terms :-

"1. Conditions of life for the artisan and townsman, consistent with sound health for himself, his wife, and his children. 2. Cheapness, efficiency, and sightliness resulting from the scientific laying out of the town as a whole from the outset. In connection with this head may be grouped: (*a*) the supply of light, water power, and heat; (*b*) facility of transit and communication; (*c*) disposal of sewage. 3. The reduction of rates by the application of the increment in the value of the lands so far as it can be secured for the benefit of the inhabitants. 4. Bringing a market to the farmers of the agricultural land, and incidentally (*a*) increasing the amount of labour employed upon the land by the extension of small culture. May I pause there to say that I attach an enormous deal of importance to that. It seems to me that this is the only scheme that I have come across, if it were carried out, which does offer a prospect of largely increasing the amount of labour employed upon the land. Of course, we all know the enormous amount of small produce imported into the country at the present time, and that is largely in consequence of the railway rates, the cost of handling, and the difficulty of getting the produce to the market. If you could distribute the population you would very largely increase small culture, and that means more hands on the land than there are at present. (*b*) Affording the agricultural labourer the advantages of town life." Neville, 4758.

203. Mr. Neville considered that this scheme might ultimately be made the model for State enterprise, as in the event of its development prices might become prohibitive and recourse to the Lands Clauses Consolidation Act might prove the only alternative. He did not propose to call upon the State to incur any risk on its own account, but merely to legalise the action of private Companies; in fact it was nothing more than benevolent assistance to which he looked. Neville, 4775-8.

204. The Committee wish every prosperity to the effort, and think that if the experiment is successful any such help from the State would be more than repaid by the solution the scheme offers for so many of the problems that at present perplex and hamper its action.

205. Evidence given before the Royal Commission on Physical Training (Scotland) seemed to suggest that the physique of the population in certain of the Home Counties had suffered by the outflow of debilitated types from the metropolitan area. No very conclusive confirmation of this theory was laid before the Committee, but Mr. Tweedy, in the course of what he had to say on the migration of the stronger types into the towns, expressed the opinion that a reverse process was going on.

"There is a current of the better and more adventurous people into the towns, and also a smaller reverse current of the feebler and less strong and fit, who are driven back to the land again," Tweedy, 3762-3.

the rural districts becoming thus both the recruiting ground and the asylum of the towns.

206. The aspect of the question discussed in this section has special features in Ireland, which require separate consideration. The witnesses from that country were emphatic in ascribing to emigration fatal effects upon the physique of the people by the withdrawal of the strongest and best types, thus leaving it to the less ablebodied to reproduce their kind and carry on the race. Dr. C. R. Browne, whose name has already been quoted as associated with that of Prof. Cunningham in certain anthropometric investigations in the West of Ireland, stated:—

"The sound and the healthy—the young men and young women—from the rural districts emigrate to America in tremendous numbers, and it is only the more enterprising and the more active that go as a rule." Browne, 9660.

207. Dr. Kelly, the Roman Catholic Bishop of Ross, carried the point further, in describing how the conditions attending emigration at the present time had aggravated the circumstances of the case. He says:—

"There are some features of the emigration that I wish to emphasise. Emigration began a very strong flow out of Ireland in the famine times and immediately after the famine, Kelly, 1127

but at that period it was the emigration of whole families. I know in various parts of Ireland there were whole families which went to a foreign country during the famine or immediately after the famine. That had no effect on the physique of those who remained behind—it left things *in statu quo*. Then for several years afterwards a considerable number of families did go. When the younger and more vigorous members went to America or Australia, after some years they were not satisfied until they finally took out the old father and mother and the young members of the family. So that although the numbers emigrating were larger it did not affect the physique of those remaining behind. But for a considerable number of years it has been only the strong and vigorous that go—the old people and the weaklings remain behind in Ireland. That has arisen from several causes. One of the causes is that the authorities in the United States have become particularly strict about the physical condition of the immigrants into the States; they have a stricter medical examination when the immigrants land, and if they are not found physically fit they are sent back again. Then the shipping companies, finding that they had to carry back *gratis* those emigrants, have become very particular, so that before a shipping company in Ireland will take an emigrant, the emigrant has to make a solemn declaration that he is not suffering from tuberculosis or scrofulous glands or insanity or diseases of the eyes. The emigrants very largely have to get themselves medically examined before they leave home at all. So that the present flow of emigration, though smaller in volume, has a much more serious and deleterious effect on the physical condition of the population of the country. Now as to the number of emigrants: from 1851 to 1901, 3,846,393 people emigrated in those fifty years, an average of 77,000 in the year. For the last twenty years the average would hardly reach 50,000. I could give you the particular figures, but they will not interest you. The taking away of 50,000 strong, vigorous men and women every year from the country has a very serious effect. According to the Registrar-General, of those 50,000 on an average who emigrate, 81·5 per cent. of the total emigrants are between fifteen and thirty-five years of age. Therefore of the 50,000 over 40,000 were between the ages of fifteen and thirty-five."

Browne, 9660-9673, 9836-8. Kelly, 11197-11201, 11211-11216.

208. By the operation of these causes the flower of the rural population is depleted, and an undue proportion of weaklings constitutes the stock from which the population of Ireland is recruited. To the effect of this both witnesses attributed a large measure of the increase in lunacy, a subject to which return will be made later under a special heading of the report.

V. Alleged tendency of superior stocks in all classes towards a diminished rate of reproduction.

209. The alleged tendency of the superior stocks in all classes towards a diminished rate of reproduction deserves some notice as one of the possible causes of physical deterioration.

210. So far as this allegation is based upon a diminished birth-rate, a fact general in varying degrees over the whole of Western Europe, there appear in this country at all events to be certain compensating considerations, inasmuch as the Registrar-General's Returns show that among the factors in the reduced birth-rate are: (1) the raising of the age at which marriages are contracted, and (2) a diminution in the number of illegitimate births, both, it will be readily agreed, circumstances tending to the improvement rather than the deterioration of the race.

211. But a more serious view has been taken and put forward by high scientific authority, which, if correct, points to a condition of things which cannot in the long run fail to react adversely on the physical characters of the people.

212. In the Huxley lecture for 1903, Professor Karl Pearson made this announcement:—

"Looking round impassionately from the calm atmosphere of anthropology, I fear there really does exist a lack of leaders of the highest intelligence, in science, in the arts, in trade, even in politics. I do seem to see a want of intelligence in the British merchant, in the British professional man and in the British workman. I believe we have a paucity, just now, of the better intelligences to guide us, and of the moderate intelligences to be successfully guided. The only account we can give of this is that we are ceasing as a nation to breed intelligence as we did fifty to a hundred years ago. The mentally better stock in the nation is not reproducing itself at the same rate as it did of old; the less able, and the less energetic, are more fertile than the better stocks. The only remedy, if one be possible at all, is to alter the relative fertility of the good and the bad stocks in the community. Let us have a census of the effective size of families among the intellectual classes now and a comparison with the effective size of families

in the like classes in the first half of last century. You will, I feel certain, find, as in the case of recent like censuses in America, that the intellectual classes are now scarcely reproducing their own numbers, and are very far from keeping pace with the total growth of the nation. Compare in another such census the fertility of the more intelligent working man with that of the uneducated hand labourer. You will, I again feel certain, find that grave changes have taken place in relative fertility during the last forty years. We stand, I venture to think, at the commencement of an epoch which will be marked by a great dearth of ability.

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The remedy lies first in getting the intellectual section of our nation to realize that intelligence can be aided and be trained, but no training or education can *create* it. You must breed it: that is the broad result for statecraft which flows from the equality in inheritance of the psychical and the physical characters in man."

213. The Committee have not been able to obtain decided confirmation of this view. Professor Cunningham, to whom the point was referred, said:—

"I think that the statement is a pure assumption. I do not know how we can possibly measure this supposed loss of inherited intelligence—we are dealing with inherited intelligence because all his remarks refer to inherited intelligence—and I do not think there is a single solid fact in support of such a view. I am astonished that one for whom I entertain so high an admiration as Professor Pearson should have put forward such a statement, and more especially claim for it, as he does, that it emerges from the 'calm atmosphere' which is supposed to surround the anthropologist." Cunningham, 2270.

Adding, in reply to a further question:—

"It should be borne in mind that it is stocks and not classes which breed men of intellect. These intellectual stocks are found in all classes, high and low. No class can claim intellect as its special perquisite. This is a fortunate circumstance, seeing that the conditions which affect the degree of fertility in the higher classes are not as a rule present in the lower classes. The conditions under which genius or outstanding ability appears are peculiar and very little understood. It likewise has a residence, I believe, in no special class and very probably in no special stock. It is not improbable that the physical conditions upon which genius depends may not, in certain cases, be far removed from the domain of pathology." Cunningham, 2271.

214. Dr. Arthur Shadwell did not think that, beyond the general fact mentioned at the outset, there was ground for the belief that the more capable among the working classes are not reproducing themselves at least in the same proportion as those less capable of putting into existence persons who are physically fit; indeed, vigour seemed to him to imply reproduction—meaning a proper fulfilment of the natural functions of which reproduction is one. On the other hand Mr. Gray, a competent witness, said:— Shadwell, 12230-2.

"Anything which decreases the difference between the birth-rate and the death-rate among the superior classes and increases this difference among the lower classes tends to produce a progressive deterioration of the average national physique. The tendency of the population in modern industrial communities to concentrate itself in large towns and the increase of wealth appear to have the effect of reducing the birth-rate of the superior classes and of decreasing the death-rate of the inferior classes. It has been established by taking a census of the size of the families of the professional classes in the United States of America, that there has been a great decrease in the size of their families within recent times, and that these intellectual classes are now barely reproducing their numbers." Gray, 3267.

And Sir John Gorst was impressed by the idea that the race is propagated in the greatest proportion by the least fit part of it, the restraints on marriage disappearing as you reached the most unfit.

215. The question is one which can be settled only when brought to the test of definite figures, and in view of the statements made by Professor Pearson, it might be as well if here, as in America, steps were taken to obtain, by means of a proper census, accurate information on the point.

VI. Food.

216. A striking consensus of opinion was elicited as to the effects of improper or insufficient food in determining physique, and this factor was acknowledged by every witness to be prominent among the causes to which degenerative tendencies might be assigned, though in one or two cases its relative importance was thought liable to exaggeration. It is in connection with the young and the conditions affecting their growth and development that the matter must be studied under its most serious aspect, and this will be dealt with in the succeeding section of the report, but in the meantime the Committee desire Rees, 4283-8.

to consider the question in its general relation to the health of the people at large.

Close, 2556–2560, 2636–9, 2774–2780, 2796–2829. Collie, 4041–4055. Booth, 1087–8. Eichholz, 436. Fosbroke, 6691–5.

217. Into the circumstances affecting this aspect of the subject, the habits of the community enter largely, and these it is obvious are open to a great variety of influences, moral, industrial, and economic. If, as one witness emphatically stated, with the support more or less marked of others, a large proportion of British housewives are tainted with incurable laziness and distaste for the obligations of domestic life, they will naturally have recourse to such expedients in providing food for their families as involve them in least trouble; if, as many contended, the effect of female labour in factory and workshop is to form bad wives and mothers, any changes in the industrial conditions of the people that increase the demand for this class of labour react upon the comfort of the home, and the economic causes that have contributed of recent years to the production of tinned foods in enormous quantities have had the effect of reducing the amount of home-cooking. Changes, moreover, in the relative cost of certain articles of food, whether brought about by economic or fiscal causes, give a direction to popular taste, which it may take generations of educative influence to correct.

Booth, 975–980. Smyth, 1221–2. Wilson, 2005–6. Malins, 3149. Dowding, 4884. Ashby, 8686–9. Garnett, 9265–9274.

218. If competent witnesses are to be believed, the progressive decrease in the price of certain articles of common consumption, such as tea, has not been without consequences of a prejudicial character. Dr. Purdon, of Belfast, is quoted by Dr. Young with entire approval in saying—

Young, 2093.

"People are living so much on tea and white bread and jam, instead of oatmeal and milk. They are using these cheap jams, and there is the white bread which is supplied so cheaply, which does not contain all the elements of nutrition. In former times the children used to live on oatmeal and butter-milk and potatoes, and the country children still live on that, but the town children live more on tea, and this white bread and jam. Dr. Purdon considers—and I quite agree with him—that that has a very decidedly deteriorating influence."

Hutchison, 10082–6. Cameron, 10095–7.

Evidence was, however, given that white bread properly made was as rich in nutritive properties as any form of brown bread, and the Committee must not be understood to express any opinion on the relative merits of either.

Hutchison, 9991.

219. Dr. Robert Hutchison, whose authority on this point is unquestioned, said—

"If I were asked to state the chief fault in the diet of the working classes of this country, I should say it is the excessive use of tea and bread."

Young, 2093–4. Cunningham, 2298. Kelly, 11284, 11374–9. Lyttelton, 5531. Bostock, 7484–8.

It is not so much the actual deleterious effect of tea, though on that point much evidence was given to show that in the form in which it is generally consumed it produces anaemia and neurosis, as that the money spent upon it might with much greater profit be spent on other things. Dr. Hutchison went on to say he would like to see porridge and milk substituted for bread and jam. The Bishop of Ross had the same story to tell of the Irish peasantry who have come to regard bread and tea as a higher and better class of food than potatoes and milk, or porridge and milk; a sentiment which he describes as growing more obdurate every day.

Hutchison, 9995.

220. Both Drs. Mackenzie and Hutchison laid great stress on balance in the formation of a scientific dietary, as well as on quantity. Dr. Hutchison explained that whereas the physiological standard for a man of average weight demands 3,500 units of energy, and for the upkeep of his body 125 grammes of the chemical substance called proteid, that is to say, nitrogenous material found in certain foods, observation showed the diet of the Edinburgh labourer deficient by 280 units of energy and by 13 grammes of proteid; while in York the average diet, according to Mr. Rowntree, was 17 per cent. below standard in energy and 29 per cent. too low in proteids. The consequence of the deficient supply of energy is to lower physical efficiency and reduce the amount of work of which the man is capable. Where the amount available for expenditure upon food is limited, it is of special importance to get the proper materials, and it is in selection that the defects of English habits come out most prominently. As one witness said—

Mackenzie, 6814–6827. Hutchison, 9957–9978.

Eccles, 10726.

"They do not understand how to provide themselves with proper food. They may have plenty of food, but it is not proper food; it is tinned food, easily got, and badly prepared."

221. The question of tea as an article of general consumption requires a little further notice. In a statement furnished to the Committee, relating to the physical condition of the working class children in Ancoats, one of the poorest districts of Manchester, these words are used—

"*Another fruitful and one of the most unsuspected causes of deterioration lies in the long ingrained habit of tea drinking at breakfast and other times in the factories and foundries of the City. Tea* drinking, if it really were so, might not be harmful, but unfortunately the mixture drunk can hardly be called tea at all. More frequently than not boiling water is poured on to too large an amount of poor tea leaves and is left to stand until the tea has become almost a stew, and this dark and nasty mixture is drunk, sometimes three and four times a day, by hundreds of young lads, setting up frequently various forms of varicocele, and is responsible for several kindred evils (excessive costiveness, etc.) We were informed by the late Chief Recruiting Officer in Manchester some time ago that a very large proportion of young men rejected for the Army had been refused on account of ailments brought about by this practice." Appendix XXII.

222. Mr. Atkins also referred to the observations of Colonel Leetham on this point. He found that a large proportion of those rejected for enlistment were heavy tea drinkers who suffered from one form or another of varicocele, and were, in consequence, unfitted for long marches. Atkins, 2954.

223. Dr. Hawkes' experience of female workers employed in factories and workshops in Finsbury pointed to the same abuse of tea. In the case of many of these, tea is the only thing consumed before starting to their work from places in remote parts of the suburbs. During some years' work at a large Metropolitan Dispensary, he found that 80 per cent. of women and girls who came under his notice never touched solid food till the middle of the day: pickles and vinegar were then often the staple of the "solid" meal with tea, and tea again in the afternoon; three or four pints of "tea poison" being thus absorbed in the course of the day. An enormous amount of dyspepsia is thus set up, which rapidly assumes acute forms, with the result that alcohol, at first taken to allay pain, is frequently the final refuge. Hawkes, 13110–13125.

224. With indifference as to the proper distribution of meals and gross ignorance of the right selection of foods required for them, a very general disinclination prevails to spend sufficient money upon food, even among those with ample resources. It is no doubt the case that with greater knowledge the poor might live much more cheaply than they do, but with all classes the tendency appears to be to spend as little as possible on food. Young men are said to take better care of themselves in this respect than the other sex, as they are not under the temptation to spend money in personal adornment, an object for which women will, it is said, stint themselves in food to a terrible degree, and sacrifice many other necessaries of life. Hawkes, 13109, 13126–9.

225. The desire for pleasure is stated to be another fruitful cause of the withdrawal from working class budgets of money that should be devoted to the purchase of food. Mr. Eccles said—

"There is a vast deal more pleasure amongst the working classes now than there was—I mean pleasure which requires money wasted on it." Eccles, 10725.

Other witnesses spoke of the taint with which the love of amusement was infecting large sections of the population, especially amusement in the form of cheap excitement, the desire for some sort of sensation, comparable to the aforesaid dietary of pickles and vinegar. Close, 2569.

226. Betting figures prominently among pleasures of this kind, and much privation in the homes of workmen is due to losses so incurred, while on the other hand, if they win, the family dietary is not improved, but the proceeds of the successful gamble go in drink. The taste for betting is unhappily not confined to men; women, and even children, according to Dr. Hawkes, being very ready to partake of this form of excitement. Loch, 10187–9. Hawkes, 13091–13100.

227. In estimating the causes which contribute to render the poor careless of, or indifferent to, the conditions of proper feeding, it is only fair to remember the extreme narrowness and squalor of their surroundings. Under any aspect of this multiform problem, it is difficult to keep away for long from the housing difficulty, and it enters very largely into the matter immediately under discussion; houses that were originally built for one family have, by the operation of pressure upon limited space and high rents, become occupied by several, but often only one room in the whole house contains a grate of proper service for cooking, with the result that a large number of tenements do not contain the requisite apparatus for the preparation of food, and the culinary art, if practised at all, is reduced to its crudest form of expression. Looking to the large rents that accrue to the proprietors of these premises by their sub-division into so many separate tenements, it does not seem too much to require that every tenement let for the occupation of a family should include a grate suitable for cooking.

Close, 2569.

228. The extent to which tinned food has superseded other kinds was the subject of some emphatic comment by a lady who claimed to know much of the habits of the people at home and abroad. In one farmhouse, notwithstanding the existence of a well-stocked garden, there was nothing but tinned vegetables and tinned fruits besides tinned food for breakfast and dinner. This she attributed partly to laziness and partly to ignorance. The nearer you come to London the more infamous, in her opinion, the food and cookery, young women caring for nothing but pleasure and amusement; their failure to make the home attractive was, she believed, one of the causes of the rural exodus, and while on this subject she described the conditions of squalor and discomfort with which she was familiar.

229. It has already been indicated in an earlier section of this report that for the purpose of bringing home to the people the importance of properly selected and carefully prepared food there is much room for training of a socially educative character among girls and young women. Both Mrs. Close, the witness just quoted, and Mrs. Arthur Lyttelton agreed that the teaching at present imparted in schools was of little value, partly because of the unpractical character given to it by some managers, but mainly because of the early age at which children leave school. The evidence, however, on this point is somewhat conflicting. Mrs. Lyttelton was of opinion that something of a different nature was perhaps more wanted, and instanced the tenement classes that have been established in New York with some success. She would like to see the people instructed in cookery in their own houses or in kitchens fitted up like those within their experience, and employing the simplest utensils; by these means she believed they could be familiarised with processes for using up vegetable and garden stuff, which would tend to economical and wholesome living. Both she and Dr. Hutchison thought much might be done by mothers' meetings and lectures conducted on simple and practical lines, which might be supplemented, after interest had beeen awakened, by the distribution of leaflets, undertaken by health visitors in the employment of the local authority or acting in co-operation with it.

Lyttelton, 5375–5382.

Lyttelton, 5391–5402, Hutchison, 9937–9941, 9979–9981.

230. The Committee believe that all these methods are valuable: nor would the question of cost form an obstacle. In the first place it would be small, and secondly after the lapse of a few years unnecessary, as once a generation of competent mothers and housewives had been brought into being, a family tradition would be created which would contribute to preserve higher ideals of domestic comfort and better standards of life. To these ends the Committee think that a further step might be taken within the near future, and continuation classes for domestic instruction organized, at which the attendance of girls who have left school should be made obligatory twice a week during certain months of the year. The courses of instruction at such

classes should cover every branch of domestic hygiene, including the preparation of food, the practice of household cleanliness, the tendance and feeding of young children, the proper requirements of a family as to clothing, everything in short that would equip a young girl for the duties of a housewife.

231. There is no reason why a judicious discretion should not be permitted in the enforcement of compulsory attendance at such classes: girls in domestic service, for example, might properly be exempt, as the Committee were informed that comfortable homes are as a rule to be found among the working classes where the wives have had the advantage of this training; factory operatives are, on the other hand, said to make the worst wives, and to facilitate their attendance at such classes some modification of their hours of work might be introduced.

232. Further reference to the teaching of Cookery in Schools will be made in the next section, but it may be as well to lay down here the principles by which it should be guided so as to form a preparation for Continuation Classes. The teaching of cookery should be directed to the selection, economy, and preparation of the material best suited to the needs of the poorer classes, including the requirements of young children. It should have for its object the constant repetition of those processes most in request in cottage households, with a view to impressing them as firmly as possible on the minds of the scholars, and care should be taken to use such apparatus and utensils as under favourable conditions are likely to be found in the houses of the poor. The syllabus of instruction should be drawn up by some one with immediate knowledge of the wants of the class from which the children under instruction are drawn; it should vary for urban and rural schools; it should be modest in scope but thorough in application, attentive to detail, but yet based on some broad principle of domestic effectiveness; and, above all, it should provide as much practical work as possible, to the exclusion of mere excursions into theory and demonstrations which tire without exciting interest. Wherever practicable the material cooked should be served and eaten in the presence of those that have prepared it, and in all circumstances the greatest prominence should be given to the utility of the task upon which the scholars have been engaged. For this reason no scientific terminology should be introduced into lessons on the chemistry of food, but the practical value of the different articles of diet should be stated in the simplest and homeliest language.

233. No evidence was taken on Adulteration, but there is no doubt that the opportunities offered to the adulterator by the change from the home production of many articles of food to supply through the channels of trade has had a deleterious effect on public health. The Committee's attention has been called to the fact that the Board of Agriculture, under the powers conferred on it by the Act of 1899, has fixed standards of purity for milk and butter, and they cannot but think it highly expedient that the Local Government Board should, with proper expert assistance, be authorised to fix some standard, which should of course be a reasonably high one, for all foods and drinks. This has now to be done by the Public Analyst, subject very often to prolonged and costly police proceedings, and the standard arrived at necessarily differs according to the views of individuals and the strength of evidence in a particular prosecution.

234. It appears to the Committee that in regard to food, as in other matters, there is something wanting to the ideal of the Local Government Board as a department of public health, and that it is desirable that this aspect of the Board's administrative functions should receive greater attention.

235. The Committee are aware that there is nothing heroic about these remedies, but they believe that by combined pressure in the directions in-

dicated, and the enlistment of an active public sentiment in their favour, much might be done in a few years to reduce evils which are not only a standing reproach to certain classes of the nation, but constitute a serious menace to its general well-being.

VII. Conditions Attending Life of Juvenile Population.

i. *Introductory.—Infant Mortality.*

236. Enough has already been said in the course of this Report to demonstrate the nature and extent of the waste that goes on under the name of "infant mortality," but before discussing the subject matter of the present section under certain particular aspects, the broad facts of this annual sacrifice, and some conclusions to which they point, require a little separate notice.

237. Among the more highly organised nations, where the tendency to a decrease in the birth-rate becomes more or less noticeable, the means by which infant mortality can be averted present a social problem of the first importance. Unfortunately in the volume of vital statistics, from which so many consolatory reflections are drawn, infant mortality remains a dark page. The Registrar-General in his last report lays down that "the mortality among infants and very young children has always been regarded as a valuable test of salubrity." Since the date of that report, Dr. Tatham has caused to be prepared, at the Committee's request, certain interesting statistics respecting infantile mortality in England and Wales, at two quinquennial periods a quarter of a century apart. The tables, six in number, show the mortality among male and female infants separately—(a) in town as distinguished from country; (b) among legitimate as distinguished from illegitimate infants. He has also furnished the Committee with a careful analysis of the tabular returns, and as this analysis is very full, it is only necessary to refer to the appendix, where will be found the six tables referred to, and also Dr. Tatham's remarks upon them.

Appendix V.A.

238. Three facts stand out prominently as the result of this investigation: first, that infantile mortality in this country has not decreased materially during the last twenty-five years, notwithstanding that the general death-rate has fallen considerably; secondly, that the mortality among illegitimate children is enormously greater than among children born in wedlock; thirdly, that about one-half the mortality occurs in the first three months of life.

239. The evidence furnished by a variety of witnesses is confirmatory of the conclusions to which these figures point. According to Dr. Chalmers, of Glasgow, where the infant death-rate varies in different districts from 63 to 217 per 1,000 births (that for the whole city being 141), "Quite one-third of the infant deaths occur in the first four weeks of life." In certain parts of London, where the proportion of persons living in one or two-roomed tenements exceeds 35 per cent., it has already been seen that this death-rate reaches 223. Preston, with nearly half its female population occupied (30 per cent. being married), has an average rate for the ten years to 1900 of 236, Burnley of 210, and Blackburn, with a still higher percentage of married women employed, of 200. In Sheffield, where the general rate in 1901 was 201, it went up in one district to 234, and there is no doubt that, in parts of the country, during certain seasons of the year, such rates are vastly exceeded.

Chalmers, 5958.

Appendix XIII., 4.

Appendix V., 26.

Greenwood, 8233.

240. Coming to particulars illustrative of these conditions, Mr. Wilson speaking of Dundee, said: "It was quite a common thing to find a woman had had as many as thirteen children, and had lost eleven or twelve out of that number, in some cases the whole of them." Mrs. Greenwood, in a paper submitted relating to Sheffield, says: "One woman I know has buried seventeen out of eighteen children, another has had sixteen sons, of whom only six are living," though neither of them had worked out of their homes since

Wilson, 1952.

Appendix XX.

marriage. Nor, in her opinion, is such waste necessarily connected with poverty; deaths from diseases of the respiratory organs constantly occur owing to the practice of even well-to-do mothers exposing imperfectly-clad children to cold while gossiping with neighbours. Among a certain number of mothers questioned in Hanley and Longton, it appeared that 38 per cent. of the children born to them had died in infancy, and the state of the case in many Lancashire towns is certainly no better; thus in Burnley one woman is said to have had twenty children and buried sixteen, all having died between one and eleven months of age; in this case the father was a collier in good wages and the mother stayed at home. At Accrington things have become so bad as to lead to vigorous action on the part of a conference convened by the Mayor, as the result of which exhaustive enquiry into the conditions under which children are brought up has been demanded.

Appendix V., 35.

Appendix V., 49.

241. In a detailed discussion on the subject of extreme value to those who may undertake further investigation, Miss Anderson was good enough to supplement her original evidence, and the Committee fully endorse the conclusions at which she arrives. The connexion between infant mortality and (i) bad or insufficient feeding, and (ii) the overcrowding of one or two-roomed tenements, is no doubt established, but though the facts seem to point to a strong presumption that it is also connected with the employment of mothers, the information is not so complete as might be desired. Miss Anderson indicates two directions in which this information should be sought: (i) localisation of the infant mortality rates in a systematic way for particular areas in industrial towns where the workers of selected industries live; and (ii) general infant mortality rates for selected industries throughout the country.

Appendix V.

Appendix V, 25–7.

242. The Registrar-General's records, which she points out might be available in throwing light on this important question, are confined to showing the occupations of mothers of illegitimate infants, and the Committee think that it would be well if they could be expanded to show the occupations (if any) of married mothers. In this connexion the Committee desire to call attention to a point of considerable importance. At the Brussels Congress on Hygiene in 1903, the absence of any registration of still-births in Great Britain was noticed, and the consequent difficulty of obtaining the complete figures as to infant mortality. Every witness who was questioned on the subject agreed in deploring the present neglect, and the Committee are emphatically of opinion that still-births should be registered, as apart from the advantages a system of registration would have in making it easier to bring home instances of mal-practice, a knowledge of the facts as to the frequency of still-births would be of great value towards elucidating the causes of infant mortality by throwing light on the ante-natal conditions prejudicial to the survival of the fœtus.

Appendix V, 11.

Scott 1753–4.
Cunningham, 2293, 4
Malins, 3142–4.
Chalmers, 5957–8.
Niven, 6422–3.
Greenwood, 8173.

243. With a view to the protection of infant life, another point arises on which it would be expedient to amend the Registration Laws. By the system under which deaths are registered, a medical certificate as to the cause of death is not absolutely essential to the registration of a death, or the burial of a dead body, although the certificate is always asked for by the Registrar. Having regard to the heavy mortality affecting children of tender years, the Committee are of opinion that the death of no child should be registered in the absence of a medical certificate as to the cause of death. Every witness who touched the subject was strongly in favour of this amendment of the law as the best means of bringing home to the careless parent the consequences of culpable neglect.

Malins, 3142–6.
Collie, 3918–3923.
Dowding, 4915–9.
Greenwood, 8171, 2.

244. In this connexion the subject of infant insurance was also considered. As to the propriety of interfering with this practice different opinions were expressed, though it was the general view that it contributed to parental negligence. On the whole it was thought that if restricted so as to cover the actual expenses of burial its principal abuses would disappear. The evidence of Sir Lambert Ormsby, President of the Royal College of

Booth, 1016–9.
Scott, 1749.
Atkins, 2944–6.
Malins, 3136–3141.
Collie, 3916,7.
Smith, 8497–9.

Ormsby, 12573-12591.

Surgeons in Ireland, upon Irish practice in this regard pointed to the prevalence of a very low view on the part of many medical men in respect of their obligations toward the security of infant life under the conditions touching insurance in that country.

245. The Committee do not think that upon the evidence they are in a position to make any definite recommendation on this point, but they consider that the operation of the practice should be carefully watched.

ii.—*Hereditary Taint.*

246. So far as the Committee are in a position to judge, the influence of heredity in the form of the transmission of any direct taint is not a considerable factor in the production of degenerates.

Mackenzie, 6742-6781, 6900-2.

247. Prof. Cunningham's views, that inferior bodily characters, the result of poverty and not of vice are not transmissible, were confirmed by Dr. Mackenzie, who at the outset of his interesting evidence elaborated a distinction between inheritable characters and their environmental modifications, the result of these last being imposed on the individual by his life history and not therefore transmissible to the offspring. Dr. Eichholz was disposed to go further and sought to explain how some mysterious law of transmitted impulse made for the recuperation of each generation, the unborn child fighting strenuously for its own health at the expense of the mother and arriving in the world with a full chance of living a normal physical existence. This view he supported by the assertion that the number of children born healthy in the worst districts was very great, he himself putting it at not less than 90 per cent. Dr. Ashby thought this was only partially true, as nature too often failed in its effort, and Dr. Mackenzie would not even concede so much, as investigations into the effect of food on guinea-pigs during pregnancy had, he said, shown that the embryo suffers in greater proportion than the mother. He quoted the opinion of Dr. Noel Paton that "the nourishment of the maternal tissues seems to take precedence over the nutrition of the fœtus."

Eichholz, 556–569.

Ashby, 8671–7.

248. The Committee deemed it advisable to hear on this point Dr. Edward Malins, President of the Obstetrical Society of London, and Professor of Midwifery in the University of Birmingham, who thought the testimony of experienced persons was on the whole in accordance with the views expressed by Dr. Eichholz. He would say that from 80 to 85 per cent. of children were born physically healthy, whatever the condition of the mother might be antecedently, so far confirming the opinion that nature intends all to have a fair start. Dr. Malins kindly undertook on behalf of the Obstetrical Society to institute an enquiry among the Lying-in-Charities and Hospitals in London which should furnish information on these facts; this enquiry is unfortunately not complete. The Committee were, however, supplied by the courtesy of Dr. Eichholz with evidence which did tend to establish this conclusion from the Medical Officers working for the Royal Maternity Charity, and from the Paddington and Kensington Workhouse Infirmaries.

Malins, 3123-9, 3203-5.

249. The Committee cannot ignore these opinions though it may well be that the depressing effects of the life-struggle on parents are, nevertheless, in some measure transmitted to the offspring. At any rate some vulnerability towards disease may co-exist with a superficially healthy appearance, and granted unfavourable environment the seeds of degeneration are not long in producing a rank harvest. The consolation of the doctrine lies in the encouragement it gives to working for the removal of the causes which are prejudicial to the health of each successive generation, an encouragement which is immensely strengthened by the concurrent testimony of all concerned as to the immediate effect upon growth and development brought about by the withdrawal of even the most unpromising material from noxious surroundings.

250. It must be remembered that even Professor Cunningham, while denying the influence of heredity in most cases, expressed the firm belief that diseases such as syphilis and alcoholism transmit their effects to the third and fourth generation—and in this opinion the Committee fully concur. Cunningham, 2210.

iii.—*Employment of Mothers late in Pregnancy and too soon after Childbirth.*

251. A very general agreement was expressed that the factory employment of mothers had a bad effect on the offspring, both direct and indirect, but opinions differed as to the extent of the evil and the practical steps that could be taken to remedy it. It is to be found in the most acute form in the Pottery districts and in textile mills. Speaking from an extensive experience of the Potteries, Miss Garnett declared that married women's labour was really the root of all the mischief; the children are born very weakly they are improperly fed, and placed in the charge of incapable people. She admitted the impossibility of interference by any general prohibition, but thought the period during which women are not permitted to return to work after their confinement should be extended. Drs. Scott and Young, certifying factory surgeons of long standing, took the same view. Miss Anderson acknowledged the evil in evidence, but her appreciation of all the conditions of the problem led her to pause before subscribing to the prudence of any legislative change. As the result of further consideration the Committee were favoured with the Memorandum already described, in which the whole subject is discussed with a fulness of detail and wealth of information that have rendered it unnecessary to go further for the basis of the following paragraphs. Garnett, 9015-9034, 9116-9122, 9345-9367. Scott 1834-8, 1888-1901. Young 2169-2172. Anderson 1590-1613 Appendix V.

252. The existing law requires that no occupier of a factory shall knowingly allow a woman to be employed within four weeks after she has given birth to a child. Thus no legal offence arises unless the occupier, with a full knowledge of the facts, is yet responsible for the employment, a situation which, in the ordinary conditions attending factory labour, it is almost impossible to prove. It is needless to say that in these circumstances prosecutions are infrequent or abortive, and though there may be a pretty uniform observation of the law, cases in which it is broken are numerous in some districts, amounting it is thought to general evasion. Appendix V., 3.

253. It has already been indicated that the extent to which the mothers of young children are employed in factories can only be roughly determined, nor are the means forthcoming for an accurate judgment of its effects on infant mortality, but the enquiries of three members of Miss Anderson's staff—in Dundee (jute), Preston, Burnley, and Blackburn (cotton), Hanley and Longton (potteries)—did lead to their noting in those towns "A very striking degree and amount of ignorance of maternal duties, especially of feeding and cleanliness." In Blackburn, Preston, and Burnley it is estimated that of women employed, 37·9 per cent., 30·5 per cent., and 33·5 per cent. respectively are married or widowed. In the several towns of the Pottery district the proportion varies from 10 to 20 per cent. The three ladies quoted by Miss Anderson were unanimous as to the stress and strain involved in the "employment of women from girlhood, all through married life, and through child-bearing"; the decreasing physical capacity of the child-bearing woman brings her at last some relief at the hands of the manager of the mill, and she is sent away, often to take up the equally unsuitable occupation of charwoman or house-scrubber. In this connection Miss Paterson says— Appendix V., 14. Appendix V., 16.

"Great harm is done and suffering occasioned to the women by their remaining at work too long before confinement as well as by their returning too soon after it. Factory managers, doctors, health visitors, and workers themselves are agreed that the four weeks absence is often shortened to three or even less." Appendix V., 31.

254. As an instance of the lack of sufficient care for the children that follows, a subject on which she was able to form very definite ideas, she gave particulars of 144 cases where the health visitors found two, three

Appendix V., 32. or more very young children left alone in the house (in some cases locked in) while the mother was at the mill, with only such food as the mother could prepare over night or in the early morning before leaving. Definite arrangements with another woman to take charge of the children seem less Appendix V., 34. common in Dundee than in Lancashire and the Potteries. It was stated by two doctors in Preston that a large number of premature births were attributable to continued work in the mill during pregnancy, and members of the profession in Blackburn held that the evil of the employment of women during that period was aggravated by their desire to earn as much as possible before they are forced to give up work. In Preston it is found that factory operatives are in the habit of nursing their babies at meal times, and before and after the day's work at the mill; but in Burnley this is exceptional, while greater ignorance and unintentional cruelty in the giving of unsuitable food seem to be common. In the Potteries Miss Martindale Appendix V., 35. notes the effects on infant life of improper feeding and the "appalling ignorance and objections to being taught."

255. Coming to the causes that render the labour of mothers necessary, Miss Anderson enumerated them thus:

Appendix V., 37.

(i.) Death of father, or lack of employment, or inadequacy of father's wage.

(ii.) Desertion of father.

(iii.) Fear on mother's part of loss of future work in factory.

(iv.) Preference for factory over domestic work.

Miss Anderson points out that some of these causes may be traced to the concentration of women's industries in districts where there is absence of men's occupations, and, so far as these are due to economic and social circumstances not immediately alterable, she considers that more may be effected, and the operation attended with fewer counterbalancing disadvantages, by working towards the mitigation of the results of the employment of mothers than by any attempted diversion thereof on a large scale. The great majority of cases may be said to fall under one or other of the three sub-divisions in class (i.).

256. Dundee and Preston resemble each other in scarcity of employment for men.

Appendix V., 40. Miss Squire, speaking of Preston, says,

"The men are said to look out for a wife who is a four loom weaver, and they have the reputation of being lazy."

It was also found that the husbands of cotton operatives were chiefly employed as labourers in intermittent work, while

"in all cases when the husband was in regular employment as weaver, platelayer, painter, bricklayer, etc., the one wage was insufficient to keep the family at the standard of life they expect."

It must be admitted that the standard is somewhat exacting, as the husband insists on having his spending money whatever the household needs may be, and, therefore, the mother's wage, over which she has control herself, proves a valuable accessory.

Appendix V., 45. 257. Miss Squire proceeds,

"The general opinion, among those best qualified to judge, seems to be that the working classes are well off, and that if it was not for the proverbial improvidence of the cotton operatives there would be no poverty. Still, it seems to be the practice for the women to continue their work in the mill as near to the time of confinement as the manager will allow; always the same complaint being made that he had to keep watch and tell the woman that she must cease work."

Appendix V., 47. 258. In Blackburn, Miss Squire finds a high standard of life among textile operatives; comfortable homes, and money to spend on excursions,

holidays and amusements, are considered essential. Of Burnley, it is said that

"The infants are of a miserable, debased type in a large number of cases. Whereas, in Preston, the important point seems to be that the infants should be properly fed, in Burnley it seems as if no amount of nourishment could build up a healthy child." Appendix V., 48.

Poverty and desertion are there the causes of the mother's early return.

259. In the Potteries the lack of regular employment for men is a serious element in the situation. According to Miss Martindale, the early return to work is in very many cases prompted by necessity, but she goes on to say, Appendix V., 50.

"It is impossible not to be impressed by the universal preference amongst the women for factory over domestic life, and how depressed and out of health they became if they were obliged to remain at home."

Analysing the causes of this preference for factory life, Miss Martindale adds:

"Surprising as this appears at first, it becomes less so on consideration. At 13 years of age the majority of these women would have begun to work in a factory, to handle their own earnings, to mix with a large number of people with all the excitement and gossip of factory life. They would thus in most cases grow up entirely ignorant of everything pertaining to domesticity. After marriage, therefore, it is hardly probable that they would willingly relinquish this life to undertake work of which they are in so large measure ignorant, and which is robbed of all that is to them pleasant and exciting. Until as girls they have been taught to find a pleasure in domestic work, and until there is a greater supply of healthy and suitable recreations and amusements in the reach of all women, to counteract the prevailing squalor and gloom of these Pottery towns, it is useless to expect them to relinquish factory life."

260. The Committee have no doubt that the employment of mothers in factories is attended by evil consequences both to themselves and their children, and they would gladly see it diminished if not altogether discontinued; but in approaching a discussion of the remedies that have been suggested, they are convinced of the necessity of extreme caution. They have been reminded of (1) the enormous practical difficulties that would accompany any sort of legal prohibition: (2) the existence of a considerable number of unmarried mothers without means of support, whose main chance of rescue from degradation lies in the fact that they desire to labour and know they ought to labour in support of their infants; and (3) the presence in certain populous industrial districts of a large proportion of married mothers who are necessarily the chief breadwinners of their families, and the danger that, if deprived of the opportunity of earning a wage, means will be taken to prevent these families coming into existence; they also feel that the right of married women to the fruits of their own labour, secured to them under the Married Women's Property Act, ought not to be lightly interfered with. Appendix V, 52.

261. Even Miss Garnett, who was most strenuous in condemning the whole practice, admitted that the time was not ripe for prohibition. Among other witnesses, Dr. Scott would prohibit all employment of married women in factories, unless the children are absolutely dependent on their wages. In that case he thought the municipality must make provision for the care of the children while the mother is at work. Mr. Wilson and Dr. Malins agreed that there would then be good cause for such assistance. Dr. Young would extend the period of exemption to two months before confinement (or three in some cases) and three months afterwards. (In Switzerland the period is two months both before and after confinement.) Dr. Ashby would extend it as far as possible, but saw the practical difficulty in regard to pregnancy that the exact date of the child's birth is not easy to predict, and that this would be a loophole of evasion for both employer and employed. He instanced illegitimate children as suffering most, because the mother so often has to go to work. He also discussed the question of licensed women for the care of infants when mothers went to work, but preferred the crèche. Garnett, 9118. Scott, 1834-8, 1888-1901. Wilson, 2039-2042. Malins, 3210-2. Young 2169-2172. Ashby 8678-8689, 8785-6, 8800-9.

262. The Committee are not able to recommend prohibition, nor do they advocate any uniform extension of the period, but it does seem to them that the application of the law, as it stands, might be made more regular and elastic.

The extension of the period at present prescribed, which is less than that in many European countries, would probably be made the occasion for more wholesale evasion, and the Committee think the alternative lies between (*a*) maintaining a hard and fast line and placing upon the employer the burden of obtaining proof that the required period has elapsed since the confinement of the woman he employs, and (*b*) exacting in all cases of pregnant or recently delivered woman (1) a medical certificate from an appointed person, say the Certifying Surgeon of the district, that they can be employed without serious prejudice to their physical well-being, and (2) proof that in their absence reasonable provision is made for the care of their infants, which might take the form of a crêche established under municipal or private management, or be secured by the recognition for the purpose of a duly licensed body of women. The latter plan seems open to the least objection, provided a proper licence is assured, but the two might subsist side by side.

Appendix V, 55.

263. Another source of amelioration is suggested by Miss Anderson, who notes the general neglect of voluntary agencies for helping mothers before, during and after confinement, to take care of infant life, even where such agencies exist. In Lancashire, where, it is said, insurances of all kinds abound, no form of provident society exists to which women could contribute while still able to earn wages, nor has any attempt been made to organize a maternity fund, towards which both employer and employed might contribute. The existence of such a fund at Mulhausen is said to have resulted in the reduction of infant mortality by half. The Committee would strongly urge the adoption of such methods of voluntary assistance, and think it not improbable that endowments may be found in many places which could be utilised as the nucleus for a considerable amount of charitable effort in this direction.

iv.—*Decrease in Breast Feeding—Defective Milk Supply.*

Rowntree, 4980–6. Hutchison, 9909, 10018.

Malins, 3131–4. Smyth, 1239. Collie, 3909.

264. A decrease at the present time in breast feeding is generally admitted to be the case in all classes of society, at any rate in the urban districts. With the poor, it seems fair to say that their failure in this respect is due to inability rather than unwillingness, especially in view of the fact that as long as it can be properly continued breast feeding is much the most economical way of nourishing an infant. It is, however, no doubt, the case that women are often unwilling to nurse their own children, because it interferes with their going to work, and witnesses were found to say that in the absence of such excuse mothers were often neglectful of their duty from sheer indifference or weariness.

Cunningham, 2198–9

265. The heavy rate of infant mortality is said to be in large part due to the fact that infants are now-a-days seldom fed from the breast, in which connection Mrs. Watt Smyth gave some figures for the sixteen months ending January 1st, 1902, derived from one of the institutions for the *Surveillance de Nourissons*, maintained by the *Conseil-Général de la Seine* and administered by the *Assistance Publique* of Paris, wherein it appears that among the children breast fed, being 45·4 per cent. of the whole number, the death rate was 2·6 per cent.; among 35 per cent. artificially fed the proportion was 10 per cent.; and among 19·6 per cent. with mixed feeding, 6 per cent.

266. It was also stated by the same witness that in Liverpool, Dr. Hope, the Medical Officer of Health, made an inquiry a few years ago and found that for every death from diarrhœa which occurred among breast-fed infants under 6 months old there were 15 among those fed partly at the breast and partly on artificial food, and 22 among infants fed entirely on artificial food.

Lyttelton, 5366.

267. It must not, however, be understood that the neglect is universal; on the contrary, Mrs. Lyttelton said that country women usually suckled their

own children, with which statement Mr. Fosbroke and Mrs. Watt Smyth appeared to agree; though with country women the process is often continued too long in the mistaken belief that it keeps off pregnancy. Mrs. Greenwood gave some figures showing that out of 725 infants visited in Sheffield nearly 79 per cent. were being fed from the breast alone; but these infants were visited within a week of registration, and it is therefore doubtful for how long they were so fed. Moreover, a medical officer in that town quoted in a lecture by Dr. Jones and referred to in his evidence, has stated that only one in eight of infants born in Sheffield is brought up at the breast. Dr. Eustace Smith, to whom this difference of opinion was submitted, said, "Sometimes they nurse their children for a month or two," and was quite definite that a very small proportion of babies brought to the East London Children's Hospital are suckled. In Dr. Hutchison's opinion it hardly counts unless a child is suckled for at least six months. Dr. Ashby said the women try to suckle their children; but if they are going to work they soon stop. It was on this account that Mrs. Watt Smyth strongly advocated the extension of the period within which a woman was allowed to return to work, as in her view a limit of three months would give a woman time to take an interest in the development of the child, whereas if she feels she must go back in a month she does not deem it worth while.

Fosbroke, 6623. Smyth, 1240. Greenwood 8177. Jones, 10889. Smith, 8435. Hutchison, 9912, 10019. Ashby, 8708. Smyth, 1225.

268. But whatever may be the case in certain districts, or whatever may be the cause, it is quite certain that there is a great decrease in breast feeding, notably in towns, testified to by a number of the most competent witnesses. The evidence of Dr. Hutchison in this regard is of special interest. He says that the fact is common to all highly civilised people, but the medical profession are in ignorance as to reasons for this disability of mothers. He notes a better state of things among the Jews, which may be connected with the abstinence from labour of Jewish mothers. Sir Charles Cameron appeared to think the Irish better off in this respect, but he admitted that the milk was not of good quality and that many of the women were taking a great deal of whiskey. On the other hand, Dr. Kelly, Bishop of Ross, declares, "The practice (of suckling) is fast dying out," and Dr. Browne testifies to its disappearance in manufacturing towns.

Eichholz, 635. Collie, 3908, 9. Garnett, 9207, 8. Eccles, 10724. Hutchison, 10029–10038. Cameron, 10985, 6, 11084. Kelly, 11247. Browne, 9690.

269. It is obvious that in these circumstances the question of the possible alternatives to breast feeding becomes of the greatest importance. The Committee are informed by the highest authority that modified cow's milk is by far the best. The patent foods so largely in use are stated by Dr. Hutchison to present certain marked inferiorities to milk as a means of nourishing children: most of these are deficient in fat, and a considerable number contain unaltered starch, which, being incapable of digestion, produces diarrhœa and irritation of the bowels, a condition which naturally leads to impairment of growth and consequently defective physique.

Hutchison, 9920–3.

270. It must not, however, be supposed that these foods enter into competition with cow's milk among the poor, as, in fact, they are more expensive and beyond their reach except in a very diluted form. The substitutes they employ are still more deficient in nutritious properties, and much more favourable to the production of every variety of intestinal disorder. In most cases tinned milk is the only expedient. This in a proper state and of a good kind is not deleterious, and there are obvious reasons of convenience why it should be preferred; but at its best, judged by its value as food, it is three times as expensive as cow's milk and is often of inferior quality and always liable to pollution. The vessel once opened is exposed to every kind of bacterial contamination, and by the time it is exhausted all sorts of foul ingredients have been conveyed into the child's system. When tinned milk is not in use, highly diluted and probably sour cow's milk, in which groats or bread have been soaked, is employed instead. It is needless to say that in such circumstances the worst effects of mal-nutrition make themselves manifest very soon, and the condition of the unfortunate child is not improved by the practice begun very early in its career of encouraging it to eat whatever may be included in its parents' dietary.

Lyttelton, 5371. Chalmers, 6027. Fosbroke, 6702. Greenwood, 8238–8245. Eccles, 10755. Hutchison, 10093–6. Dowding, 4921–4. Eves, 7644, 7793. Smith, 8454.

Defective Milk Supply.

271. The importance of being able to obtain a sufficient supply of good cow's milk being thus emphasised, the Committee are confronted with a great deal of evidence to the effect that it is next to impossible to ensure such a supply, at any rate to the poorer classes. It is not a little curious that, while people in the rural districts have a growing difficulty in obtaining milk because it pays better to send it into the towns, the great mass of the dwellers in towns are in no better case than formerly. There is in fact a great lack of organisation in the distribution of this prime necessity, a great want of knowledge as to its value, and very inadequate means for its preservation from the most obvious sources of pollution. Mrs. Watt Smyth called special attention to this subject, and her evidence was full of the strongest allegations against the cleanliness of the persons from whom the milk comes and of the processes by which it is treated. Thus—

Smyth, 1247. "It is a fact that the milk when it arrives in large towns has been proved to be putrescent. I mean it goes through so many stages, from the country farm to the towns, that it is badly contaminated. But that is not the worst of it. The farms are in such a filthy condition that the milk when it leaves the farm is already poisonous. I have been over many farms, and the conclusion one must come to is that at the bottom of the whole question is the filth of the farms."

And again—

Smyth, 1347. "The cows are in the most filthy condition, standing in manure, and the cow-sheds, the stalls, are covered with manure; and outside the yards are heaped up with it. There is no proper ventilation, the milkers are filthy, their hands and clothes are dirty, and their vessels very often are dirty."

Smyth, 1350. 272. In another case Mrs. Smyth detected hair and fæces in the milk, which the boy in charge took quite as a matter of course because it came off the cow.
Smyth, 1348. These allegations Mrs. Smyth declined to admit were only applicable to a few farms. On the contrary she believed that the great majority of farms from which the milk supply was obtained were of this character. It is only fair to
Malins, 3220, 3235. say that from his experience at Birmingham Dr. Malins was not prepared to support Mrs. Smyth's indictment, but he could not state whether any precautions were systematically taken to see that the dairies from which the city received
Fosbroke, 6731-9. its supply were under proper supervision; Mr. Fosbroke's evidence that the County Council of Worcestershire had been urging this duty on the District
Vincent, 12070. Councils implied the presence of much neglect, and Dr. Ralph Vincent's description of the steps taken in the model farm connected with the Infants' Hospital at Hampstead indicated with much clearness the deficiencies of most farms in this respect. These conclusions were borne out by a report on the milk supply of Finsbury in the course of an inquiry conducted by Dr. Newman, the Medical Officer of Health.

The report runs,

"There is evidence to prove that as a general rule the country cowsheds from which the milk is derived are ill-lit, over-crowded, badly ventilated, and badly drained. There is little or no guarantee that the milk is derived from healthy cows."

273. The remedies for this state of things are, first, the general application of the permissive provisions of the existing law under the Contagious Diseases (Animals) Act, 1878. The Local Government Board may make orders for :—

(i) Registration of cowkeepers, dairymen, etc.

(ii) Inspection of cattle in dairies, and for prescribing and regulating the lighting, ventilation, cleansing, drainage and water supply of dairies and cowsheds.

(iii.) Securing the cleanliness of milk stores, milk shops, and vessels.

(iv.) Prescribing precautions to be taken for protecting milk against infection or contamination.

(v.) Authorizing a Local Authority to make such orders.

The Committee think that in the event of the Local Authority not making such orders the Local Government Board, who, it is understood, have already issued model bye-laws for urban and rural districts respectively, should make the orders themselves ; or if it was deemed preferable to bring indirect pressure to bear, the power now enjoyed by a local authority under the Infectious Diseases (Prevention) Act, 1890, for prohibiting the supply of milk from an infected dairy might be extended so as to cover exclusion of supply from areas where provisions of the Contagious Diseases (Animals) Act are not in operation. Under either alternative the County Council should be empowered to act in default of the Local Authority, and in either case it should be the duty of the Local Government Board to intervene in the ultimate resort.

274. Nor are the risks of contamination at an end when the milk has left the farm. Owing to the distance from which the supply is drawn and the number of hands through which it passes, these are numerous ; to quote Mrs. Smyth again :

"Dr. Priestly, medical officer of health for Lambeth, has stated that much of the milk consumed in the poorer quarters is three or four days old, and probably Lambeth is not the only district in which this state of affairs exists. The milk has passed through the hands of three or four dealers by each of whom a dose of some preservative has been added in order to prevent the actual onset of decomposition. The mischief is caused by the many hands through which it passes. If there were some system of collecting milk in the country and sending it straight to milk depots it would be better." Smyth, 1267.

In Dr. Newman's report it is stated under this head :

"52 per cent. of the milk shops in the Borough were found to have one or more sanitary defects, and 73 per cent. of the milk vendors fail to keep their milk covered or protected from dust. Further, 48 per cent. of the shops where milk is sold are small general dealers, doing a daily milk trade of only a few quarts or pints."

And again,

"There is reason to believe that Finsbury milk and milk generally in London contains great bacterial contamination. Four unpreserved samples of milk, selected from two good class and two poor class milk shops, gave an average of 2,370,000 bacteria per cubic centimetre, which is about 2,000,000 bacteria in excess of what should be present in good fresh milk. Of 25 milks examined in Finsbury in 1903, 32 per cent. contained *pus* and 40 per cent. contained dirt."

275. Things may be better or worse in selected localities, but the Committee have no reason to think this is an overstated account of the general condition. In proof of the extreme ignorance that prevails even among the better class of dealers as to the precautions that should be taken to preserve the purity of milk, Dr. Vincent instanced the practice of a prominent dairy company in keeping a wide bowl of milk standing on the counter of a shop in the West End within a few yards of a continuous and dense traffic. This they label "Pure Milk," whereas from the wide surface exposed to contamination it is imbibing the maximum of bacterial poison, and in Dr. Vincent's emphatic words "should be pitched down the drain." "It is perfectly incredible," he adds, "how milk companies could act in this way." Vincent, 12066

276. The evil is not at an end when the milk reaches the home of the consumer. A pure supply may be rendered injurious by dirt in the house, the proximity of contaminating articles, the general ignorance, in fact, that prevails as to how milk should be stored and the conditions under which it is fit for use. One fertile source of contamination was said to be the use of the feeding-bottle with a long indiarubber tube, which it was impossible to keep clean. Dr. Hutchison would like to see the use of this tube made illegal, as he believes it is in France, and is certainly in some of the States of America. Hutchison, 9984–9.

277. The real remedy, however, is to be sought in that social education already described, by means of which, at first in the school and afterwards in continuation classes, and finally by the fostering care of philanthropic and municipal agencies, the foundations of maternal competence may be laid. The Committee had their attention called to a document issued by the Health Department of the Corporation of Sheffield, entitled "Advice on the Feeding and Rearing of Infants," and to another emanating from the Wakefield and Appendix XVIII.

District Sanitary Aid Society, "How to Rear a Healthy Baby," either of which might be made the model of similar admonition elsewhere. Dr. Hutchison thought systematic instruction of mothers in the methods of feeding and rearing of the first importance; he believed they were in most cases willing to learn, and recommended the issue in all towns of leaflets by the Registrar on the registration of every infant, as was said to be the practice in France, and as had been done for twenty years in Glasgow.

Hutchison, 9937–9941, 9979–9981. Chalmers, 6076–9.

278. The crux of the question lies in the steps that should be taken to bring an adequate supply of pure milk within the reach of the poorer classes. The Committee have had before them schemes for the organisation of this supply by municipal action, the agency of hospitals or charitable societies, or some better adaptation of trade methods. A good account of the system adopted at Battersea was given by Mr. Atkins. It is claimed for it that it has already had an effect in reducing infant mortality, and will be self-supporting when its area of operation is sufficiently extended. The securities taken against contamination seem adequate. Mrs. Smyth described the methods pursued in Paris, both commercially, by an organization under the direction of Dr. H. de Rothschild, and municipally by the *Assistance Publique*. Both these work under medical supervision, and their operations include the periodical weighing of the children fed thereby. In Liverpool the scheme is directed towards "the supply of sterilised milk to poor people at a nominal price," and it was deemed by Dr. Young that the municipality had thus reduced very largely infantile mortality from diarrhœa in the summer. Dr. Collie was an advocate of such a system and thought it could be made self-supporting, and Dr. Chalmers explained the steps that were being taken to organize it in Glasgow. On the other hand Dr. Niven was rather inclined to deprecate municipal activity in such a field, and Dr. Ashby held that the municipality weakened their position as censor if they assumed the functions of trader, and thought much could be done by helping the people to help themselves and by improving the commercial channels of supply. Dr. Eustace Smith informed the Committee that an attempt was about to be made by the East London Children's Hospital to organise a proper milk supply. The milk will be brought from farms kept under strict supervision and it will be kept under supervision the whole time it is in the hands of the Hospital authorities, and will be sold as cheaply as possible. Dr. Smith believes that the scheme will be self-supporting, and anticipates a large sale owing to the willingness of parents to take advantage of the instruction given by the hospital in the shape of leaflets. Dr. Hutchison, however, saw a good deal of difficulty in the general adoption of such a system. Hospitals were for the most part non-local, and he would rather look to improvement in the ordinary commercial supply. On the whole it seemed to him that concerted action might be brought about in which municipalities, hospitals, and charitable agencies might all bear a part and prepare the way for the introduction of better commercial methods.

Atkins, 2938.
Smyth, 1299–1315.
Young, 2122–7.
Collie, 4204–9.
Chalmers 6069-6081, Niven, 6340–5.
Ashby, 8791, 8852–8874.
Smith, 8458–8463.
Hutchison, 9925–9.

279. It is of great importance, with a view to enforcing responsibility and guarding against contamination, that the milk supply should pass through as few hands as possible. It has already been shown that milk vendors are often general dealers whose sale of milk is confined to a few quarts, and in the interests of public health this practice should cease. With the formation of a sufficient number of milk depôts, the machinery of registration and of municipal health visitors could be utilised to bring to the knowledge of mothers of young children where supplies of milk could be obtained, and to the spread of this knowledge hospitals and infirmaries in the district could contribute their share. By these means the Committee believe the difficulty of milk supply could be got over without recourse to direct municipal action, but they think that in all improvement Bills promoted by Local Authorities, the insertion of provisions dealing with the milk supply within their area should be insisted on.

280. The problem of providing *ab initio* for the purity of the milk is not so easy: most of the witnesses appeared to think that sterilisation did secure this object; but Dr. Vincent, who gave evidence late in the enquiry,

Vincent 12061–4, 12137–12143.

condemned the practice *in toto* on the ground that it reduced the nutritive value of milk to a minimum, and was calculated to cause a scorbutic condition. The Committee do not feel themselves qualified to determine a point on which professional opinion is so acutely divided, but having regard to its importance and the very general belief that by means of sterilisation the best conditions under which a supply can be organised are secured, they think that it should be made the subject of a special investigation by a small body of experts. They have no doubt, however, that Dr. Ashby and Dr. Vincent are right in holding that the first step to be taken with milk on its leaving the cow is prompt refrigeration to a temperature of 40° Fahrenheit.

Ashby, 8874. Vincent, 12073.

281. It is obvious that the enforcement of this practice would stand in the way of the small cow-keeper sending his milk to the agents of the great collectors who serve the urban market, but looking to the alleged scarcity of milk for the consumption of the poor in rural districts, it might be a good thing if these persons were confined to the sale of what they produce among their own neighbours, where it would be rapidly consumed, and the supply of the urban market thus left in the hands of producers with sufficient capital to take a precaution which the Committee believe to be an essential preliminary to the protection of milk from pollution.

v. *Parental Ignorance and Neglect.*

282. These failings have not escaped illustration in the preceding sub-divisions of this section; unfortunately they are not confined to the subject-matter therein treated, but touch every aspect of child-life. The fact of ignorance and neglect on the part of parents is undisputed, and is testified to by a crowd of witnesses. It is not, perhaps, easy to determine how much of this neglect springs from ignorance and how much from callousness; observers are indisposed to take a view that would appear to press hardly on persons the conditions of whose lives are unfavourable to the development of the domestic virtues, and many testify to the willingness of the poor to learn and to a tractable disposition in contact with judiciously tendered advice; but, at the same time, there is no lack of evidence of increasing carelessness and deficient sense of responsibility among the younger women of the present day, which is a discouraging sign, especially as these features are said to exhibit themselves in the country as well as in the towns. Apart from the effects of extreme poverty, alcoholism and love of ease are contributory causes on which many witnesses laid stress. Mr. Booth admitted a growing disinclination to attend to domestic duties, and Mrs. Mackenzie's description of certain classes in the Canongate, Edinburgh, pointed to a degree of indifference which amounted to positive inhumanity.

Booth, 1087–8.

Mrs. Mackenzie, 7034.

283. In certain overt directions, the disastrous consequences of this neglect are very palpable. Thus overlaying is described as frequent, and is the result of carelessness or drunkenness, the cases generally occurring between Friday night and Monday morning. The practice of placing a small child in bed with older people is, perhaps, sometimes defensible on the score of warmth, but it should be discouraged, and health visitors might properly point out its dangers, while, at the same time, indicating that next to no cost would be incurred by providing a suitable box in which a child could sleep with safety.

(*a*) *Overlaying.*

Atkins, 3002–5. Malins, 3147. Greenwood, 8165–7. Smith, 8507–8

284. The instances in which children are left alone in a room with a fire unprotected by any guard are said to be very numerous. During the years 1899 and 1900 inquests were held on the bodies of 1,684 young children whose deaths had resulted from burning, and in 1,425 of these cases, the fire which caused the accident was unprotected by a guard. Mrs. Greenwood stated that in the leaflets distributed in Sheffield, "On the Care of Infants and Children," warning was given on this point, showing the picture of a fire-guard, but she had never known one bought as the result of the warning, and thought they could only be brought into use by the inclusion of provisions in the building bye-laws.

(*b*) *Fire.*

Booth, 1008.

Greenwood, 8163–4.

(c) *Ventilation.*

Lyttelton, 5454–6, 5480–5.

Ashby, 8700; 8723–5.

(d) *Want of Cleanliness.*
(e) *Insufficient Clothing.*

Deverell, 7998–9.

285. The lack of ventilation and ignorance of the value of keeping windows open—not only in schools but at home—has been mentioned as having a very deleterious effect on child-life. Thus Mrs. Lyttelton said that "not one person in a thousand understands the value of fresh air," and she thinks cottagers get less air than they used because the cottages are less draughty. Dr. Ashby alluded to bad ventilation in the houses as a particular in which mothering was deficient, and classed it with want of cleanliness and badly fitting and insufficient clothing. In this last connection Miss Deverell, Inspector of Schools, confirmed the remark of Mr. Booth that the poor did very little mending, by stating that in many households there is no such thing as a needle and cotton, and mothers made no attempt to mend their children's clothes. Weight, in their opinion, is the only criterion of warmth: children are often without underclothing at all, and their outside garments are both ragged and filthy.

(f) "*Comforters.*"

Young, 2117.
Greenwood, 8197–8200.
Ashby, 8907–8911; 8918.
Garnett, 9211–4.

286. One of the most noxious practices described is the habit of giving infants india-rubber nipples to suck; this habit appears to be very common, and was most strongly deprecated. It has the effect of causing contraction of the roof of the mouth and the air passages at the back of the nose, which is prejudicial to proper breathing, and is also instrumental in introducing foul germs into the system by virtue of the dirt accumulated. The first of these evils was illustrated by Dr. Young, the second by a number of witnesses.

(g) *Sleeplessness.*

Rees, 4418.

Mackenzie, 6835–8.

287. Much evil arises from the chronic sleeplessness fostered by the conditions of life so largely prevalent. The lack of sleep from which town children suffer was mentioned by several witnesses as a cause of degeneration. "One of the great contributory causes of physical deterioration," says Mr. Edwards Rees, "is the fact that the children do not get enough sleep." Children in the slums are habitually up till very late at night. This is attributed by Mr. Edwards Rees more to parental carelessness than to the fact that the children would not go to sleep, even if they were put to bed, by reason of the noise and overcrowding, and so on; "for," he says, "children easily get accustomed to such surroundings;" but the conditions under which many of them are compelled to exist must render sleep very troubled and broken. Dr. Mackenzie attributes to sleeplessness the prevalence of irritability and nervous exhaustion.

(h) *Indifference to slight ailments.*

Deverell, 8006.

(i) *Improvidence.*

Loch, 10185–9.

Chalmers, 6051.

288. Very little knowledge is moreover found among mothers of the slighter ailments to which children are prone, and precautionary measures are rarely taken until they have reached an aggravated stage. The improvidence of the poor is another circumstance responsible for much juvenile suffering. Money, when plentiful, is spent on luxuries or absorbed in the pursuit of pleasure, and when the pinch comes the children are the first to feel it. Mr. Loch drew attention to the higher rate of wages and also to the decrease of child pauperism; but he said that "when the higher wage has not been combined with a better power of using the wage the children have not come off better," and Dr. Chalmers stated "that there is no relation between the total earnings of the individual householder and the quantity or the quality of the food going into the household."

vi.—*Feeding wrong in time, in kind, and proportion.*

Eichholz, 436, 7.

289. The general aspect of the feeding problem is discussed under a previous heading of the report, and the questions of milk for infants and feeding of children at schools under sub-sections of this heading, but looking to the extreme importance of nutrition in relation to the young, the subject requires some special notice among the factors that make for juvenile degeneracy. With the single exception of Mr. Edwards Rees, whose panacea is fresh air, all the witnesses concurred in claiming the first place for food. "Food," says Dr. Eichholz, "is the point about which turns the whole problem of degeneracy." There is, first, the want of food, secondly, the irregularity in the way in which children get their meals, and, thirdly, the non-suitability of the food when they

get it; and these three circumstances, want of food, irregularity and unsuitability of food, taken together, are, in his opinion, the determining cause of degeneracy in children. Describing their dietary, he says:

"Their breakfasts are nominally bread and tea, and the dinner nothing but what a copper can purchase at the local fried fish shops, where the most inferior kinds of fish are fried in reeking cotton-seed oil, and this often supplemented by rotten fruit collected beneath coster's barrows."

290. Meat may be had in small quantity and of a poor sort on Sunday, but according to this witness the absence of milk and meat is most important in determining degeneracy in the poorer areas. The tea it must be added is probably in the dangerous form already mentioned, having been brewed in the morning and been allowed to stew throughout the day. Dr. Scott instanced a child in Arran who died the victim of his parents' special kindness in this respect. Mrs. Close thought children would be better brought up on beer than the tea they get. Dr. Collie considered it most deleterious, and evidence to the same effect was given by other witnesses. The growing consumption of tinned foods and its coincidence with the decrease of cookery at home press with exceptional severity on the young. Sir Frederick Maurice laid stress on this as a serious factor in the situation. Few of the mothers in the poorer districts, according to Mrs. Bagot, do much cooking; tinned foods or bad fried fish are the alternatives, and if the mother does do any cooking it is only for the father, and the children have to eat what he does. Thus Miss Garnett cited a case where a baby, who was very ill, had been fed on tinned salmon and orange juice, and Mrs. Lyttelton described the regrets of a country holiday child for its "tasty" supper, which on enquiry proved to vary between bloater and a halfpenny saucer of pickles.

Scott, 1744. Close, 2592. Collie, 3931–3. Maurice, 331, 2. Bagot, 4554. Garnett, 9110. Lyttelton, 5388.

291. In the course of Sir Frederick Maurice's investigations, he gathered "universal testimony" that it was the habit of parents to feed children off their own plates, and this would ordinarily include raw herrings, pickles, fried fish, and the like. "They live as we do," was quoted by Mr. Fosbroke as a common saying.

Maurice 275. Fosbroke 6624.

292. With the prevalence of such ignorance, it is needless to say, no balance or proportion enters into the calculations of those who cater for the wants of the young. The greater cheapness of many articles of consumption —meat, for instance—has brought them much more largely within reach of the poor but there has been no corresponding increase of knowledge as to the economic expenditure of money on wholesome food; indeed, the general consensus of opinion collected from every variety of witness points to the conclusion that in no branch of domestic life is the English housewife so deplorably destitute of the necessary equipment.

Remedial Measures for the above Adverse Conditions.

293. It is clear that the evils, which it has been the object of the preceding sub-sections to summarize, can only be dealt with as part of some great scheme of social education, to which many agencies must contribute, legislative, administrative and philanthropic, and by which the people themselves must be induced to cast off the paralysing traditions of helplessness and despair.

294. Later sub-sections will deal with what, in the Committee's opinion, may be done in school and during the period between the close of school life and adolescence to raise the standard of domestic competence and ideals of home life, and in this they believe lies the principal hope for future generations; but it is not too late to do something to rescue the present generation from the consequences of past neglect, and to that end the subjoined observations and recommendations are directed.

295. An enactment placed on the Statute Book so recently as 1902 offers an opportunity to the Local Authority that should not be missed. Under the Midwives Act of that year, which places in the hands of County Councils, or any District Council to which they may delegate their powers, the general supervision of all midwives practising within their area in accordance with rules to be laid down under the Act, rules have been made and approved

by the Privy Council by which every midwife is made responsible for the cleanliness and is enjoined to give full directions for securing the comfort and *proper dieting* of the mother and child during the lying-in period, which, for the purposes of the regulations, is held to include a period of ten days after delivery. It is obvious that as women trained under the Act take the place of the illiterate, incompetent persons that very generally look after the poor at this critical point of their lives, a great opportunity is offered for giving mothers the information wanted and providing the newly-born infant with a fair start. If the Local Authority make use of this agency, which is entirely under their control, for the dissemination of proper knowledge and practical advice, a considerable step in advance will have been achieved. Models for maintaining and improving upon this step already exist, and only require careful study and a genuine faith in the value of social education, to be brought into general use.

296. Direct evidence on the value of crêches as places of instruction for mothers was given by Miss Eves. She thought education of young women in the care of infants in the strictest sense technical education, and advocated the establishment of centres for the purpose under the Local Education Authorities.

Eves, *passim.*

297. A large body of evidence was tendered as to the organisation and operations of the Manchester and Salford Ladies' Public Health Society, and the Committee had the advantage of examining on the subject Mrs. Worthington, one of its principal members, and Mrs. Bostock, one of the Health Visitors it employs. The Society, which has been in existence for more than twenty-five years, has for its object the discovery of all those conditions that are adverse to public health, and especially the bringing within the knowledge of the mothers among the poor such information as will enable them to do their duty by their children. The poorer parts of both towns are divided into districts, each under the supervision of one or more of the ladies who constitute the Society, and, subject to their directions, a number of Health Visitors, who are in part paid by the Corporation, undertake the duty of visiting every house in which the birth of a child is reported, with the object of educating mothers in the best methods of bringing up young children. By these means, Mrs. Worthington stated that a good deal of influence has been brought to bear upon them to adopt regular hours and not be quite so miscellaneous in their feeding operations, and it is said that they have now acquired some settled notion of what is the best type of food to give children. Incidentally and very largely the labours of the Health Visitors in this connection bring to their knowledge all sorts of insanitary conditions, arising from overcrowding, stopped drains, and structural defects, which they proceed to report to the municipality on a form provided for the purpose. In the result, an inspector is at once sent and the evil is put right before very long. In a recent report of the Society's work, it is said that the Health Visitors have made 30,364 inspections of houses, and have reported 1,500 cases of insanitary conditions, and the Medical Officer of Manchester testifies that the effect is marked in the poorer districts of the city, and that "an improvement on former conditions can now be generally discerned." The Report goes on to quote from one of the superintendents that the poor "look upon the Health Visitor as their best friend, and there are few homes where she is not made welcome."

Worthington, *passim*
Bostock, *passim*

298. The Report proceeds :—

"In addition to teaching personal and household cleanliness and giving advice and sympathy, much practical help is given in ways such as giving food and clothing to specially needy families, finding work for men and women, getting recommendations for different hospitals and institutions, sending children into the country or to the seaside, making the beds of sick patients and cleaning their houses."

On the whole, however, the work is preventive rather than remedial.

"The women in the district are shown the evils of dirt and the dangers of living in unhealthy dwellings; they are taught to prevent the spread of disease, and the laws generally which will enable them and their families to lead moral and healthy lives."

Miss Squire, one of the Factory Inspectors employed by Miss Anderson for the purposes of the Memorandum which has been extensively

referred to, visited some houses with one of the Health Visitors and was

"favourably impressed with the effect she seemed to produce upon the mother or nurse, as the case might be. The serious proportion of infant deaths is a matter of common knowledge in the town, and the mothers and nurses seemed to take it as quite reasonable that the Medical Officer of Health should prescribe to them what they might and might not do, and to be impressed with the fact that what their mothers did before them would no longer be allowed to be their guide in the treatment of their children." Appendix, V. 60.

These visits are supplemented and the lessons they give enforced by the distribution of short leaflets (as concise and pointed as possible) in order to keep the advice given constantly before the mother's mind, and it is found that these leaflets, following upon personal visits, are read and treasured.

299. Fuller testimony is borne to the value of the system by the extent to which it has already been adopted in other places. Mr. Rowntree advocated municipal leaflets associated with visiting; he described the work of the Health Society in York and also the standard of knowledge and training to which visiting ladies ought in his opinion to attain. Mr. Fosbroke testified to the good results of the lady visitors employed by the Worcestershire County Council. Dr. Smith said that the distribution of leaflets by the East London Children's Hospital had had great effect, and he thought that direct work among parents was more valuable than the training of children and young people with a view to their becoming parents, a view also taken by Dr. Hutchison, because in his opinion these things do not come home to girls until they have a baby of their own. Rowntree, 4994-5028, 5158-5168, 5252-5263. Fosbroke, 6613-6621. Smith, 8464-7. Hutchison, 9937-9953, 9980-9990.

300. The Committee believe that enough has been said of the value of the system, and the testimony paid to its success by competent judges, to justify them in urging upon every locality the adoption of similar methods. The system has the advantage of linking individual and philanthropic effort with municipal responsibility, in a way that regularises the one while energising the other, and appears to give to each its proper influence in dealing with social wrongs, at the same time tending to check the overlapping and misdirection so often characteristic of purely charitable impulse.

301. Other agencies to the same end, such as lectures and mothers' meetings are not excluded; indeed, they can very well be worked into the system and be utilised to expand and develope its scope. There is no step, in short, towards training mothers in personal, domestic and infant hygiene, with which it cannot be associated, and towards the effect of which it cannot be made to contribute.

302. The Committee desire to press these considerations with all the earnestness at their command upon the most serious attention of the community, and they would further suggest to the Local Government Board the desirability of issuing to local authorities a circular explaining the objects to be sought and the means by which they can best be attained. It is in connection with steps of this sort that the Committee believe an Advisory Council formed on the lines recommended in the earlier part of the Report might prove of great use to the Department usually charged with the interests of Public Health.

vii. *School System—Medical Inspection of School Children—Feeding of School Children.*

303. In a country without compulsory military service the period of school life offers the State its only opportunity for taking stock of the physique of the whole population and securing to its profit the conditions most favourable to healthy development. It has been shown in the first part of this report how the occasion may be utilised in furtherance of the objects of an anthropometric survey, and it remains to be considered what are the conditions of school life adverse to physical well-being, and how the opportunities which it presents can be made to realise the best results for the rising generation, at, perhaps, the most sensitive period of its growth.

304. It may be said at once that the general effects of school life are not prejudicial to health. The civilising influence exercised by the school during

Eichholz, 526–530. 578–582. Niven, 6246–9.

the last thirty years was noticed by both Drs. Eichholz and Niven. The untamed savagery characteristic of certain types has disappeared, and Dr. Eichholz further thought that there was nothing in the conditions of school life which it was not in the power of existing authorities to improve; but popular opinion required educating on such elementary though important points as the seating of children, the arrangement of light, and the supply of fresh air. Evidence was given of children being kept too long at desks which do not fit them, in an attitude of strained attention, either writing or with their eyes concentrated on a blackboard, which, if the class happens to be a large one, perforce occupies a position in which some have a difficulty in seeing it. Very young children are sometimes observed sleeping in postures calculated to develop curvature, and infant occupations are criticised as often much too fine for their eyesight. It was also alleged that the eyes of scholars often suffered from the effects of a strong cross light, and that defective ventilation counted for a great deal among the unfavourable circumstances with which children had to cope.

Cameron, 11053. Gorst, 11852, 11872.

Kerr, 801, 812, 818. Collie, 4019. Garnett, 9237.

Greenwood, 8213, 8265–8280. Kelly, 11366–8.

305. While with the last-named exception schools on the whole seem to be in a good state, Mrs. Greenwood drew a sad picture of the dirt and darkness in some of the Sheffield schools, and Dr. Kelly, Bishop of Ross, taxed the National Board with indifference to the warming of schools, from which children suffered acutely. It appears that whatever fuel is used in schools in Ireland has to be procured by voluntary contributions or brought there by the children themselves, and it is not an uncommon thing for children to take a sod or two of turf to school on a winter's morning. Dr. Kelly goes on:—

"I might set it down as one of the causes of the poor physical development in Ireland that the school children are unfairly, in fact I might say cruelly, treated in the schools themselves. I see now many of these little children going to school all the winter barefooted, and in some instances they go to a school where there is no fire. The country children have to travel a couple of miles to school; a great many of them have no cloak or shawl, or anything to cover them. Ireland is rather a rainy country, and they go wet into the school and sit down there shivering all day."

The Committee think that a system under which the infliction of such suffering on poor children is possible requires amendment.

Eichholz, 579–583. Kerr, 808–810, 946–950. Collie, 3982, 4024–6, 4096–4101. Chalmers, 6164–9. Horsfall, 5687–5693. Gorst, 11811–3.

Brunton, 2426, 2443–9, 2470–9, 2528–2537.

306. On the point of ventilation, there was some difference of opinion between the advocates of open windows on the one hand and mechanical appliances on the other, but as in the case of the latter the inlets are usually under the control of the teacher, it is of the first importance that he should be alive to the value of fresh air, and in this respect among others there appears to be something wanting to the education of teachers in the principles of practical hygiene. Sir Lauder Brunton was perhaps the most emphatic critic of the school system, and believed that both in regard to breaks in school work and the substitution of physical exercises for prolonged mental application the Swiss practice was preferable, but his actual knowledge of what goes on in English schools did not appear to be very close, and the Committee are convinced that the regulations in force, if properly observed, are sufficient to cover both points of attack.

Lyttelton 5415–5428. Fosbroke 6598–6608.

307. Infant schools as conducted in urban districts can no doubt be worked to the great physical advantage of the children attending them, but there is evidence that a handful of small children in a rural school necessarily suffer a good deal from neglect or are taught under conditions from which no advantage can be derived. So impressed were Mrs. Lyttelton and Mr. Fosbroke with the unsatisfactory results that may be expected from keeping tiny children at school that they would not permit attendance under five at all. Mr. Fosbroke made this one of his chief points and had evidently given it a great deal of attention. He thought the effect of a later attendance at school on the children themselves, both physically and mentally, would be most salutary, and it would have the indirect result of keeping mothers at home and compelling them to attend to domestic duties. Sir J. Gorst went even further, and would be glad to see country children excluded from school up to seven years of age.

Gorst, 11816.

"That is the practice in Switzerland, which is perhaps almost the best educated country in the world. They do not let their children come to school till they are seven. They run about in the villages and mountain sides, and they are often employed in looking after cattle, goats, and so on. They do not go into school at all till they are seven years old, and therefore when they do go to school they are sturdy and strong, and their observation is awakened."

While the Committee are unable to accept this statement as entirely correct, they think that school attendance in the *rural* districts should not be compulsory till six or possibly till seven, and should be discouraged, if not absolutely prohibited, under five.

See Appendix III to the Report of the Committee on Employment of School Children (1901, Cd. 849).

308. The organisation of games and the provision of accommodation for outdoor exercises were strongly pressed by some witnesses, but no scheme of games alone can ever be made general enough to supply the place of methodical physical training. A model course of physical exercises, more thorough, systematic, and complete than any previously in use, has just been produced by the labours of another inter-Departmental Committee, and in connection therewith this Committee desire to express their opinion that wherever practicable, the prescribed exercises should be performed in the open air, and the interval utilised to obtain a thorough ventilation of the school premises, and particularly the class-rooms, which as a rule suffer most in this respect. Inasmuch, however, as the effect of physical exercises depends in no small degree on their regularity, and the climate of this country is such that exercises in the open air are necessarily interrupted for days at a stretch, the provision of play-sheds or rooms for physical exercises, other than the ordinary class-room, should be insisted on in ordinary circumstances as an almost indispensable part of the school equipment.

309. Mr. Atkins avowed himself a great advocate of games as an educative as well as a health-giving factor, and he thought there might be a much more systematic effort towards their proper organisation, both for children of school age and young people. Mr. Rowntree called attention to the same want, more especially in towns, and cited Boston as an example of the American practice in this respect, where there is no open space without some one to organize the children's play. Mr. Horsfall and others emphasised the need for physical recreation and exercise, through the lack of opportunities for which Mr. Edwards Rees said the children of Salford were losing the instinct of play. To this end playgrounds should be utilised, not only during the mid-day recess but after school hours. The Committee heard a good deal from Sir Lauder Brunton of an organization now in process of formation, under the name of a National League for Physical Education and Improvement, and they cannot do better than commend to its attention the expediency of placing itself in communication with the educational authorities throughout the country, with a view to their intelligent co-operation in a scheme of so much importance and utility. The Committee have read with great interest the observations of the Royal Commission on Physical Training (Scotland) on this subject, and think that paragraphs 85 and 86 of that Report deserve the special study of the organizers of the League. In the Committee's judgment a full consideration of the subject requires that due prominence should be given to the part that ought to be played by skilled physical instructors, and the need of securing a constant supply of such. In this regard, the suggestion in paragraph 314, as to the training and recognition of teachers and instructors, may be useful.

Atkins, 3000, 3041–3060, 3075–3086.

Rowntree, 5129–5140.

Horsfall, 5673–5683

Rees, 4318–4330.
Fosbroke, 6648, 6681.

Loch, 10131–5.

Brunton, 2430, 2434–7, 2537–9.

310. The teaching of cookery and household management assumed particular importance as bearing directly on the subject of this enquiry. The principles that should govern the teaching of cookery have already been laid down in paragraph 232 of this Report. These principles are to all intents and purposes embodied in the directions of the English and Scotch Central Education Authorities for the conduct of Cookery Classes, but there is a considerable body of evidence to show that, for various reasons, in practice the teaching of cookery has not had all the beneficial results that might have been expected.

311. Dr. Eichholz summed up the fruits of his experience in these words :—

Eichholz, 499.

"Many reforms are necessary in the teaching of cooking before it will become sufficiently useful in the home. The children begin to learn it too early to retain much by the time they leave school. They do not follow the work up sufficiently at home or at school to become conversant with the process taught them. It is the exception to find a girl repeat a lesson on the cooking of meat at home. The knowledge which the child gains is too insecure to tempt the parent to run any risks with the modest domestic allowance of meat. So it comes about that the girls become great adepts at making cakes. I think the work would be all the better for being concentrated upon the last six or twelve months of school life."

Lewis, 8579-8581, 8624, 8631.

This testimony is confirmed by other witnesses such as Mr. Lewis, teacher in the West Green School, Tottenham, who pointed out that teachers were apt to substitute a standard limit for the age condition very properly inserted in the Code, and that one cause of the disposition to devote too much attention to the making of cakes and other attractive dishes is the difficulty of getting rid by sale—as the teachers are expected to do—of the plainer and more useful dishes. On the other hand, Mrs. Bostock and Miss Maude Stanley bore testimony to the beneficial effect in the homes of the teaching at present given in cookery classes in school.

Bostock, 7516-7522. Stanley, 13448.

312. It seems to the Committee that certain prevalent defects in the teaching of cookery are, in part at all events, due to the absence of an efficient system of inspection, but on a consideration of the evidence they are disposed to doubt whether any system of teaching cookery, however well organised, is likely to be effective or practical, which is confined to the period of school life and is not continued and supplemented by instruction of the girls at a more mature age, when they are more appreciative of the need of such instruction and more likely to have opportunities for the practical application of what they have learned. It is for this among other reasons that the Committee have elsewhere (paragraph 230) recorded their opinion in favour of compulsory Continuation Classes.

Smyth, 1277-1288. Wilson, 1958-1960. Close, 2604-2619, 2662-2681. Rees, 4366-4383. Lyttelton, 5435-7, 5375-5382. Niven, 6295-6, 6379-6386, 6526-8.

313. As regards the instruction of girls of school age, however, the Committee are disposed to agree with those witnesses who urged that instruction in Cookery, Hygiene and Domestic Economy, should, as far as possible, be made compulsory on the older girls, that such instruction should be concentrated in the last year or so of school life, and that room for it should be made by the omission at this stage of certain other subjects from the school curriculum. In this connection, they would direct attention to the scheme of supplementary courses for girls under the Scotch Code, which virtually carries out these suggestions. Girls are admitted to these courses at or after 12 years of age, on giving proof of reasonable proficiency in the three R's, and thereafter devote most of their school time to *practical* instruction in cookery and laundry work, and all that appertains to the management of a home. As girls must remain at school till 14, unless specially exempted, there is thus opportunity for concentrating the attention of the girls upon domestic subjects for a period of a year or eighteen months immediately prior to their leaving school.

314. It is obvious that if instruction of this kind is to form part of the normal school course, questions of school and personal hygiene and of the proper conduct of a home must receive much greater prominence than appears to have been the case hitherto in the normal curriculum of Training College students, and that further, in the large centres of population, there will be opportunity for the employment of a special class of teachers, of more moderate attainments, perhaps, as regards the ordinary subjects of a general education, but who have a thoroughly expert knowledge of the class of subjects in question. It follows from this that, in the opinion of the Committee, there should be greater diversity of type in Training Colleges and greater elasticity in the conditions upon which recognition as a Certificated Teacher is granted. This status, subject, of course, to sufficient safeguards as regards general education, should be conferred not only upon the teachers of book subjects but also upon those who have received a comprehensive and thoroughly satisfactory training as teachers of housewifery, or, to take another example, teachers of physical exercises, and the training of such teachers should be equally an object of State support.

315. Moreover, the Committee think it worth considering whether the present law as to school attendance could not be so modified as to render the partial exemption from attendance at school, which in England and Wales is at present granted only on a certificate of proficiency or of previous due attendance, obtainable without further condition than that the obligation to attend school, which at present ceases altogether at the age of fourteen, shall in that case be extended to a later age. By this means the knowledge acquired during

attendance at elementary schools, which is too often forgotten on leaving school, might, it is hoped, be retained and extended. Legislation would, of course, be required to effect this, but the principle has already been to some extent recognised by the agricultural provisions of Robson's Act, and the Education (Scotland) Act, 1901, and it seems capable of extension in other directions; it might, for example, be made a valuable means of fostering that sense of domesticity in girls, the decay of which several witnesses deplored. In this, as in many other respects, the co-ordination of education which is now being effected by means of the new Local Education Authorities should be of great service in rendering a scheme of the sort feasible.

316. The problem presents features of too great minuteness and intricacy to be adequately discussed within the limits of this Report, but enough has been said to indicate the lines of advance upon which the Committee think that something may be done in order to equip the daughters of the people for domestic life.

317. Evidence was also forthcoming as to the unsuitableness of a stereotyped school system for children who are not up to normal school standard and are yet not so defective as to warrant treatment as "mentally deficient." Dr. Eichholz advocated the establishment of special schools, to which he gave the name of "Schools of Industry," something on the lines of day industrial schools for "retarded" children; that is, all children other than those actually defective who, by reason of insufficient feeding or whatever cause, are backward and not able to profit by the ordinary school curriculum. The condition of many of these children is the result of parental neglect, so that there are two sets of associated circumstances, educational and domestic, which, in his opinion, make it desirable to extend the industrial school system under Section 16 of the Education Act, 1876, with the same liability on the part of the parent to contribute. In his own words— Eichholz, 486–494, 680–708.

"I should like to see schools, either urban or rural, schools of industry, not punitive industrial schools, which shall recognise the uselessness of much of our present curriculum for retarded children, which will, in the first instance, create self-respect through cleanliness and decency, and aim at re-establishing an enfeebled constitution through suitable regular feeding. As these are secured, physical education becomes possible, and the final aim comes into the foreground, which is to provide a curriculum based largely on manual occupations and manual instruction, and which shall endeavour to implant in the minds of the children a respect for the dignity of work —a fact which their homes have never impressed upon them, and which the elementary schools likewise fail too often to accomplish." Eichholz, 486.

Dr. Eichholz would like to see the thing done through the magistrate rather than by a simple drafting of children to and from such schools by means of the School Attendance Officers and the ordinary authorities concerned. Eichholz, 486–494, 680–708.

318. The Committee may take this opportunity of expressing their opinion that, wherever possible, in cases touching the young where the assistance of a magistrate is invoked, he should be a person specially selected, sitting for the purpose.

319. Dr. Kerr was also in favour of a system of special schools for retarded children, though he had not considered the matter in relation to the food problem. He considered that as many— Kerr, 783–794, 846–9, 869–880, 888–902, 918–941.

"as ten per cent. of the ordinary school populations all over the country, at any rate in the first half of school life, require some consideration on account of debility and backwardness from various causes—some simpler education than the ordinary Board School attempts to give them."

In his view the method of selection for such schools would depend on the results of medical and educational inspection, the great point to be kept in view being "to suit the curriculum to the child instead of the child to the curriculum." It would, of course, be an essential feature of the scheme that children who under special treatment became fit for the normal type of school should be transferred there for the remainder of their school life. Besides these "retarded" children, Dr. Kerr thought there was a group of semi-invalids for whom something between a school and a hospital in the country should be started.

320. It is obvious that underlying all these schemes there is need of a much more complete system of Medical Inspection in schools than has yet been attempted, and it is not therefore surprising to find that all the medical witnesses and others laid great stress upon its introduction on some recognised basis.

Eichholz, 456–464, 550, 1, 615–9.

321. Dr. Eichholz thought it was the greatest need in school organisation. On the ground of expense he would confine a general examination to the poorest schools, and considered that in London the work could be done by ten young men at £250 each. The School Board had nothing like a big enough staff and confined their attention to cases of defective eyesight, feeble-minded children, and the medical examination of pupil and assistant teachers. Dr. Eichholz explained to the Committee the conditions observable in the children attending these poorer schools, and described the means by which medical inspection might be utilised to note and check degenerative tendencies. Children who were thought to need medical examination in better class schools would be examined on special notification by the teacher, but in the schools classified as poor the inspection would cover all new admissions and the re-examination of old cases where necessary. What follows on such a system is thus described:—

Eichholz, 463.

"The business of the school doctor is to examine children at admission when necessary, and periodically later; to make recommendations to the school authority which shall reach the parent without delay. It is for the school authority to determine how to make those recommendations effective. It is impossible that the doctor can enforce anything that he says. The way I suggest this should be done is as it is done in Frankfort and in German schools generally. They issue a slip of paper, which I suggest should be in duplicate, which says, 'Your child is suffering from so-and-so, kindly exclude him until he is fit to attend.' In England this would not suffice, as it would give the parent an excuse for not sending the child to school. We want the certificate in duplicate so that the school attendance officer may keep its contents before the parent. The authority would issue one to the officer and the other to the parent, and the parent in this way might be dealt with according to the measure of his culpability or his powerlessness, if he did not or could not act upon it. Many cases would still need charitable aid and whatever help managers could procure. I do not anticipate that the need for punitive expedients would often arise. A few wholesome examples would effect a very rapid cure of culpable neglect."

Among the further duties of the medical inspector would be:

Eichholz, 464.

"recommendations to the local authority on general and special points of school curriculum, length of lessons, apportionment of intervals for recreation, organisation of recreation, ventilation, lighting, artificial and natural, the use and abuse of needlework, desking for children of various ages, use of slates, towels, local variations in curriculum to meet special needs."

Kerr, 853-9.

322 Dr. Kerr thought that with the assistance of intelligent teachers trained in hygiene, there need not be a very great augmentation of the existing medical staff.

Collie, 3989–4006, 4120–6.

Dr. Collie went into the matter in some detail and thought that in the first instance it would be sufficient to entrust to the teacher the duty of reporting to the medical inspector the case of any child who on admission appeared to him to be suffering from any physical or mental defect; and the medical inspector would attend occasionally to receive such reports from the teacher and examine any child who required it. He advocated the employment of doctors of experience rather than young ones, and said the late School Board staff was quite inadequate, but well qualified general practitioners might be entrusted with the inspection of eyes and teeth (and presumably ears) without having recourse to specialists. No very large staff would, in his opinion, be required.

Chalmers, 6183–6.

Dr. Chalmers quoted the Report of the Royal Commission on Physical Training (Scotland), and declared a medical inspection the necessary accompaniment to any system of general physical training in schools. He thought medical inspectors might be useful in matters of ventilation and health conditions generally.

Niven, 6346-8.

Dr. Niven, like Dr. Collie, would utilize the teachers in the first instance and would require them to have special training. This last indeed appears a necessary corollary to the introduction of any system of the sort.

Mackenzie, 6787-6813, 6858-6869

Dr. Mackenzie considered "the systematic medical inspection of schools as one of the things that is most called for at the present time," and explained with some fulness the methods he advocated. He thought the

superintendence of the system might be entrusted to the Medical Officer of Health, and the inspection made on admission and periodically afterwards. The assistance of specialists on certain points would probably be required, but he agreed with other witnesses that properly trained teachers could render most useful assistance. Mr. Loch would not neglect the medical inspection of the home, "the fulfilment of an already recognised public sanitary duty," and he would have the two go together. Mr. Murphy was also among those who emphasized the need of a general medical inspection of schools.

Loch, 10328-10333.

Murphy, 10403.

323. For the reasons, then, that appear in the discussion that has occupied the preceding paragraphs of this sub-section, the Committee consider that a systematized Medical Inspection of School Children should be imposed as a public duty on every school authority, and they agree with the recommendation of the Royal Commission on Physical Training (Scotland) that a contribution towards the cost should be made out of the Parliamentary Vote. The value of such an inspection is well illustrated by the particulars given in a recent report by Mr. George Andrew, of the Scotch Education Department, on the *Gemeindeschulen* of Berlin and Charlottenburg. From that report it appears that of 2,547 children examined on admission to the schools of Charlottenburg, 321 or 12·3 per cent. were rejected as being unfit for the work of ordinary schools, and of all the children examined, 63 per cent. were described as not completely normal *(nicht völlig normal)*.

324. The Committee believe that, with teachers properly trained in the various branches of hygiene, the system could be so far based on their observation and record, that no large and expensive medical staff would be necessary. The general inspection may safely be limited to that class of school which from its character and surroundings affords clear evidence of the type of which its scholars are composed, and it should be repeated as often as the medical officer thinks necessary. In other cases it will be enough for him to examine such children as may be submitted to him by the teachers, and it would be for him to determine whether circumstances called for expert assistance. In no instance should the inspector do more than state the facts that require the attention of the parent, cases of poverty or neglect being left to the proper authorities to deal with.

325. The Committee further think that the services of the medical inspector should be at the disposal of the school authority in respect of all matters where the advice of a person skilled in the hygiene of child life may be wanted, and they look in the result to a much more intelligent handling of many of the problems with which that authority is charged.

326. Owing to the healthier conditions commonly prevailing in regard to the nurture and growth of the country population, the Committee do not think that these recommendations will have any appreciable effect in augmenting the charge for education that now devolves upon the rural ratepayers: on the contrary they are of opinion that bringing the sanitary administration of the county into touch with the schools may lead to the anticipation and prevention of many of those epidemics which are now such a fertile source of local expense.

Feeding of School Children.

327. The Committee have reserved to the end of this subsection the discussion of the question of feeding elementary school children (1) because it lies outside any direct obligation that has hitherto been recognised and (2) because some of the matter that precedes has a bearing upon its consideration.

328. Besides seeking to elicit the opinion of a large number of general witnesses on the point, the Committee sought to equip themselves for the task of formulating some conclusion by the examination of certain persons who were either called or tendered themselves to give special evidence thereon. These included Mr. W. H. Libby, Secretary to the East Lambeth Teachers' Schools Dinner Association, Sir John Gorst and Dr. Macnamara, Members

of Parliament, and Dr. Osmond Airy, one of H.M. Inspectors of Schools, who for many years was chairman of the organisation for providing dinners to poor children in Birmingham.

329. Before, however, proceeding to examine the evidence on the point, it may be as well to state that the general trend of opinion was to the effect that the ultimate means of dealing with the difficulty lay in the development of those forces of social education which have been described above, and in the operation of the great body of ameliorative tendencies which would raise the general condition of the poor, and foster a sense of parental responsibility, spreading knowledge and enlightenment in their train.

330. It was nevertheless acknowledged that the evils arising from underfeeding were so widespread, and in certain localities so pressing, that some authoritative intervention is called for at the earliest possible moment to secure that the education of the children who are obliged to attend school shall not be hampered and retarded by the physical conditions thereby engendered.

331. The evidence on the specific question of the feeding of children compelled by law to attend a Public Elementary School can conveniently be treated under the following heads:—

(*a*). The extent to which underfeeding prevails at present.

(*b*). Existing voluntary methods of providing food.

(*c*). Proposals in regard to the more systematic feeding of school children.

(*a*). *The Extent of Underfeeding.*

332. On this point Dr. Eichholz, one of H.M. Inspectors of Schools, gave very interesting evidence. In pursuance of his view, already noted, that the whole question of bad physique practically centres round feeding, he made a special investigation into the conditions of the Johanna Street Board School, Lambeth, as a type of school in a very bad district, and he considers that 90 per cent. of the children are unable, by reason of their physical condition, to attend to their work in a proper way, while 33 per cent. during six months of the year, from October to March, require feeding. He gave the Committee an estimate, based on the figures of the voluntary feeding agencies, of the number of underfed children in London. Some time ago he furnished the Board of Education with a similar estimate, in which he set down the number as 60,000; but he has since gone into the question in more detail and now estimates the number as approximately 122,000, or 16 per cent. of the elementary school population of London.

Eichholz 435–7.

Eichholz 471, 476.

333. The London School Board expressed the opinion that there were not more than 10,000 children suffering from malnutrition; but, in Dr. Eichholz's view, this estimate is belied by the actual figures given in the report of the Joint Committee on Underfed Children, which gives the average number of children fed per week during the weeks the feeding centres were open in 1902-3 as 22,206. His argument is that in the first place this figure only refers to children attending Board Schools; and secondly it is very fallacious as an index of the total number of children who are underfed, because the same children are not being fed all through the season; the result of investigation shows that on an average the centres feed three times as many children during the season as they feed on any one day, and that the number furnished as the weekly average of children fed may be taken as an index of the daily average of meals provided; and therefore we get 66,000 as the rough total of underfed children attending the London Board Schools. Besides this there are the children attending voluntary schools. And, as the amount spent per annum in London by voluntary feeding agencies is £6,100, and £100 spent is said to represent 2,000 necessitous children fed per season, the total estimate of underfed children in London is, roughly speaking, 122,000, or 16 per cent of the whole.

Eichholz 472, 475.

334. This calculation obviously proceeds on the assumption that all the children fed at schools and centres would otherwise be underfed, but such observations as those of Miss M. Horn, manager under the late London School Board, in a paper recently read to the International Home Relief Congress, throw considerable doubt on the validity of the assumption.

335. Dr. Eichholz also made enquiries about Manchester, and was assured that 15 per cent. of the Manchester children are underfed. As to this, Dr. James Niven, the Medical Officer of Health for Manchester, did not give any figures, but expressed the opinion that there was a very large number of underfed children, that the child must be fed at any cost, and that no voluntary agencies could possibly cope successfully with the evil. On the other hand, Mr. Edwards-Rees, Vicar of Pendleton, Salford, and a member of the Salford Education Committee, stated distinctly that not more than 2 per cent. of the children in Salford and Manchester come to school underfed; and in his opinion the question of malnutrition is not nearly so urgent as that of lack of proper physical training and pure air. Dr. Henry Ashby, of Manchester, nominated by the Royal College of Physicians to give evidence on the subject of nutrition, was inclined to think that most children go to school having had sufficient breakfast; so that there is some apparent conflict of evidence as to the conditions in Manchester.

Eichholz, 476, 478.
Niven, 6290-1, 6372-8.
Rees, 4285, 4286, 4384-9.
Ashby, 8740-1, 8748-9.

336. To revert to London, Dr. James Kerr, Medical Officer to the London School Board, "does not feel as strongly on the point of nutrition, or rather want of nutrition, as most people"; but he admitted not having considered the matter as fully as Dr. Eichholz. Dr. R. J. Collie also, a Medical Inspector to the late London School Board, stated that there is "not a very large proportion of children who are actually half-starved; it is only in some districts"; but he did not give any statistics.

Kerr, 942-5.
Collie, 3947.

337. Of other witnesses who spoke on the extent of underfeeding, Mrs. Close, a lady who considers herself familiar with rural England, said that children are constantly half-starved when they get to school owing to the laziness and neglect of the parents. Dr. Chalmers, Medical Officer of Health for Glasgow, is now making enquiry into the proportion of underfed children in Glasgow, but had no figures at the date of giving evidence.

Close, 2636-2642.
Chalmers, 6171-2.

338. Dr. W. L. Mackenzie, Medical Officer to the Local Government Board for Scotland, said that in the slums of Edinburgh a large proportion of children were half-starved, and he agreed that to subject a half-starved child to the routine of school would be the height of cruelty, and the educational result would be poor. Mrs. Mackenzie, the wife of Dr. Mackenzie, gave the same sort of opinion: "the child must be fed." Mr. W. H. Libby said that a feeding agency in Lambeth coped with from 12 to 15 per cent. of the elementary school population, and in the poorest districts with from 25 to 30 per cent., which, so far as that locality is concerned, bears out Dr. Eichholz's figures. Miss Garnett, the head of the Diocesan Women's Settlement in the extremely bad district of the Potteries, attributed the faulty nourishment of the children to the neglect of the mother who goes to work in the factories; the teachers in the various schools notice that children from such homes are less able to do their morning's work; but they do not admit that the proportion of such cases is very large. Mr. C. S. Loch, Secretary to the Charity Organisation Society, did not think a large number of children were sent to school half-starved, but gave no figures. Mr. Shirley Murphy, Medical Officer of Health of the Administrative County of London, regarded the question as by far the most important before the Committee, and said "the child has got to be fed." Finally, Dr. Kelly, Roman Catholic Bishop of Ross, said that in the South of Ireland it was commonly the case that children came to school underfed.

Mackenzie, 6977-6980.
Mrs. Mackenzie, 7030.
Libby, 7835-7.
Garnett, 9042-9215.
Loch, 10191.
Murphy, 10402-5.
Kelly, 11380.

(*b*). *Existing Voluntary Methods of Providing Food.*

339. There has not been a great amount of definite evidence on the voluntary agencies in existence. As regards London, Dr. Eichholz mentioned the following agencies which spend about £6,100 per annum collectively:—

Eichholz, 473, 475 476.

London Schools Dinner Association.
Mr. G. R. Sims *Referee* Fund.
Destitute Children's Dinner Society.
East Lambeth Teachers' Schools Dinner Association.
Southwark Children's Free Meals Fund.

The work of these agencies has been coordinated, so far as the Board Schools

are concerned, by the Joint Committee on Underfed Children, which was worked under the ægis of the School Board and existed to prevent overlapping.

Eichholz, 482.

340. In regard to the sum contributed by the parents, Dr. Eichholz said that it amounted to 5 per cent. in the case of the London Schools Dinner Association, and 25 per cent. in the case of the Destitute Children's Dinner Society.

Libby, *passim.*

341. Mr. Libby, who is Secretary to the East Lambeth Teachers' Schools Dinner Association, gave a description of the working of the Free Meal Fund in connection with the Association. The fund has been running about twelve years, and is conducted on business lines; it is worked by the teachers through the attendance officers, and careful enquiries are made as to the circumstances of each family before a child is given a meal. There are breakfast centres and dinner centres. A child can be given a pint of vegetable soup and a piece of brown bread and a piece of cake at the cost of 1d. About 2 per cent. of the children pay the full 1d., some pay part of the cost, and the rest nothing; not more than 7 or 8 per cent. pay anything at all, but Mr. Libby thought this small percentage was due to the thing not being sufficiently worked. In spite of the fund there are still many underfed children, because there is not sufficient organisation; it is difficult to get sufficient organisation by voluntary methods.

Atkins, 2967–2974. 2981.

342. Mr. J. B. Atkins, the London Editor of the *Manchester Guardian*, gave a description of the Free Feeding System in Manchester. There the funds are derived entirely from voluntary sources, but the School Board recognised the charity and the teachers helped in distributing the food, &c. The movement has grown steadily, and in 1902, 139,000 free dinners were given, at the cost of a little over £400. In this case also the circumstances of the family are carefully investigated by the attendance officers, but no attempt is made to recover payment from the parents.

Chalmers, 6173–7.

343. In Glasgow Dr. Chalmers said there is an institution called the "Poor Children's Dinner Table," by means of which the condition of every child is enquired into, and meals are given to the underfed; the system is very comprehensive apparently, so that "no child in Glasgow ought ever to go to school starving," but no detailed account was given to the Committee.

Maurice, 279–283.

Sir Frederick Maurice, however, referred to the Glasgow system and stated that the difficulty as to parental responsibility had there been solved by means of a very thorough system of investigation, and that the applications for gratuitous food have diminished rather than increased.

Mackenzie, 6977. Mrs. Mackenzie, 7005–7013.

344. Free meals are given in Edinburgh to about 2,000 children, but the evidence given by Dr. and Mrs. Mackenzie makes it doubtful whether this number by any means exhausts the number of children who are underfed.

345. The most complete scheme described was started by the late Mr. George Dixon, and has now been in operation for 20 years in Birmingham with Dr. Airy, H.M.I., as chairman of the organisation. In considering the principles on which they would act it was decided in the first place that only those should be helped who could expect practically nothing if it was not given to them, and secondly that only such a meal should be given as would not compete in any way with the meal which could be provided even in a very poor home. It was next decided that cases for help should be selected with the greatest care. This is done by three different people—by the head teacher of the school, by the class teacher in whose class the boy or girl is, and by the visiting officer. The co-operation of these three, Dr. Airy states, has been so successful that he does not believe there has been 5 per cent. or anything like it of abuse. The number of children fed in normal times is 2,500 and the plan pursued is thus described:—

Airy, *passim.*

Airy, 13253.

"We began with ten centres. We had large coppers for soup at ten centres, to which the children came from all outlying schools. The School Board allowed us in each of those centres to canvas off some twenty or thirty yards of playground, perhaps five yards wide, and the cooking was done at one end. There the soup, a good lentil soup with some animal stock, and the bread and jam, were prepared. The process was simply this: we had to do everything to simplify matters. It had to be a rough business, but it was an effective one. The children come, and form file, and then they walk up, and as they walk up they take a spoon out of a basket and go up to where the voluntary helpers are distributing the soup. They take their bowl of soup and go on to benches on the other side of the canvassed shed and sit down and eat their soup. The moment they have done they put their basin and spoon into another basket, and as they go out they take a large slab of bread and jam, and eat that

in the street. The School Board allowed us to do this without any rent, and they gave us the gas. Then the cooking of those meals is done by paid labour, but the distribution is done by the voluntary help of ladies at each centre. There is a rota at each centre and there are two ladies who attend each day. Our manager I will refer to directly—he is a most capable, suggestive man. We were very much distressed at the fact that the children would come a mile or a mile-and-a-half to eat this poor dinner, and they would come through slush and snow and wet, and we wanted to prevent that. A system of baskets was invented. There is a system of baskets at present in use by which the soup can be kept absolutely hot for more than an hour. I have tried it at both ends, and I find it is almost as hot as when it comes out of the copper. We reduced the number of centres to four or five, and now all the outlying schools send their baskets with a paper saying how many dinners they want. Those dinners are put into the baskets at a quarter to twelve or twelve o'clock, and then the staff of the school help in distributing the meals at that school."

346. The Committee have thought it worth while to print this part of Dr. Airy's evidence in the body of the report because of the remarkable economic fact with which he concludes :—

"We give that dinner, a large bowl of soup—in fact, they have two or three bowls if they like—and a large slab of bread and jam, for less than a half-penny, and in that expense is included £150 or £100 a year to the manager." Airy, 13258.

347. He attributed this result (1) to the concentration of the population that has to be helped, (2) to the good will and assistance of the local authority, and (3) to the organizing skill of "a heaven-born manager," a retired naval officer, and to the co-operation of volunteers. In addition to those dinners, which provide for some 2½ per cent. of the children of school age, breakfasts, consisting of cocoa, milk and bread, are supplied by the bounty of a private individual to the necessitous children in about twenty schools in Birmingham, as Dr. Airy believed, under similar conditions. The testimony of the teachers is unanimous, that the system pursued enables the children to do the ordinary school work, and they report that the difference is perfectly extraordinary. Airy, 13272.

(c) Proposals in regard to the more systematic feeding of school children.

348. With scarcely an exception, there was a general consensus of opinion that the time has come when the State should realize the necessity of ensuring adequate nourishment to children in attendance at school; it was said to be the height of cruelty to subject half-starved children to the processes of education, besides being a short-sighted policy, in that the progress of such children is inadequate and disappointing; and it was, further, the subject of general agreement that, as a rule, no purely voluntary association could successfully cope with the full extent of the evil. Even those witnesses who were inclined to think that its magnitude had been much exaggerated, did not question the advisability of feeding, by some means or other, those children who are underfed, provided it could be done quietly and without impairing parental responsibility. The only witness who appeared absolutely to dissent from that view was the Bishop of Ross, who, while admitting an enormous number of underfed children in Ireland, deprecated any steps being taken to remedy the evil, on the ground that it would weaken the sense of self-respect and self-reliance both of parent and child. Kelly, 1150–88.

349. The purely medical view was well put forward by Dr. Robert Hutchison, a well-known authority on nutrition, nominated to give evidence by the Royal College of Physicians. He said, "looking at it purely scientifically, it would be an extremely important thing to ensure to every child at school a sufficient and proper sort of meal"; and again, "I feel certain that the provision of meals would do a great deal to improve the health and growth and development of the children of the poorer classes." It is worth noting, also, that he considers the ages of ten to fifteen as the most critical period, rather in opposition to the view expressed by some witnesses that the period of infant life is the most important. This witness further gave the Committee to understand, that a child ought to have a certain amount of nourishment during the twenty-four hours, but that it does not very much matter how you divide it up; except that it is more important to have a meal before physical exercise than before mental; and, therefore, mid-day dinner is more important than breakfast. This view is interesting, as differing from a very general opinion that no child should be allowed to come to school without sufficient breakfast. Dr. Hutchison further Hutchison, 9973–8, 10001–10015, 10067, 8.

thought that most children require a certain amount of animal food, and pure vegetarianism is not sufficient. He spoke entirely from the medical point of view, and refused to discuss the economic question.

350. The general trend of opinion is in favour of some sort of regularised feeding in school, or at centres, exacting payment from the parents where they are in a position to pay, but giving the meal free where they are not. Thus, Mr. Charles Booth is in favour of some sor of school restaurant in every school, or connected with every school, where food could be obtained at a minimum cost, but with no intention of giving it away; though he admitted that "in some cases it might be a mere charitable assistance." He is also in favour of some special industrial schools, where children, whose parents culpably neglect them, could be fed and boarded, the cost to be charged upon the parents.

Booth, 992-6, 1128-1133.

351. Sir Lauder Brunton thought it might be necessary to provide food at schools, and "in cases where the parents are absolutely unable to pay, food might be provided out of the poor rates;" but "every effort must be made to force the parents to pay properly for the food."

Brunton, 2428, 2450-2.

352. Mr. Atkins said,

> "We have got to the point where we must face the question whether the logical culmination of free education is not free meals in some form or other, it being cruelty to force a child to go and learn what it has not strength to learn."

Atkins, 3000, 3006-3018.

But he agreed that the parents should be made to pay, if possible.

353. Dr. Collie thought that underfed children should be fed by means of school kitchens, and that the parents should be prosecuted for neglect; a few prosecutions would have a salutary effect. Mr. Seebohm Rowntree advocated the judicious feeding of school children, so as not to pauperise the parents. Mrs. Mackenzie thought the child must be fed, but there ought to be power to "arrest the wages of the parents." Miss Garnett thought the children must be fed, and there were other opinions to the same effect.

Collie, 3955-9.

Rowntree, 5039-5041.

Mrs. Mackenzie, 7030-4.

Garnett, 9215-9.

354. The opinion of Mr. C. S. Loch is worthy of consideration, as being presumably the official view of the Charity Organisation Society. He found fault with the existing systems of voluntary feeding, as "purely a movement against destitution without regard to education;" he stated his belief that no child should ever be fed without thorough investigation into the circumstances of its family, and no free meal given except in special cases, and then only as secretly as possible; but he admitted the necessity in special cases. The feeding should not be at the school, though it does not appear from his evidence where it ought to be. He instanced the difficulty in former days, before the Free Education Act of 1891, of getting educational fees out of parents, and argued there would be similar difficulty in getting feeding fees. Both Mr. Loch and Mr. Shirley Murphy thought that in cases of real destitution the Poor Law Administration should always be brought into play, and not kept out by any system of free feeding.

Loch, 10192-9. 10242-6. 10271-6.

Murphy, 10402-10411.

355. Dr. Niven propounded a definite scheme for ascertaining the fact of malnutrition, for feeding the child, and enforcing parental responsibility. The teacher would be taught to note all children obviously suffering or undersized, and to report them, if diseased, to a medical officer; if underfed, to the educational authority. The director would then instruct the attendance officer to ascertain the circumstances of the family; and the subsequent feeding of the child would depend upon the facts thereby elicited. It is worth noting that any such system would in the first instance be rendered easier by an organised medical inspection of schools, a proposal, as it has been seen, very widely and generally advocated.

Niven, 6349-6378, 6508-6510.

356. The most uncompromising advocacy of public responsibility came from Sir John Gorst and Dr. Macnamara, and as the first-named appealed to the authority of the other, it is fair to treat his proposals as put forward

Gorst, 11834.

in the name of the two. Dr. Macnamara has based his recommendations on the following proposals of a Committee of the London School Board in 1898, which, however, do not appear to have commended themselves to the School Board of the day :— Macnamara, 12376.

Children attending School unfit for School Work.

(i.) It should be deemed to be part of the duty of any authority by law responsible for the compulsory attendance of children at school to ascertain what children, if any, come to school in a state unfit to get normal profit by the school work—whether by reason of underfeeding, physical disability, or otherwise—and that there should be the necessary inspection for that purpose.

Provision for Children sent to School "Underfed."

(ii.) That where it is ascertained that children are sent to school "underfed" (in the sense defined above), it should be part of the duty of the authority to see that they are provided, under proper conditions, with the necessary food, subject to the provision contained in Clause (vi).

Supervision of Voluntary Organisations by Authority.

(iii.) That existing or future voluntary efforts to that end should be supervised by the authority.

Voluntary Effort to be Supplemented if inadequate.

(iv.) That in so far as such voluntary efforts fail to cover the ground, the authority should have the power and the duty to supplement them.

School Dinners available for all Children, and Method of Payment.

(v.) That where dinners are provided it is desirable that they should be open to all children, and should be paid for by tickets previously obtained, which parents should pay for, unless they are reported by the Board's officers to be unable by misfortune to find the money; but in no case should any visible distinction be made between paying and non-paying children.

Prosecution of Parent for culpable Neglect.

(vi.) That where the Board's officers report that the underfed condition of any child is due to the culpable neglect of a parent (whether by reason of drunkenness or other gross misconduct) the Board should have the power and the duty to prosecute the parent for cruelty, and that, in case the offence is persisted in, there should be power to deal with the child under the Industrial Schools Act.

357. Dr. Macnamara was good enough to explain to the Committee how a scheme on these lines could be brought into practical application, and gave interesting evidence as to the success claimed for similar schemes in Brussels, Vienna and Paris. Upon the plan followed in the last-named city he estimated the outside cost of its application to London to amount to £120,000. He did not believe that any serious difficulty would arise in determining what children should be fed without paying, as "the attendance officer and the teacher together could bring you very near to the actual state of facts," and he was prepared to press the case against the parents who neglected their children with all the force at the disposal of the law. He advocated dealing with them by an extension of the Prevention of Cruelty to Children Act, or under the Education Acts by enabling the school authority to recover the cost of food in the same way as fines for non-attendance are recovered. The permission to parents to have their children fed at school, if they desired it, would, it was believed, greatly facilitate the operation of such a scheme, and Dr. Macnamara agreed that where parents made use of it as a convenience it would be fair to make them pay something in excess of cost price, which would to some extent diminish the charge that would in the last resort fall upon the community. The weak point in the system was admitted to be the difficulty of maintaining voluntary effort and providing public help at the same moment. Sir John Gorst, it is true, said the British public is very fond of doing some part of the work of the Government for them, instancing the lifeboat service, and thought private benevolence would still come in, though the school authority should be responsible for its efficient working; but Dr. Macnamara was obliged to acknowledge that in those towns abroad where the municipality had stepped in, the flow of charity had been arrested, and he was not prepared to think his scheme could be adopted without a substantial public charge This he would allow, subject to increased powers of dealing with a parent who could and would not pay, which he regarded as an essential part of the scheme. Macnamara, 12429, 12438. Macnamara, 12425. Macnamara 12488. Macnamara, 12468 Gorst, 11915. Macnamara, 12384.

358. On a general survey of the evidence, and bearing in mind the considerations which form the subject of Paragraphs 329 and 330, the Committee think that a large number of children habitually attend school ill-fed, but this

number varies locally with the time of year and with the conditions of employment, and is not likely to increase —indeed they look, as they have said, with confidence to the operation of many causes towards its diminution.

359. It seems, further, that in a large number of cases voluntary organisations with the support and oversight of the Local Authority are sufficient for the purpose, and as long as this is so the Committee would strongly deprecate recourse being had to direct municipal assistance.

360. Circumstances, however, do arise which call for more immediate aid, and in which the School Authority, taking into account the difficulty in the way of home provision of suitable food, and the number of children who attend school habitually underfed, are willing to provide regular and sufficient meals, and in such cases the Committee agree with the opinion of the Royal Commission on Physical Training (Scotland), that "the prepara-" tion and cooking of these meals, where it is found necessary to provide them, " ought to be regarded as one of the charges incident to school management."

361. By a differentiation of function on these terms — the School Authority to supply and organise the machinery, the benevolent to furnish the material—a working adjustment between the privileges of charity and the obligations of the community might be reached.

362. In some districts it still may be the case that such an arrangement would prove inadequate, the extent or the concentration of poverty might be too great for the resources of local charity, and in these, subject to the consent of the Board of Education, it might be expedient to permit the application of municipal aid on a larger scale. As a corollary to the exercise of such powers—which should be by scheme sanctioned by the Board—the law would have to be altered so as to furnish means, as was suggested in evidence, to compel the neglectful parent to take his full share of responsibility, and the Committee are sanguine that a few prosecutions to this end would have a most salutary and stimulating effect.

363. It seems probable that the best way of dealing with many of these children, whose antecedents place them definitely in the category of "retarded," is by means of special schools of the Day Industrial Schools type, in which feeding would form an essential feature, and the choice between establishing such schools or merely treating children as underfed must be largely left to the Local Authority, after considering all the circumstances, to determine.

364. The Committee, moreover, do not think that children should be made the subject of either experiment without the concurrence of the Poor Law Authorities, and the funds should be found through the machinery of the Poor Law, with all due precaution against affixing any unnecessary stigma upon the deserving parent.

365. The Committee deem that by these means the community may be protected from the consequences of the somewhat dangerous doctrine that free meals are the necessary concomitant of free education. Education is a great social need, which individual citizens are, as a rule, not able to provide for their children on a sufficient scale, but food, like clothing and lodging, is a personal necessity, which in a well-ordered society it is not inherently impossible for parents to provide; and the effort to supplement their deficiencies, and to correct the effects of their neglect, should aim, in the first instance, at the restoration of self respect and the enforcement of parental duty.

viii. Risks of Contamination during Adolescence.

366. The Committee are impressed with the conviction that the period of adolescence is responsible for much waste of human material and for the entrance upon maturity of permanently damaged and ineffective persons of both sexes. The plasticity of the physical organization, the power it possesses of yielding rapidly towards degenerative or recuperative influences, appears

to terminate at eighteen, and the records of the years preceding that age are in the great majority of cases decisive for self-improvement or the reverse. Unfortunately, it is a period of which too little account is taken. With the classes under consideration education in the ordinary sense of the word is over just when in its full significance it becomes most necessary. Parental direction is almost entirely absent, and in lieu of it very little supervision is exercised in any other quarter over physical or moral development.

367. The Committee are not prepared with any comprehensive scheme of social regeneration, but there are agencies at work whose efforts deserve recognition and support, and there are ways in which the State might still exert some restraining and guiding influence in the interests of the adolescent of either sex.

(a) *Girls.*

368. Taking girls first, it is said, "the conditions under which they work, rest and feed doubtless account for the rapid falling off in physique which so frequently accompanies the transition from school to work." The secretaries of Girls' Clubs were quoted "that as soon as a girl leaves school she does not fall off immediately, but between fifteen and eighteen she begins to suffer, and if her work is too hard she does not recover." Hot rooms, unhealthy surroundings at work, bad food, late hours, excitement and stress of work, superadded to functional anæmia, are described as most detrimental during these years. The extension of the mid-day restaurant to meet the needs of adolescent girls was recommended, but the difficulty, in the opinion of one witness, was to get girls to feed themselves properly, however much restaurants might abound. Eichholz, 435. Eichholz, 566. Hawkes, 13113.

369. Testimony, however, was forthcoming that girls, as a whole, during these years showed improvement. Prof. Cunningham noted a conspicuous diminution in the number of young women whose figures were distorted by tight lacing. Whether due to "improved æsthetic taste" or the greater prevalence of outdoor exercises, the important effect of the change is recognised by all familiar with the anatomy of the thoracic and abdominal cavities. Moreover, it was remarked as a common impression that girls were actually bigger than they used to be, a statement which, in the absence of anthropometric observations, it is of course impossible to prove. Cunningham, 2220–5. Eichholz, 551.

370. The opinion of the Hon. Maude Stanley is valuable on this point. From an experience of thirty-four years in connection with Girls' Clubs in Soho, a district which Mr. Charles Booth marks as one of the blackest on the map, this lady was able to assure the Committee that the physical conditions of girls had improved. Though 50 per cent. of those that come under her review are working as tailoresses under circumstances which cannot be particularly favourable, she is satisfied that they are better grown and likely to do better towards their children than were their mothers. Even in a poor district in Walworth, where a club was recently started for the benefit of a most demoralised class, the girls who joined it were not physically deteriorated. Miss Stanley attaches great value to the contact with helpful and sympathetic women of a superior class which these clubs establish, and to the ten days or a fortnight in the country which most of the members enjoy through the medium of their organization. Miss Stanley was able to add, owing to maintenance of relations with members after they married, that they proved competent housewives and were greatly in request upon that ground. Stanley, 13381–8. Stanley, 13408. Stanley, 13465.

371. Unfortunately, the number of these clubs is small and the sphere of their operations far too limited to produce any general effect. Mr. Douglas Eyre, who spoke with authority on this point, confirmed the evidence of Miss Stanley that much less was done for girls than boys in this respect. Mr. Eyre enumerated the principal organisations that have for their object the strengthening and development of the work of institutions for the welfare of girls, but, so far as it was possible to collect reliable returns on the subject, he did not believe there were more than 5 per cent. of the youthful portion of the industrial population who were materially touched or assisted by Eyre, 3555–3563.

anything in the shape of a well organised recreation agency out of school or working hours.

372. The Committee have already (paragraph 230) touched upon the subject of obligatory evening continuation classes for girls beyond school age, which should have for their aim the instruction of girls in the objects of personal and domestic hygiene, and a large body of opinion was in favour of the experiment being made; and if physical exercises of a recreative character were included in the curriculum, the Committee believe it would add to the value and ultimately, it may be, to the popularity of such classes.

373. Wherever it was thought desirable, owing to the employment of married women in factories, or for other reasons, to establish municipal crèches, girls over 14 might be made to attend occasionally, and the teaching of infant management should rank with other forms of technical instruction in the way advocated by Miss Eves.

Eves, 7708–7719.

(b) *Boys.*

374. Turning to boys of the age under discussion, it is not too much to say that in their case physical training contains the most fruitful germ of moral and material well-being. The evidence of Mr. Douglas Eyre, who has been for years connected with the organisation of boys' clubs and other associations which rest on a basis of physical exercise, affords striking testimony to their value, but indicates at the same time how small a field is covered by existing effort owing to lack of funds, scarcity of personal service, and want of systematised co-ordination.

Eyre, *passim.*

375. The work of a cognate character described by Mrs. Josceline Bagot, who for many years has maintained a Boys' Club in Lisson Grove, shows what may be effected by the single-handed exertions of an intelligent and sympathetic individuality towards giving lads of a very poor class that motive for self-preservation from contaminating influences which is the very bed-rock of self-respect, and it is not a little singular that so obvious an outlet for philanthropic energy should have received such scanty support, either personal or pecuniary. One reason appears to be the reluctance of some of the clergy to associate themselves with anything that is not primarily religious; as Mr. Booth puts it, "Obligatory attendance at a Bible class being administered medicinally, with cricket and football to take the taste away." Boys entering the club physically feeble are greatly improved by a few months' systematic training, and Mrs. Bagot's experience shows that the interest a lad acquires in physical fitness instinctively weans him from idleness and temptation to drink, while teaching the roughest to box gives them a chivalrous sense of obligation to the weak. Material improvement thus becomes the natural ground-work upon which moral and religious impressions are afterwards built up; but all these results are too apt to be lost by prematurely forcing religious interests upon the attention.

Bagot, *passim.*

Eyre, 3574–8.

Bagot, 4693–9.

Bagot, 4564–7.

376. The evidence on this subject was not confined to London; the Rev. W. Edwards Rees and Mr. Horsfall testified most forcibly to the need of similar efforts in Lancashire. Mr. Rees considered the lack of physical training to be one of the two main causes of degeneration, and would make such training universal for boys and girls of all ages; both gentlemen deemed the provision of facilities for physical exercise and enjoyment as the most pressing question of the hour, and Mr. Rees in common with Mrs. Bagot and others was emphatic in attaching great importance to swimming. Mr. Douglas Eyre commented on the lack of encouragement given to physical education in continuation schools, and the difficulty, in the absence of some State system of training, of finding competent instructors. He also described the organisation and objects of the Twentieth Century League, which he hoped in due course would provide the machinery for intelligent co-operation among the various voluntary agencies in the field, and thus give the State a firmer foothold for direct intervention and support.

Rees, 4318–4341. 4427–4442; 4506–8. Horsfall, 5067–9.

Rees, 4413–8, 4498–4501. Bagot, 4618. Atkin, 2918–2922.

Eyre, 3642–3652, 3692–5, 3710–9.

Eyre, 3532–5, 3548–3564, 3578–3584.

377. It is not a little curious, however, that a league with these objects should not have come to the knowledge of the persons engaged in the formation

of the National League for Physical Education and Improvement, which is apparently being promoted by Sir Lauder Brunton and others, with similar aims. That two leagues should be in the field for the same ends appears to the Committee a signal instance of that waste of energy and overlapping which the existence of each league is presumably designed to counteract. Brunton, 2430, 2454–7, 2537–9.

378. Mr. Murphy was impressed with the number of boys employed on errands and as messengers (by which means they begin to earn money younger) who have no technical training and therefore subsequently drift into the ranks of unskilled labour. He threw out suggestions as to making them join cadet corps, with a view to their being fitted for military service, and at the same time teaching them a trade upon which they could engage after leaving the Army, if they enter it. In this connection it is interesting to note that, in Mr. Edwards Rees' opinion, the Lancashire working men at all events would not be afraid of some form of general military service which did not imply absence from home. Murphy, 10440, 1. Rees, 4336–4341, 4503–8.

379. With a view to giving the people every possible opportunity for physical recreation, the Committee think it should be the duty of municipalities to provide and maintain open spaces in some proportion to the density of the population, and that such spaces, or some of them, should include shelters fitted with gymnastic apparatus, these last being put in the charge of competent instructors; and having regard to the paramount importance of the national physique to the community at large, they are also of opinion that some grant should be made from the National Exchequer in aid of all clubs and cadet corps in which physical or quasi-military training, on an approved scheme, is conducted, subject to public inspection, which grant might be provided without any additional charge to the Treasury, by insisting that a certain proportion of the sums already paid to the local authority under the Local Taxation (Custom and Excise) Act, 1890, should be devoted to physical education.

380. The Committee also think that the obligation should be laid on boys to attend continuation classes, in which drill and physical exercises should take a prominent place; and with a view to the encouragement of clubs and cadet corps, exemption from the obligation might be granted to all enrolled and efficient members of such organisations as submitted to inspection and conformed to the regulations qualifying them for public aid. By these means, without recourse being had to any suggestion of compulsory military service, the male adolescent population might undergo a species of training that would befit them to bear arms with very little supplementary discipline. The older lads could actually be familiarised with the use of the rifle, an exercise of no inconsiderable value from the point of view of general education, and a great deal might thus be done which would not only provide partly prepared material for absorption into the army or reserved forces, but would give a tone and a carriage to all that came under the influence of the system.

381. Direct information on the working of a cadet corps was furnished by Mr. Bennett, Captain of the 1st Cadet Battalion "The Queen's" Royal West Surrey Regiment. His letter on the subject, and some figures illustrative of his experience are printed in the Appendix. Their general effect, so far as it goes, is to negative the presumption of progressive deterioration in the class concerned. Appendix XXIII.

382. In order to organize existing efforts on a comprehensive and effective basis, the Committee would like to see a central body (whether a branch of the Twentieth Century League or another), in touch with municipal activity, established in every large town, and charged with the duty of supervising and directing voluntary agencies of all kinds and bringing them up to a minimum standard of efficiency. One extremely important field of operation for such an organisation in each town would be the collection of information as to the various kinds of employment open to young people on leaving school—the conditions of employment, rates of remuneration, and relative permanence—with a view to advising them in their choice of an occupation, and thus minimising the evil effects of the kind of temporary and casual employment referred to in paragraph 378.

(c) Juvenile Smoking.

383. The question of Juvenile Smoking at the period of life dealt with in this and the preceding sub-section has been given some prominence in evidence, and the Committee have received communications on the subject from the late London School Board and one or two Anti-smoking Leagues. The evidence submitted on the point represents a practically unanimous opinion that the habit of cigarette smoking among boys is a growing one, and that its consequences are extremely deleterious. No actual testimony was forthcoming to prove that early smoking diminishes growth, but Prof. Cunningham mentioned it as one of the causes of physical deterioration, and Dr. Scott was of opinion that scarcely two per cent. of cases of undergrowth had not been habitual cigarette smokers : the experience of a schoolmaster at Longton was quoted to show a distinct inferiority of physique in the case of boy-smokers as against non-smokers, and Mr. Atkins adduced evidence from Colonel Leetham, the late Chief Inspector of Recruiting in Manchester, who has said that "perhaps a third of the rejects from the Army in Lancashire might be attributed to smokers' heart." This is, no doubt, an excessive estimate, but it shows one bad consequence of early smoking, and it is common knowledge that smoking affects the wind and general physical capacity.

Cunningham, 2346–9, 2369–2372.
Scott, 1766–9.
Garnett, 9261–4.
Atkins, 2954–9.

384. There appear to be two ways of dealing with the matter which might be of good effect and could be made the subject of a very simple Act of Parliament.

(1.) To prohibit the sale of tobacco and cigarettes to children below a certain age.

All the witnesses were agreed in advocating this step, but there was some difference of opinion as to the age which should be selected. The Committee think that it should at least be sixteen.

Eyre, 3603.
Fosbroke, 6642–6.
Chalmers, 6202–4.
Garnett, 9134–5.

(2.) To prohibit the sale of tobacco and cigarettes in sweet shops and other shops frequented by children.

This appears to be a growing practice, though it is impossible to discover the number of such shops licensed for the sale of tobacco. The Committee communicated with the Inland Revenue Office on the subject, and their reply was to the effect that "a licence to deal in tobacco is granted to anyone who asks for it, and no record is kept of whether the holder of such a licence is solely a tobacconist or whether he combines with that business any other trade." Mr. Eyre was of opinion that sweet-stuff shops should not be so licensed, and called attention also to the gambling propensities encouraged by such shops. The Committee agree with the weight of the evidence that licenses for the sale of tobacco should not be given to these shops.

Eyre, 3605–8, 3678–3687.
Rees, 4410–2.
Lamb, 11754–6.

VIII.—Special Subjects.

385. The Committee now proceed to notice certain special subjects bearing on the general purpose of the inquiry, to which their attention has been called.

i. *Syphilis.*

386. It will be remembered that Professor Cunningham in declaring certain inferior bodily characters to be not transmissible from one generation to another, carefully excluded syphilis from the agencies so indulgently estimated. The general effect of the evidence is to show that syphilis is an active agent in the production of congenital weakness and the degeneracy that accompanies it. "It is the great element" says Dr. Kerr "in congenital blindness and deafness, and in the cases that go blind and deaf—children who have gone to the age of ten or eleven gradually getting blind and deaf." In his opinion all these combined cases were practically due to this cause, presenting the other characteristics of syphilis—interstitial iritis and internal ear deafness, and generally the brain deterioration that goes with it. It can hardly, however, be included among the factors making for progressive deterioration, for Sir Alfred Cooper and the other

Cunningham, 2210–2350.
Kerr, 851–2.
Cooper, 3815–7.

experts examined on the point, Sir Victor Horsley and Dr. F. W. Mott, all agreed that there was no increase of syphilis; indeed Sir A. Cooper thought there was less, and it was also thought that it had now assumed a less virulent form. This last circumstance was largely attributed by Sir W. Taylor to the precautions taken in India and other tropical stations, by which means the worst taint was kept out of this country. Mr. Tweedy, whose experience of its effects is principally connected with the eye, is under a strong impression that there is nothing like the same amount of secondary and tertiary disease, or disease transmitted to the children, and quoted as a proof the diminution of a disease of the eye, called interstitial keratitis, which is essentially a disease of inherited syphilis. He could not say whether it was due to the existence of less primary syphilis or to the more efficient treatment and care that syphilitic patients now receive.

Horsley, 10627. Mott, 10502–4. Taylor, 33–5. Tweedy, 3776.

387. In describing the consequences of syphilis Sir A. Cooper gives the following sinister category of disease:

Cooper, 3818.

"Insanity; idiocy; diseases of bones, producing deformity and disfigurement; diseases of the eyes producing blindness; disease of the ear producing deafness; disease of the internal organs, causing defective nutrition and deficient development; disease of the nervous system, producing insidious forms of paralysis, locomotor ataxy."

And Sir Victor Horsley described with minute care its effects on successive generations:

Horsley, 10564.

"The infection at one end of the family or the other may be slight, but you cannot say that any child of such a family, whom you can trace, escapes during its whole life and is really a healthy individual."

It appears in the second generation in the form of what is called disseminated sclerosis and degeneration of the nervous system, an organic disease and a progressive deterioration of a paralytic type which ends fatally after perhaps fifteen or twenty years. Without having any scientific proof of syphilis in the third generation, this witness would be quite prepared to find it, having regard to the severity of the disease in the second generation, and he was certain that a syphilitic condition of the tongue rendered the member more liable to cancer. Numbers of children moreover die within the first six months of life from what is called bronchitis, but a number of those are cases of congenital syphilis of the lungs. It is admitted that syphilis in the female is still more prejudical to the child than the transmission of the taint through the male, and Sir Victor Horsley considered this a source of general physical deterioration.

Horsley, 10570–4. Horsley, 10578 10581. Horsley, 10584–6

388. Two specific points were mentioned in connection with the treatment of the disease, and to these the Committee desire to draw particular attention. It was alleged that, owing to the comparatively small practical inconvenience attending the first visitation of the malady, curative measures were frequently postponed and the tainted persons left to infect others. As a remedy for this Sir A. Cooper and Sir V. Horsley strongly advocated compulsory notification; they were aware of the difficulties and objections on which both Dr. Mott and Dr. Jones laid stress, but having regard to the terrible nature of the disease and its far-reaching effects they thought these should be disregarded and every effort made to arrest its progress. The argument that it might lead people to refuse treatment was, Sir Victor Horsley said, used in connection with simple zymotics at the time of the Notification Act and has been shown to have no validity. Dr. Mott mentioned it as one of the evils of syphilis that at present it so often escapes treatment, and notification would thus be the means of bringing many cases under observation.

Cooper, 3869–3872. Horsley, 10539–10543, 10600–1, 10631–2. Mott, 10469–10471, 10493–5. Jones, 10891–6, 10912–4.

389. The second point was the inadequacy of hospital accommodation, especially for the poorer classes, and on this all the witnesses were agreed. "Taking the case of London," said Sir Alfred Cooper, "it may be said without fear of contradiction that the accommodation for the treatment of venereal disease is lamentably inadequate." And he went on to indicate how it should be remedied by the addition of special departments to general hospitals for this class of disease. Dr. Mott and Sir V. Horsley both complained of general hospitals not taking cases of syphilis, and Dr. Jones thought treatment in general hospitals preferable on every ground to the lock hospitals system.

Cooper 3849. Mott 10468, 10486–9. Horsley 10534–5. Jones 10892–7.

390. A third point in connection with the disease, to which all these gentlemen attached the greatest importance, was the necessity of inquiry into its nature and prevalence. Sir A. Cooper and Sir V. Horsley put this into the forefront of their recommendations. Owing to the insidious forms that the later stages of the malady assume, the official returns are far from representing the true extent of mortality from syphilis, and death certification is fallacious because, it is said, medical practitioners are reluctant, for fear of possible consequences, to put syphilis on a certificate.

Horsley 10525–9, 10602–10616.

391. In these circumstances, the Committee would desire to see all reference to the "cause of death" eliminated from the statutory death register. The medical opinion as to cause of death should be regarded as confidential, and should never be divulged, as is permissable at present, by the Registrar to the friends of the deceased. The medical certificate should be sent by the local Registrar direct to the Registrar-General, who would use it for the elaboration of his national mortality statistics. In this way the Committee believe that the accuracy of the records would be greatly increased.

392. The Committee hardly feel qualified at this stage to express a definite opinion on so thorny a subject as notification, although they think the considerations in its favour have great weight, but this point and the question of hospital accommodation may safely be relegated to the Commission of inquiry into the prevalence of the disease which the Committee feel ought to be appointed. A voluntary association, of which Sir J. Crichton Browne and Sir V. Horsley are prominent members, has been in existence for some time, and would be of great service in presenting evidence to any such Commission in a compendious form. The good that has been done by the Tuberculosis Inquiry has stimulated interest on the subject, the recent resolutions of the Brussels Congress point to the urgency of the case, and the Committee are satisfied that the moment is ripe for a searching and exhaustive investigation into the extent of the malady, and for a definite pronouncement on the steps that should be taken, while arresting its progress, to trace and counteract its effects.

Appendix XXIV.

ii.—*Insanity.*

393. Syphilis is, as has been seen, one of the principal elements in the manufacture of the insane, and alcoholism has also been shown to contribute its share, but the prevalence of insanity has certain special features which call for separate notice.

394. Besides the evidence on the subject under the above-mentioned heads, the Committee had the advantage of examining Dr. Joseph Wiglesworth, who was selected for the purpose by the Royal College of Physicians, and certain witnesses from Ireland who gave valuable information on the aspect which the question assumes in that country.

395. Documentary evidence was also put in of some interest to the special objects of the inquiry. The Lunacy Commissioners sent a circular letter in December last to the Medical Superintendents of all the County and Borough Asylums in England and Wales, asking for physical statistics, information or suggestions as to the lines on which steps should be taken to collect such statistics and information. Most of the replies gave information of an inconclusive character, but those which appeared to be useful were, by the courtesy of the Home Office, forwarded for the consideration of the Committee, who have printed a summary of them in the Appendix.

Appendix XXVII.

396. In regard to the preliminary, but most important point, as to whether insanity is increasing, it is extremely difficult to give a decided opinion so far as Great Britain is concerned. There is no doubt about the gross increase; the number of persons under treatment relative to population is much greater, but the question is whether this is due to accumulation, or how far it is due to that, and how far to increased incidence of insanity in the people at large.

Wiglesworth, 8927.

397. On this point Dr. Wiglesworth admitted that statistical information was incomplete, and that the conclusions to be drawn from it varied according as it was read and looked at, but on the whole, though he would like to express

himself with reserve, he was inclined to think that the incidence is increasing. He had arrived at this conclusion from careful study of the Lancashire statistics, which, as covering one-eighth of the population of England and Wales, were likely, in his opinion, to afford a reliable indication.

398. Analysing the increase to be accounted for on the theory of accumulation, he acknowledged that there was a large increase in the number of cases sent to the Unions, owing to the growing unwillingness or inability of their relations to charge themselves with their maintenance, and stated further that the poor-law authorities showed a much greater tendency to send on to asylums cases of idiocy, imbecility, and senile weak-mindedness. The diminution of the death-rate is another factor in the process of accumulation. Wiglesworth 8930-8952.

399. Examining two decennial periods, 1882-1891, and 1892-1901, Dr. Wiglesworth found that the annual average number of lunatics in Lancashire in the first period was 8,247, which is equivalent to a rate of 2·221 per thousand on the average population; in the following decennium that rate had risen to 2·562; if the previous average had not been exceeded, the number of lunatics would have been 9,301, whereas it actually amounted to 10,733, an average increase of 1,432 for the decennium, over and above what might have been anticipated from the increase of population. In trying to ascertain how much of this increase might be accounted for on the theory of accumulation, *i.e.*, the diminution of the discharge rate by deaths or recoveries, he was met by the difficulty that no returns from the workhouses were available. Proceeding to deal with asylums alone, he found that the percentage of deaths in the second decennium stood at 8·89 as against 10·27 in the first, which represented an accumulation of 1,149 persons. The rate of recoveries, however, showed a reversed condition of things. Calculated on admissions (and here it it may be as well to observe that the practice of the Lunacy Commissioners is not the same as that of the Registrar General, who is said to have made his calculations on the numbers resident) the rate of recovery had improved in the second decennium to the extent of 4·13 per cent. Had the recovery rate been maintained at the low level of the first decennium, 735 fewer cases would have been discharged than was actually the case, but the more favourable aspect that these figures wear, is to some extent discounted by two indeterminate factors, (1) the number of recoveries that are counted more than once, and (2) the restriction that was placed during this second period on the reception of incurable cases, owing to the lack of accommodation in the various asylums. On the whole, Dr. Wiglesworth calculates that 900 remain thus unaccounted for on the theory of accumulation in the two decenniums he has compared.

400. Among the circumstances conducive to insanity, next to alcoholic and syphilitic conditions, Dr. Wiglesworth gave a high place to density of population and the environment it connotes. This view is conveniently illustrated by certain tables he prepared showing the different unions of Lancashire classified according to the relative incidence of insanity, and the same unions arranged according to the density of the populations as aggregated in towns of different size. Two unions, which are both mainly country districts containing comparatively small aggregates of population, but with a high lunacy rate, Ulverston and Lunesdale, appear as exceptions to this argument, but in each there is a significant decline in population since 1891, for, speaking generally, Dr. Wiglesworth affirms that there appears also to be some relation between a declining population and a high lunacy rate. If this is so, the fact assumes considerable importance in relation to the state of Ireland, and may account for an increase of lunacy in some of the rural districts of England, combined as it probably is with a greater tendency to intermarriage among a reduced population. The observations collected from various asylums, which have been mentioned above, give some colour to the belief. Appendix XXVI. Wiglesworth, 8955. Appendix XXVII.

401. Discussing the connection between insanity and progressive deterioration, Dr. Wiglesworth is at one with other witnesses as to the frightful havoc wrought by alcohol on the nervous system, adding—

"There is reason to believe also, from the great frequency with which a history of gross parental intemperance is found in the antecedents of persons who become insane, that a habit of Wiglesworth, 83.

excessive drinking tends in some cases to a poisoning of the germ cells of the parent by means of the alcohol circulating in the blood, and a consequent tendency on the part of these germ cells to develop into an organism with an unstable or badly developed brain. This may probably result even if the sperm cells of the father are alone affected."

402. In regard to the effects of syphilis in producing insanity, Dr. Wiglesworth considered it the most important factor in causing the development of general paralysis, and he went on to say—

Wiglesworth, 8999, *and see* Appendix XXV.

"The importance of this disease in connection with the incidence of insanity is emphasised by the fact that general paralysis cannot be considered as a disease of degeneration. A large number of our cases are purely examples of degeneration, and if they did not get insanity they would be very useless to the community. General paralysis cannot, however, be considered as a disease of degeneration. On the contrary, it attacks very frequently persons of exceptional mental and physical energy, who are valuable members of the community, and though an inherited predisposition to insanity has an influence in causing the development of the disease, it is, nevertheless, less hereditary than other forms of insanity. The causes of general paralysis act more readily if there is a tendency by heredity, but at the same time it is a more strictly acquired disease than any other form of insanity."

403. On the whole, while expecting to find an increase of insanity coincident with a growing tendency towards physical deterioration, Dr. Wiglesworth did not appear equally confident that if an increase of lunacy were proved it could necessarily be accepted as evidence of progressive deterioration.

Wiglesworth, 8970–8.

404. There can, it is feared, be no question but that insanity is on the increase in Ireland: according to the published returns the number of lunatics under care in 1880 was 250 per 100,000, or 1 in 400, and in 1902, 499, or 1 in 200, and if the number of idiots and lunatics at large is added, the whole represents 587 per 100,000 or 1 in 170: moreover, fifty years ago the number is said not to have exceeded 1 in 730. Sir L. Ormsby, who was closely questioned on the subject, was of opinion that considerable allowance must be made for the fact that people are put into asylums now who were never so treated formerly, and the number is swelled by the unwillingness of their relations to take care of old people who get softening of the brain and become slightly demented; Sir Lambert also referred to the effects of accumulation in raising the rate, as both the death rate and the recovery rate are lower than in England; but giving full effect to all these considerations, enough remains to excite very serious disquiet. The Bishop of Ross made some notable statements in confirmation of the impression produced by the returns. "Lunacy," he said, "has become so common that it is practically no longer a disgrace," and to this he attributed the loss of any disinclination to make the fact public by the removal of the affected person to an asylum. The number of families affected is so great that apprehension based on the risk of intermarriage ceases to operate, and the Bishop went on to say—

Ormsby, 12684–12702.

Kelly, 11216.

Kelly, 11217.

"I have a very serious difficulty in that way, because, according to the Canon Law, I am bound, as a bishop, not to admit amongst the clergy any person whose relations within certain degrees are affected with insanity, and if I draw a line very strictly I would exclude practically all the applicants, so that I cannot draw the line too strictly"

405. In estimating the causes of this state of things, syphilis, at any rate, must be excluded. Except in Dublin, there is said to be very little syphilis in Ireland. Sir L. Ormsby, in gathering information from Sir George O'Farell and Dr. Courtenay, the two inspectors of Lunacy, and from Dr. Woods, the medical inspector of the Cork Asylum (the largest outside Dublin), was told that it is very seldom that they put down syphilis as a cause of insanity. General paralysis of the insane is also less common, and although the taste for drink is still, in many parts of Ireland, regrettably strong, there is no evidence of increased drunkenness that could account for the increase of lunacy.

Ormsby, 12691.

406. The cause that the inspectors are disposed to lay principal stress upon is heredity, and here the same agency appears that has already been held responsible for the depletion of the population in the rural districts, viz: emigration. The effects of this extensive emigration have been thus noted by a competent authority:—

"Insanity in relation to Fertility," by Dr. John Macpherson.

(1) Depletion of the population; (2) a lowering of the marriage-rate; (3) alteration of the age distribution of the population; (4) lowering of the birth-rate; and (5) depending upon the lowered birth-rate a diminished natural increase of the population.

These five factors acting in sequence and conjunction disturb the normal stability of the population, and induce conditions which are favourable to the production of insanity.

The depletion of the population, as has been seen, chiefly affects its sexually efficient units, and by so doing tends to lower the marriage-rate among the remaining sexually potent units in the population. The growing disinclination to marriage is one of the most observable features in the vital statistics of the country.

407. On the whole, it appears to the Committee that there are more grounds in Ireland than can be discovered in England for connecting increase of lunacy with conditions of physique which show signs of progressive deterioration. In regard to certain classes in Dublin, Sir L. Ormsby was convinced that there was evidence of progressive deterioration, and Sir Charles Cameron seemed to share the same belief. It is not only that the effect of migration into the towns is to make the next generation of a weaker type, but in Sir L. Ormsby's opinion the people who come into the towns from the rural districts are of a weaker type to start with and therefore more vulnerable to the noxious influences of urban existence. From the facts that came under his knowledge, the Bishop of Ross was likewise of opinion that there was physical deterioration amongst the people, and seemed to look upon the increase of lunacy, particularly among girls between 18 and 20, as the strongest evidence of its existence. The Committee think that, having regard to the special conditions that appear to prevail in Ireland, investigation should be undertaken at an early date into the extent and character of the increase of lunacy in that country, and a serious effort made to trace it to causes which might be the subject of some ameliorative interference.

Ormsby, 12640

Cameron, 10917.

Ormsby, 12641.

Kelly, 11163, 11202-7.

iii. Eyes and Ears.

(a) *Eyes.*

408. The evidence on the subject of defective eyesight does not point to the conclusion that blindness, or tendencies towards it, is on the increase, still less that the actual conditions of the eye afford any index of deterioration. Speaking from the experience of a very large hospital and private practice, Mr. Tweedy said :—

"I do not see there is any evidence, so far as the eyesight of the population is concerned, of any physical deterioration of the people; there is no evidence in the eyes that degenerative diseases are more common than they were."

Tweedy, 3746.

And he went on to attribute any apparent increase in optical defects to the greater knowledge and care with which they are treated, the connection between optical defect and headache being much more understood and noted than formerly. Mr. Tweedy, however, mentioned one rather curious fact, viz., the frequency with which really degenerative types of disease occur in people from the rural districts, and gave as an example the greater degree in which *retinitis pigmentosa*, an essentially degenerative malady, is met with in such persons. This he was inclined to attribute to the intermarriage of blood relations, among the offspring of whom the disease is often found.

Tweedy, 3757-9.

409. Dr. Eichholz appealed to the evidence of the Census and of the London School Board Schedule to show that there is a distinct decrease in blindness and deafness among adults and children.

"In the last ten years—in 1891 the blind adults numbered 3,573 (one in 1,186), and in 1901 the number was 3,556 (one in 1,275). Deaf mute adults were 5,023 (one in 930), in 1901; and in 1891 they were 4,787 (one in 883). Then coming to the children of school age, in 1891 in the case of the blind it was one in 1,844, and now they are one in 2,233. In the case of the deaf, in 1891 it was one in 744, and it is now one in 866."

Eichholz, 532.

It is noteworthy that the recruiting returns do not show a similar improvement in respect of those rejected during the last ten years for defective vision.

Appendix VI., VII

410. Carelessness at birth is a fertile source of infantile eye disease. "Half the cases," said Dr. Kerr, "of blind children in the blind-schools are due to ophthalmia caused by infection at birth." The Committee believe

Kerr, 825-9.

that the provisions of the Midwives Act, if properly enforced, will have a signal effect in reducing blindness from this cause.

Kerr, 812-6

411. Dr. Kerr further considered that the methods pursued in many infant schools were responsible for the development of visual defects ; 95 per cent. of over 1,000 infants examined for the purpose between the ages of 6 and 6½ managed to reach the standard of normal visual acuity in London, but among older children it was found that 10 per cent. had exceedingly defective vision. "The conditions," he says, "are bad for infants' eyesight in every way ; the work is too fine." This subject has been menioned in an earlier section of this Report, but these facts point to the want of some general provision for testing visual acuity in all schools under proper medical supervision. Mr. Tweedy laid great stress upon this and noted the good that that had already been done by the experimental application of the system to Board Schools and High Schools. The testing of eyesight, whether for colours or objects, should, he thought, take place in childhood, before time has been wasted in acquiring technical knowledge, which defective vision may render useless.

Tweedy, 3771-5, 3778-3781.

Tweedy, 3737-3770.

412. In the judgment of the same authority, the prevalence of short-sightedness must not be associated with ophthalmic degeneracy ; the long-sighted eye of primitive man has hitherto been the normal eye in England, but it appears as if it were gradually being replaced by the short-sighted eye of civilised man, to whom, as he mostly works within a yard of his eyes, short sight, so long as it is healthy, is a positive advantage. The evidence already mentioned as to a marked diminution in those forms of eye disease which are connected with congenital syphilis confirms the belief that no proofs of degeneration are to be found in the conditions touching the eyesight of the people.

(c) *Ears*

413. In regard to the condition of the ears, the Committee had the evidence of Mr. Arthur Cheatle, who recently conducted an investigation into the hearing of 1,000 school children between the ages of 3 and 16 in the Hanwell District School (including the Ophthalmic School), which receives the children of the poorest class from Southwark and the City of London, and, so far as the Ophthalmic School is concerned, from the Metropolitan Poor Law Schools, all being thus of a type exposed to degenerative influences from birth. Of the children examined, 341, or 34 per cent., had normal ears and hearing, and 449, or 45 per cent., were suffering from adenoids in some form or other.

Cheatle, 12830-12844.

414. It is from the prevalence of this ailment that most of the deafness observable arises, but Mr. Cheatle was unable to associate it with degenerative tendencies, as it was found in all classes, being, as he admitted, quite as common where children are in healthy surroundings as among the poor. Further, Mr. Cheatle was not prepared to say that it is more prevalent now than it was some years ago, as the indications given by pictures seem to show that at any rate among the upper classes it has always been common. The effects of it, on the other hand, are distinctly degenerative ; it produces mouth breathing with all its attendant evils, imperfect expansion of the lungs, want of proper oxygenation of the blood, contracted chest and stunted growth ; it tends to increase vulnerability to all zymotic diseases, produces defective dentition by the contraction of the upper jaw which it favours, and leads to broken sleep by inducing the habit of snoring. The only remedy is the removal of the adenoids, and with a view to that remedy being adopted at the earliest possible moment, Mr. Cheatle advocated the medical inspection of schools, or, at least, the reference to a doctor of any case in which, by the application of proper tests, the teacher discovered signs of defective hearing. Looking to the permanent disablement and marked dulness which are associated with deafness in the young, the Committee think that the case for the medical inspection of schools is greatly strengthened by the means it offers for dealing promptly and adequately with this class of "retarded" child. A timely interference may not only prevent their becoming later a serious charge upon the community, but may supply a necessary check to tendencies which, if unheeded, would render the victims useless to society.

Cheatle, 12851, *et seq.*

415. Mr. Cheatle was not able to say that deafness due to congenital syphilis had diminished, but he did not think it had increased. Cheatle, 12881-2.

iv. Teeth.

416. In the first part of this Report, Professor Cunningham's testimony to the anatomical fact tending to favour dental deterioration was quoted. There is no question that the teeth of the people have become much worse of late years, and in many parts of the country may now be described as very bad. On this point there is no difference of opinion, though the acuteness of the evil is said to vary much, and may in some cases be affected by local causes. While affirming the indirect consequences that may flow from the gradual contraction of the jaw, Professor Cunningham had no difficulty in assigning the real cause of dental degeneration to the change that had taken place in the character of the food in common use. Sir Lauder Brunton laid great stress on the fact that dental caries is due to the cessation of the use of food which requires good mastication, and added that the soft foods are more apt to leave particles behind which cause decay. This view, and the aggravation that lack of cleanliness lends to the conditions of the mouth so produced, were emphasized by a succession of witnesses, lay and professional. Cunningham, 2219. Legge, 5919. Cunningham, 2225-9, 2363-8. Brunton, 2461-9. Taylor, 43. Smyth, 1216-8. Colfie, 3987. Fosbroke, 6638-6641. Murphy, 9464-5.

417. Mr. W. H. Dolamore, who attended on behalf of the British Dental Association, and laid before the Committee (i.) a statement of the results obtained by a Committee of the Association appointed to investigate the condition of the teeth of school children, and (ii.) a Report of the Hygienic Committee of the Association on the alleged increase of dental caries, both of which will be found in the Appendix, confirmed these opinions. He had no doubt that bad teeth were a condition of the feeding that accompanies high civilization. The ruder and coarser sorts of food at one time in use not only kept the jaw in action during the plastic period of its development, but had the effect of a tooth brush in keeping the teeth free from the settlement of toxic agents. Appendix XXVIII Dolamore, 7073-7082.

418. On the vexed point of the presence of sufficient lime in teeth, Mr. Dolamore agreed that, as a matter of fact, caries is just as often found in teeth with their proper elements of lime as in teeth which are defective in lime, and stated that, so far as chemical analysis went, there was not much difference between what are called soft and hard teeth, but he seemed to think that investigations into the character of the enamel might produce different results. Dolamore, 7088-7092.

419. Though no doubt bad teeth generally accompany deterioration of physique, and are often the result of bad conditions in childhood, there are happily no grounds for associating dental degeneracy with progressive physical deterioration. On this point Sir L. Brunton is as emphatic as any other witness, including Mr. Dolamore. It is not a little curious in this connexion, that it was found upon examination of two schools in Edinburgh that the ratio of defective permanent teeth per 1,000 children was 158·2 in the school for children of well-to-do working people, and 273·9 in that for the children of a better class, professional men and merchants. According to Mr. Dolamore, "It is undoubtedly the better class schools, in my experience, where the teeth are the worst—the higher the class the worse the teeth." And this appears to be the general opinion. Brunton, 2469-1, 2524-8. Dolamore, 7123-7131.

420. In the result of a recent Admiralty and War Office Interdepartmental Conference on the subject, it was held that deterioration of teeth is intimately connected with a variety of intricate causes affecting the general health of the nation, but that mal-nutrition plays but a very small part in the production of dental caries, as compared with the more common Appendix XXVIII

use of articles of food which readily undergo acid fermentation, and that it is neglect to keep the mouth clean that is chiefly responsible for the decay of teeth.

421. In this opinion the Committee concur, and they also agree with the recommendations which the Conference decided to make to the Board of Education on the subject—

1. That the teaching of the elements of hygiene should be made compulsory in schools, and in this teaching the care of the teeth should receive special attention.

2. That daily cleansing of the teeth should be enforced by parents and teachers.

3. That systematic examination of the teeth of children by competent dentists, employed by school authorities, should be practised where possible, to prevent caries extending, to stop carious teeth, and to remedy defects of the teeth.

The Committee believe that if to these precautions are added systematic instruction to mothers, through the medium of health visitors, as to the proper food for infants, so that dentition may not be delayed or imperfect, much will be done towards removing a condition of things which, though it is not an indication of degeneration, contributes to the causes that produce it by the poison dental caries introduces into the system and the gastric disorders that follow therefrom.

v. *Vagrancy and Defective Children.*

422. Two other matters have been mentioned, viz.: vagrancy and the condition of defective children, and some evidence was given on the first named by Mr. Loch and "Colonel" Lamb; but the Committee have not thought it necessary to consider them in this Report, as it is understood they are to be the subject of separate enquiries.

Loch, 10336–10367.
Lamb, 11528–11553.

PART III.

Summary of Recommendations.

423. The following is a summary of the principal recommendations which the Committee desire to make:—

Pars. 55–61, 189–190.

(1) *Anthropometric Survey.*

With a view to the collection of definite data bearing upon the physical condition of the population, the Committee think that a permanent Anthropometric Survey should be organised as speedily as possible upon the lines indicated in Part I. of the Report. In the first instance, this Survey should have for its object the periodic taking of measurements of children and young persons in schools and factories, enlisting for this purpose the assistance, among others, of School Teachers and Factory Surgeons, supplemented by a small staff of professional Surveyors. Besides this, a more comprehensive and specialist survey, spread over a longer period, of the population of the country at large, might be undertaken.

Par. 62–3.

(2) *Register of Sickness.*

It appears to the Committee in the highest degree desirable that a Register of Sickness, not confined to infectious diseases, should be established and maintained. For this purpose the official returns of Poor Law Medical Officers could, with very little trouble and expense, be modified so as to secure a record of all diseases treated by them. And, further, it ought not to be difficult to procure the co-operation of hospitals and other charitable institutions throughout the country, so as to utilise for the same purpose the records of sickness kept by such institutions.

(3) *Advisory Council.* Par. 64-6, 124, 302.

The Committee are emphatic in recommending the creation of an Advisory Council, representing the Departments of State, within whose province questions touching the physical well-being of the people fall, with the addition of members nominated by the medical corporations and others, whose duty it should be, not only to receive and apply the information derived from the Anthropometric Survey and the Register of Sickness, but also to advise the Government on all legislative and administrative points concerning public health in respect of which State interference might be expedient; and to them might be remitted for consideration and report all the problems affecting public health which the requirements of a complex social organisation are constantly bringing to the front. Such a Council, the composition of which might be modelled to some extent on *Le Comité Consultatif d'hygiène publique de France*, would be, the Committee believe, of great assistance, especially to the Local Government Board, and would be calculated to supply the knowledge and stimulus which are necessary in order to give to the Public Health side of the Board's administration a prominence which the multiplicity of its other functions may have tended to obscure, and to attract to its work that measure of public interest and support which has perhaps been lacking hitherto.

(4) *Overcrowding.* Par. 87-9.

The Committee believe that the time has come for dealing drastically with this problem. They advocate an experimental effort by the Local Authority in certain of the worst districts, in the direction of fixing a standard and notifying that after a given date no crowding in excess of such standard would be permitted. It is believed that, if the thing were carried through without hesitation or sentimentality, means would be found, through the ordinary channels of supply and demand, or within the sphere of municipal activity, for housing all but the irreclaimably bad.

(5) *Labour Colonies and Public Nurseries.* Par. 90-2.

It may be necessary, in order to complete the work of clearing overcrowded slums, for the State, acting in conjunction with the Local Authority, to take charge of the lives of those who, from whatever cause, are incapable of independent existence up to the standard of decency which it imposes. In the last resort, this might take the form of labour colonies on the lines of the Salvation Army Colony at Hadleigh, with powers, however, of compulsory detention. The children of persons so treated might be lodged temporarily in public nurseries or boarded out. With a view to the enforcement of parental responsibility, the object would be to make the parent a debtor to society on account of the child, with the liability, in default of his providing the cost of a suitable maintenance, of being placed in a labour establishment under State supervision until the debt is worked off.

(6) *Building and Open Spaces.* Par. 97-9, 125.

Local Authorities in contiguous areas which are in process of urbanisation should co-operate with a view to securing proper building regulations, in furtherance of which end the making of Building Bye-laws to be approved by the Local Government Board should be made compulsory on both urban and rural authorities; attention should also be given to the preservation of open spaces with abundance of light and air. By the use of judicious foresight and prudence the growth of squalid slums may be arrested, and districts which hereafter become urbanised may have at least some of the attributes of an ideal garden city.

Par. 106.

(7) *Smoke Pollution.*

The Committee strongly advocate that cases of pollution of the air by smoke and noxious vapours in manufacturing districts should be heard by a stipendiary magistrate. A stricter enforcement of the law, and a change in legislation, giving higher penalties, would produce a great improvement without imposing any serious burden on manufacturers. It should also be considered whether the responsibilities of the ordinary householder in regard to domestic smoke pollution might not be brought home to him.

Par 117.

(8) *Register of owners of houses.*

It should be the duty of the Local Authority in all towns above a certain size to establish and maintain an accurate register of owners; this is one of the first *desiderata* towards dealing with slum property.

Par.118.

(9) *Medical Officers of Health.*

A Medical Officer of Health in all areas above a certain population should be required to give his whole time to the work, and in no case, unless convicted of misconduct, should a Medical Officer of Health so engaged be removed without the consent of the Local Government Board.

Par. 119.

(10) *County and District Councils.*

With a view to strengthening the chain of responsibility in matters of local administration, County Councils should be empowered when necessary, after a reference to the Local Government Board, to act in default of urban (other than municipal boroughs) and rural sanitary authorities within the area of their administration, for all purposes of the Public Health and Housing Acts, to which end the appointment of Medical Officers of Health who would give their whole time should be made obligatory on County Councils.

Par. 120-4.

(11) *Reports from Local Authorities.*

The Local Sanitary Authority in each district should be required to furnish to the Local Government Board, through the County Authority, reports according to certain specified requirements, which would show accurately what was being done, or left undone, in matters of sanitation and administration generally, and would thus form a basis of comparison between different districts. Armed with this information it should be the duty of the Central Authority to watch closely local administration, and to endeavour constantly to level up backward districts to the standard attained in the best administered areas.

Par. 135-6.

(12) *Law as to Insanitary and Overcrowded House Property.*

Nothing has been brought more prominently to the notice of the Committee than the ignorance that prevails, even in quarters which ought to be well informed, as to what the law and the powers it confers are. A statement on this subject was prepared for the Committee, with the assistance of the Local Government Board; and it appears to them that the Board could not do better than issue it, with such additions as they think proper, to all Local Authorities.

Par. 153.

(13) *Medical Inspection of Factories.*

The existing powers of Certifying Factory Surgeons should be extended, (1) so as to enable them to examine employees for purposes of qualification at a later age than sixteen, (2) so as to enable them to

re-examine, when necessary, at definite intervals. Further, even if it be necessary that Inspectors of Factories and Medical Officers of Health should have, to some extent, co-ordinate powers with regard to insanitary conditions in factories, an arrangement should be made whereby each authority should notify to the other any defects that may be apparent, although coming within the other's province. Similarly it should be the Certifying Surgeon's duty to notify to the Factory Inspector or the Medical Officer of Health, as the case may be, such defects as may come under his notice.

(14) *Over-fatigue.* Par. 147.

As a preliminary to any further legislation on the subject of hours of employment, particularly employment of women and children, it is, in the view of the Committee, highly desirable that there should be a strictly scientific enquiry into the physiological causation and effects of over-fatigue, as recommended by the Brussels Congress.

(15) *Coal Mines.* Par. 156.

The medical examination of young persons should be extended so as to cover those employed in coal mines.

(16) *Workshops.* Par. 158.

The inspection and supervision of these, as distinguished from factories, should be strengthened. On the question whether this work should be undertaken by the Local Authority or the Home Office, the Committee are not in a position to make a definite recommendation. But one point in particular that calls for consideration is the propriety of making employment of children and young persons in workshops, dependent, as it is in factories, on a medical certificate.

(17) *Alcoholism.* Par. 173-183.

The Committee believe that more may be done to check the degeneration resulting from "drink" by bringing home to men and women the fatal effects of alcohol on physical efficiency than by expatiating on the moral wickedness of drinking. To this end they advocate the systematic, practical training of teachers to enable them to give rational instruction in schools on the laws of health, including the demonstration of the physical evils caused by drinking. At the same time, the Committee cannot lose sight of the enormous improvement which has been effected in some countries, and might be effected in this country, by wise legislation.

(18) *Education in Rural Schools.* Par. 193-5.

With a view to combating the evils resulting from the constant influx from country to town, the Committee recommend that every effort should be made by those charged with the conduct and control of rural schools to open the minds of the children to the resources and opportunities of rural existence.

(19) *Rural Housing and Allotments.* Par. 192, 197.

Local Authorities in Rural Districts should apply themselves to remedying the dearth of cottages which exists in many parts of the country, by the exercise of their powers under Part III. of the Housing Act, 1890, as amended by the Act of 1900. If necessary, these powers might be supplemented by the introduction of some such machinery for putting them in motion as is contained in the Labourers' (Ireland) Acts, 1883-1903. It should also be seriously considered whether the experiment, for which there are legislative facilities, of dividing land into small holdings, might not be tried more frequently.

Par. 229-232.

(20) *Food and Cookery.*

For the purpose of bringing home to the people the importance of properly selected and carefully prepared food, there is much room for training of a socially educative character among girls and young women. To this end the teaching of cookery in schools should be guided by the principles laid down in Paragraph 232 of the Report. Even more may be done by mothers' meetings and lectures, and the distribution of leaflets on the subject. Continuation classes for girls beyond school age should be organized, attendance at which should be compulsory, subject to the exercise of a judicious discretion on the part of the School Authority.

Par. 227.

(21) *Cooking Grates.*

It should be provided by law that every dwelling let for the occupation of a family, should include a grate suitable for cooking.

Par. 233.

(22) *Adulteration.*

It would be highly expedient that the Local Government Board should be authorised to fix a standard of purity for all foods and drinks, in the same manner as standards for milk and butter have been fixed by the Board of Agriculture.

Par. 241-2.

(23) *Infant Mortality and Employment of Women.*

In order to arrive at some conclusion as to the connection between these two, (1) the infant mortality rates should be localised for particular areas in industrial towns, (2) general infant mortality rates for selected industries throughout the country should be taken, (3) the occupations (if any) of all mothers (married or unmarried) should be shown in the Registrar-General's records.

Par. 242.

(24) *Still-births.*

Still-births should be registered.

Par. 243, 391.

(25) *Medical Certificates as to Cause of Death.*

A medical certificate as to the cause of death should invariably be required before the death of any child, or indeed of any other person, is registered. Moreover, the medical certificate should be regarded as confidential, and its contents should never be divulged by the Registrar, as is permissible at present, to the friends of the deceased. It should be sent by the local Registrar direct to the Registrar-General.

Par. 262.

(26) *Employment of Women in Factories.*

The Committee do not think that the period during which employment after confinement is prohibited could be extended without counterbalancing disadvantages. But the law should certainly be strengthened, so as to place upon the employer the burden of obtaining proof that the required period has elapsed since the confinement of the women he employs, or, in the alternative, so as to prohibit future employment in the absence of (1) a medical certificate that it will not be prejudicial to their physical well-being, and (2) proof that reasonable provision is made for the care of their infants. This might take the form of a crêche, or be secured by the recognition for the purpose of a duly licensed body of women.

(27) *Provident Societies and Maternity Funds.* Par. 263.

Charitable efforts in manufacturing towns might well be directed towards endowing and maintaining insurance organisations to which employees, assisted by voluntary subscriptions, could contribute while in work, and from which they might receive assistance during the period of confinement and afterwards.

(28) *Milk Supply.* Par. 273.

With a view to ensuring the purity of the supply of milk to the community, the Committee think that the measures indicated in Paragraph 273 of the Report should be taken; in default of the Local Sanitary Authority taking proper precautions, the County Council should in all cases be authorised to act, and it should be the duty of the Local Government Board to intervene in the ultimate resort.

(29) *Feeding of Infants.* Par. 277.

The Committee are impressed with the enormous sacrifice of infant life due to insufficient or improper feeding. The ultimate remedy lies in that social education already described, and the Committee advocate the systematic instruction in continuation classes of girls in the processes of infant feeding and management. They also recommend the issue to mothers in every district of leaflets on the rearing of babies similar to those used in Sheffield and Wakefield; this could be done by the municipality, by voluntary associations, or by the Registrar on the registration of every infant.

(30) *Milk Depôts.* Par. 279.

It is of great importance that the milk supply should pass through as few hands as possible, and that milk vendors should not be general dealers whose sale of milk is confined to a few quarts. In order to effect these objects, milk depôts should be formed in every town, obtaining their supply direct from the farms. The Committee believe this could be done without recourse to direct municipal action, but they think that in all improvement Bills promoted by Local Authorities, the insertion of provisions dealing with the milk supply within their area should be insisted on.

(31) *Sterilisation and Refrigeration.* Par. 280–1.

Having regard to the acute difference of medical opinion as to the effects of sterilisation, the Committee recommend an investigation into the whole subject by a small body of experts. Milk, when drawn from the cow, should at once be refrigerated to a temperature of 40 degrees Fahrenheit.

(32) *Midwives.* Par. 295, 410.

The Committee desire to call the attention of Local Authorities to the provisions of the Midwives Act, 1902, which may be made an instrument of the greatest utility for the dissemination among mothers of proper knowledge and practical advice.

(33) *Training of Mothers—Health Associations.* Par 297–302.

While laying special stress on the need for education of the young in matters of hygiene and domestic economy, the Committee believe even more may be done in the direction of training the mothers of the present generation

in these matters. To this end, Health Societies on the lines of the Manchester and Salford Ladies' Health Society should be formed all over the country. Enough has been said of the value of the system by competent judges to justify the Committee in urging upon every locality the adoption of similar methods. They would further suggest to the Local Government Board the expediency of issuing to Local Authorities a circular explaining the objects to be sought and the means by which they can best be attained.

Par. 305.

(34) *Elementary Schools in Ireland.*

It appears that the elementary school system prevailing in Ireland urgently requires amendment in regard to warming of schools and hygienic conditions generally.

Par. 307.

(35) *School attendance in rural districts.*

The Committee think that school attendance in rural districts should not be compulsory till the age of six or possibly seven, and should be discouraged, if not absolutely prohibited, under five.

Par. 308-9.

(36) *Games and exercises for school children.*

It is desirable that more attention should be given, with the assistance, where possible, of voluntary agencies, to organizing games for school children, and for that purpose much greater use should be made both of school and public playgrounds than at present. But the Committee are of opinion that no scheme of games alone can ever be made general enough to supply the place of methodical physical training, and they hope that the course of physical exercises referred to in Paragraph 308 will find general acceptance with Local Authorities. While they consider that such exercises should, when possible, be taken in the open air, they would urge upon Local Authorities the expediency of providing play-sheds or rooms other than the ordinary class-rooms in which the exercises may be conducted regularly without interruption from the weather.

Par. 310-314.

(37) *Cookery, hygiene, and domestic economy.*

Instruction in these matters should, as far as possible, be made compulsory on the elder girls at school, and care should be taken that it is placed in the hands of properly qualified teachers, to which end it is expedient that some State aid should be given under proper conditions to schools of cookery at which teachers are trained, and that hygiene in its various branches should be made an essential element in the course of training for all teachers.

Par. 315.

(38) *Partial exemption from school.*

It should be considered whether the present law might not be modified so as to make it possible for a child under fourteen years of age to obtain partial exemption from the obligation to attend school, on no other condition than that of continuing to attend school up to a later age for certain specified periods and for special subjects of instruction.

Par. 317.

(39) *Special schools for "retarded" children.*

The Committee think that special schools of the Day Industrial School type might with advantage be established for the temporary treatment of children who are not up to normal school standard and are yet not so defective as to warrant treatment as "mentally deficient."

Par. 318.

(40) *Special magistrate for juvenile cases.*

In all cases touching the young where the assistance of a magistrate is invoked, he should, where possible, be a specially selected person sitting for the purpose.

(41) *Medical inspection of school children.* Par. 320-6, 411, 414, 421.

The Committee are emphatic in recommending that a systematised medical inspection of children at school should be imposed as a public duty on every school authority, and they agree with the Royal Commission on Physical Training (Scotland) that a contribution towards the cost should be made out of the Parliamentary Vote. With the assistance of teachers properly trained in the various branches of hygiene, the system could be so far based on their observations and records that no large and expensive medical staff would be necessary. The lines on which the inspection should be conducted are laid down in paragraphs 323–326 of the Report.

(42) *Feeding of elementary school children.* Par. 358–365.

The Committee recommend that definite provision should be made by the various Local Authorities for dealing with the question of underfed children in accordance with the methods indicated in paragraphs 358–365 of the Report. The Committee, it will be seen, do not contemplate any one uniform method of procedure, but think that regard should be had to the varying circumstances of different localities. They also suggest safeguards against economic abuse.

(43) *Physical exercise for growing girls.* Par. 372.

If physical exercise of a recreative character were included in the curriculum in the obligatory evening continuation classes for girls, the establishment of which has already been recommended, it would be likely to add greatly to the value and ultimately, it may be, to the popularity of such classes.

(44) *Crèches.* Par. 373.

Wherever it was thought desirable, owing to the employment of married women in factories, or for other reasons, to establish municipal crêches, girls over fourteen might be made to attend occasionally, and the teaching of infant management to such girls should be eligible for aid from the grant for public education.

(45) *Open spaces and gymnastic apparatus.* Par. 379.

It should be the duty of Local Authorities to provide and maintain open spaces in some proportion to the density of the population, and such spaces, or some of them, should include shelters fitted with gymnastic apparatus. Every effort should also be made to put such apparatus to the best possible use by placing it in charge of a competent instructor.

(46) *Clubs and cadet corps.* Par. 379.

Having regard to the enormous value to the physique of growing lads of these institutions, and to the possible saving of expenditure in other directions resulting therefrom, the Committee are of opinion that some grant should be made from the National Exchequer in aid of all clubs and cadet corps in which physical or quasi-military training, on an approved scheme, is conducted, subject to public inspection.

(47) *Physical exercise for growing boys.* Par. 380.

Lads should be made to attend evening continuation classes, in which drill and physical exercises should take a prominent place; and, with a view to the encouragement of clubs and cadet corps, exemption from

the obligation might be granted to all enrolled and efficient members of such organizations as submitted to inspection and conformed to the regulations qualifying them for public aid.

Para. 382.

(48) *Organization of existing institutions for the welfare of lads and girls.*

In order to organize existing efforts on a comprehensive and effective basis, the Committee would like to see a central body, in touch with municipal activity, established in every large town, and charged with the duty of supervising and directing voluntary agencies with a view to bringing them up to a minimum standard of efficiency.

Par. 384.

(49) *Juvenile Smoking.*

The Committee recommend that a Bill should be brought before Parliament at an early date, having for its object, (1) to prohibit the sale of tobacco and cigarettes to children below a certain age, (2) to prohibit the sale of tobacco and cigarettes in sweet shops and other shops frequented by children.

Par. 392.

(50) *Syphilis.*

The Committee recommend the appointment of a Commission of Inquiry into the prevalence and effects of syphilis, having special regard to the possibility of making the disease notifiable and to the adequacy of hospital accommodation for its treatment.

Par. 407.

(51) *Insanity in Ireland.*

The Committee recommend that investigation should be undertaken at an early date into the extent and character of the increase of lunacy in Ireland.

Par. 411, 414, 421

(52) *Teeth, Eyes, and Ears.*

The Committee are of opinion that the care of the teeth should receive special attention in the teaching of the elements of hygiene in schools, that daily cleansing of the teeth should be enforced by both parents and teachers, and that systematic inspection of the teeth, eyes, and ears of school children should be undertaken as part of that general medical inspection which has already been recommended.

Par. 422.

(53) *Vagrancy; Defective Children.*

The Committee wish to record their belief that the proposed inquiries into these subjects will be of great value.

Conclusion.

424. The Committee hope that the facts and opinions they have collected will have some effect in allaying the apprehensions of those who, as it appears on insufficient grounds, have made up their minds that progressive deterioration is to be found among the people generally. At any rate the Committee believe that their labours will result in giving matter for reflection to those who realize the importance of evidence towards the determination of issues of such uncertainty and complexity, and that these persons, who they would fain hope are the larger portion of the thinking community,

will await the necessary steps being taken to secure that body of well-sifted and accurate information, without which it is impossible to arrive at any conclusion of value as to the general problem.

425. It may be argued that there is here no immediate remedy, and that years must elapse before the lack of knowledge is supplied; but in regard to those evils, the existence of which is admitted, the Committee have recognised what can be done in the interval, and are confident that if their recommendations are adopted a considerable distance will have been traversed towards an amendment of the conditions they have described.

426. In the carrying out of their recommendations for the rectification of acknowledged evils, the Committee do not rely upon any large measure of legislative assistance; the law may with advantage be altered and elaborated in certain respects, but the pathway to improvement lies in another direction. Complacent optimism and administrative indifference must be attacked and overcome, and a large-hearted sentiment of public interest take the place of timorous counsels and sectional prejudice.

427. The Committee cannot conclude their Report without a cordial acknowledgment of the debt they owe to the zeal, diligence and ability of their Secretary, Mr. E. H. Pooley, who has been of the greatest service to them throughout the inquiry; and they also desire to recognise their obligations to the Royal Colleges of Surgeons and Physicians for the assistance rendered by those bodies, in expressing their opinion on points submitted to them and in the selection of witnesses.

We have the honour to be,

Your Lordship's obedient Servants,

ALMERIC W. FITZ ROY.
G. M. FOX.
JAMES G. LEGGE.
H. M. LINDSELL.
G. T. ONSLOW.
J. STRUTHERS.
JOHN F. W. TATHAM.

ERNEST H. POOLEY, Secretary.

July 20th, 1904.

APPENDICES.

APPENDIX I.

(a) ORIGINAL MEMORANDUM PREPARED BY SURGEON-GENERAL SIR WILLIAM TAYLOR, K.C.B., DIRECTOR-GENERAL, ARMY MEDICAL SERVICE.

1. A deep interest has been aroused, both in the lay and medical press, by the writings of Sir Frederick Maurice and others, who have brought into prominence certain observations pointing to the fact that there is an alarming proportion of the young men of this country, more especially among the urban population, who are unfit for military service on account of defective physique.

The questions naturally arise as to whether this impeachment of the national health has a solid foundation in fact, and as to whether the condition is true of the population as a whole, or only of a certain section of it. The teaching of public health statistics would appear to show that progressive improvement of the national health has steadily followed the improved conditions of life which have been brought about by the advance of sanitary knowledge and its practical application. It has also been pointed out that athletic records are constantly being broken for all sorts of feats of strength, agility, and endurance, facts which would seem to indicate that the physique of the well-to-do classes, at least, is improving rather than deteriorating. It is nevertheless true, and the fact is a disturbing and disquieting one, that a very large proportion of the men who offer themselves for enlistment in the Army are found to be physically unfit for military service.

2. In an article on the National Health, which appeared in a recent number of the *Contemporary Review*, Sir Frederick Maurice states that, according to the best estimate he had been able to arrive at, it has been for many years the case that out of every five men who wished to enlist, and primarily offer themselves for enlistment, you will find that by the end of two years' service there are only two men remaining in the Army as effective soldiers. Of the men who offer themselves, some are rejected by the recruiting sergeant or recruiting officer, some by the examining medical officer, and some, though enlisted, are found after three months to be unlikely to develop into effective soldiers and are summarily discharged. According to General Maurice's experience, at the end of two years not more than 40 per cent. of the men who wished to become soldiers will be found serving; or, in other words, 60 per cent. of the men offering themselves are physically unfit to serve as soldiers. He points out that it is no good talking of conscription or of any form of compulsory service if we already have five men offering themselves for every two men who are fit for the work; no one has suggested that we should increase our Army in the proportion of two to five, *i.e.*, make it two and a-half times as large as it is now. He then goes on to say that no nation was ever yet for any long time great and free, when the army it put in the field no longer represented its own virility and manhood.

3. But the want of physique, thus shown to exist with regard to a large section of the community, is not only serious from its military aspect, it is serious also from its civil standpoint, for if these men are unfit for military service, what are they good for? As Sir Lauder Brunton says—"Poor in physique as they all are, and poor in mental capacity and power of application as many of them must be, what becomes of them? Many of them probably marry girls as weak as themselves, and have children, some of whom go to swell the lists of infant mortality, some to join the criminal classes, while others grow up more weak and incompetent than their parents." Inquiry is wanted, and it is vital for us to know the truth. Whether part of the physical deterioration is the result of unskilled labour flocking to the towns and there failing to find means for properly rearing a family, or whether it be on account of causes which are attackable, such as early marriages and the ignorance of mothers: the result is that the rising generation of all below the artizan class includes a vast number of men of a very low standard of health and physique.

4. Regarding the condition of the poorer classes, Mr. B. S. Rowntree read a paper at the British Medical Association Meeting, last August, on Poverty and Disease (*British Medical Journal*, 16th August, 1902). His observations refer to York, which has a population of about 75,000. In discussing the question he speaks of poverty under two heads, primary and secondary poverty. He defines "primary poverty" as the condition when the total earnings are insufficient to obtain the minimum necessaries for the maintenance of physical efficiency in the family. "Secondary poverty" is when the earnings would be sufficient if some part of them were not wasted. He found that in York 10 per cent. of the total population were living in "primary poverty," and that of this 10 per cent. just one-half (52 per cent.) is due to the fact that the chief wage earner, though in regular employment, has wages which are insufficient to maintain a family of moderate size in a state of physical efficiency. 18 per cent. of the population were living in a state of "secondary poverty," so that, adding the two classes together, 28 per cent. of the population in York are living in poverty. Some years ago Mr. Charles Booth estimated that in London 30 per cent. of the people were living in poverty. If then the same conditions prevail in other large towns, it would appear that more than a quarter of our town populations are living at, or below, the poverty line. Now in England and Wales, at last year's census, 77 per cent. of the population was urban: namely, 25 millions out of 32½ millions; the town population having increased 15 per cent. during the last decade.

5. Every year a table is published, in the Army Medical Department Report, which classifies the recruits examined according to their previous occupations. The following is the table for 1900. It has not been selected for any special reason, but is given as an average example of our recruiting experience:—

Occupation of recruits.	Number inspected.	Number rejected.	Ratio rejected per 1,000 inspected.	Proportion of each group in 1,000 recruits inspected.
1. Labourers, servants, husbandmen, etc. -	52,022	15,025	288·82	616
2. Manufacturing artizans (cloth-workers, weavers, lace makers, etc.) - - -	11,971	3,478	290·54	142
3. Mechanics employed in occupations favourable to physical development (smiths, carpenters, masons, etc.)- -	11,201	2,923	260·96	133
4. Shopmen and clerks - - - - -	5,950	1,826	306·89	70
5. Professional occupations, students, etc. -	827	220	266·02	10
6. Boys under 17 years of age - - -	2,431	273	112·30	29
TOTAL - - - - - -	84,402	23,745	281·33	1,000

6. Examination of a series of these annual tables shows that the proportion of the different classes remains remarkably constant from year to year, and the figures indicate that the bulk of our soldiers are drawn from the unskilled labour class, and consequently from the stratum of the population living in actual poverty or close to the poverty line. As might be expected, the highest ratio of rejection is shown for men who have been following indoor occupations.

7. The impairment of vigour and physique among the urban poor is easy to understand when we reflect that, in addition to their only being able to provide themselves with food insufficient in quantity and probably poor in quality, their poverty also usually entails unhealthy environment, *e.g.*, defective housing, overcrowding and insanitary surroundings. Add to this the distress resulting from such causes as want of thrift, illness or death of the breadwinner, and alcoholic excess. Further, the physical deterioration caused by inherited or acquired disease must not be forgotten, and in illustration we need only instance the part played in this way by tubercle and syphilis.

8. In his Annual Report for 1902, just issued, the Inspector-General for Recruiting remarks that the one subject which causes anxiety in the future as regards recruiting is the gradual deterioration of the physique of the working classes from whom the bulk of the recruits must always be drawn, and, when it is remembered that recruiters are instructed not to submit for medical examination candidates for enlistment unless they are reasonably expected to be passed as fit, we cannot but be struck by the percentage considered by the medical officers as unfit for the service. In the reports from all the manufacturing districts, stress is invariably laid upon the number of men medically rejected for bad teeth, flat feet, and inferior physique.

9. Examining next the Army recruiting statistics in relation to the assertion that practically 60 per cent. of the men offering themselves for enlistment are unfit for military service, the following table has been compiled from information given in the Army Medical Department Reports, supplemented in some particulars by data obtained from the reports of the Inspector-General of Recruiting. A period of 10 years (1893–1902) has been selected, as of course, the greater the number of observations dealt with, the nearer will be our approximation to the truth.

Year.	1. Number of recruits inspected (A.M.D. Report.)	2. Number rejected on inspection. (A.M.D. Report.)	3. Number rejected within 3 months after enlistment. (A.M.D. Report.)	4. Invalids discharged during the year under 2 years' service. (I.G.R. Report.)	5. Ratio per cent., column 2.	6. Ratio per cent., column 3.	7. Ratio per cent., column 4.
1893	64,110	25,999	342	962	40·6	0·5	1·5
1894	61,985	24,705	369	770	39·9	0·6	1·2
1895	55,698	22,548	368	952	40·5	0·7	1·7
1896	54,574	22,698	413	999	41·6	0·8	1·8
1897	59,986	22,370	575	997	37·3	1·0	1·7
1898	66,502	22,983*	387	983	34·6	0·6	1·5
1899	68,087	22,071	433	1,003	32·4	0·6	1·5
1900	84,402	23,105	640	1,514	27·4	0·8	1·8
1901	76,750	21,522*	1,014	3,825	28·0	1·3	4·9
1902	87,609	26,913*	1,308*	2,254	30·7	1·5	2·5
1893–1902	679,703	234,914	5,849	14,259	34·6	0·9	2·1

* Does not include men enlisted in 1902 and discharged under 3 months' service in 1903.

10. It will be observed that during this decennial period the number of men medically examined for enlistment was 679,703, and of those 234,914 were rejected as medically unfit for service, giving a rejection ratio of 34·6 per cent.; of the men passed fit, 5,849 broke down within three months after enlistment, being at the rate of ·9 per cent. for this class; while 14,259, or 2·1 per cent. more, were discharged as invalids under two years' service. The smallness of the rate of the rejections within three months of enlistment, varying as will be observed, between ·5 and 1·5 per cent. speaks well, I think, for the thoroughness of the primary medical examination of recruits. But the rejection of one out of every three men examined by the recruiting medical officer points clearly to the poorness of the human material available for army purposes, as a writer in the *Lancet* puts it. Adding together the rates for the three classes of rejections referred to in the table, we find that 37·6 per cent. of the 679,703 men examined during the decennial period proved to be unfit for military service. This percentage of rejections does not, however, represent the whole extent of the physical unfitness existing among men wishing to become soldiers, and offering themselves for enlistment. The Inspector-General of Recruiting states in his report for 1902, that it must be borne in mind, when examining these totals, that they do not represent anything like the total number of the rejections of candidates for enlistment into the Army. A large number of men are rejected by recruiting sergeants and recruiting officers and such men in consequence are never medically inspected and do not appear in any returns. In the decennial period under consideration we have only been able to account for 37·6 per cent. of rejections from official statistics; but according to Sir Frederick Maurice's estimate, 60 per cent. of the men who offer themselves are unfit for service. This indicates that the number of men turned away by the recruiters themselves as unlikely to have any reasonable chance of passing the medical examination is an appallingly large one. As already stated no official record is kept of the number of men turned away; but there is reason to believe that the number is a large one, though whether it is sufficiently large to bring up the figures of the rejected to 60 per cent. we have no means of saying.

11. Examination of the statistics dealing with the causes of rejection by the examining medical officers of men seeking enlistment, brings into prominence the fact that the majority are rejected on account of causes indicating poor physical development, namely, under chest measurement, under height, and under weight. Defective vision may also be regarded in many cases as resulting from developmental defect. The following table gives the statistics relating to the principal causes of rejection for the twelve years 1891–1902:—

Causes of Rejection of Recruits on Inspection, with ratio per 1000.

1891–1902.

Cause of rejection.	1891.	1892.	1893.	1894.	1895.	1896.	1897.	1898.	1899.	1900.	1901.	1902.
Under chest measurement	93·03	95·90	108·55	110·27	126·38	139·64	89·44	73·88	65·84	59·84	49·88	56·72
Defective vision	40·35	42·35	41·51	42·90	39·88	40·72	41·15	42·64	41·99	36·42	35·84	39·23
Under weight	32·47	27·62	39·99	39·61	36·58	35·95	45·58	34·82	33·84	28·52	25·15	21·72
Under height	26·76	32·71	33·24	28·67	28·72	28·77	24·86	21·79	20·21	15·18	13·56	11·59
Imperfect constitution and debility	18·40	9·87	9·47	5·00	3·57	4·44	4·45	5·49	5·82	4·94	3·36	3·91
Disease of veins	16·39	16·24	17·11	15·84	15·85	15·72	15·42	15·74	14·22	11·69	13·98	12·30
Disease of heart	16·06	13·87	17·74	19·62	20·71	18·76	17·67	17·26	15·69	13·15	16·74	17·33
Defects of lower extremities	15·57	17·09	14·40	17·44	18·16	18·14	18·12	17·72	13·98	10·53	10·35	12·27
Varicocele	12·93	11·85	12·85	14·25	12·28	13·07	13·07	12·29	12·16	11·21	13·89	12·59
Flat feet	11·04	9·83	12·45	14·71	13·16	17·81	16·79	12·24	12·31	9·02	11·66	12·44
Loss or decay of teeth	10·88	14·56	15·33	16·26	17·95	19·75	24·16	26·34	25·29	20·02	26·70	49·26

It will be observed that bad teeth and flat feet, causes of rejection to which considerable importance was attached in General Maurice's paper in the *Contemporary Review*, occupy a comparatively low place in the list. But with regard to loss or decay of teeth, it must be pointed out that the numbers rejected on this account during the past four or five years have shown steady increase, until this cause of rejection has come to regularly occupy a high place on the list. Whether the increase in the rejections for bad teeth is an indication of increasing prevalence of physical unfitness is open to question, the increase may partly, at least, be due to the more common use of articles of food which readily undergo acid fermentation, and partly also to examining medical officers having gradually come to place a high value on soundness of teeth as a matter of the greatest importance in its relation to the maintenance of the physical efficiency of the soldier on service. The main inference to be drawn from a consideration of the figures in the table is that the bulk of the rejections arise from causes indicating the operation of agencies antagonistic to healthy physical development.

12. It has already been stated that a large proportion of the population live in towns, and this has been estimated at 77 per cent., or 25,000,000. Of this town population about 25 per cent. (probably at least 6,000,000), appear from trustworthy investigations, to be not only poor, but living in actual poverty, so as to be unable to rear their children under conditions favourable to health and physical fitness. The bulk of the men who seek enlistment belong to this section of the population, and a very large proportion (but probably not quite three out of five as stated by General Maurice) of the men who wish to join the Army prove physically unfit for military service. It is not claimed that the same proportion of poor materia will be found generally distributed amongst all classes of the community. In an earlier paper in the *Contemporary Review*, on "Where to get men," General Maurice remarks regarding this point, "Of course, as yet, that stern and brutal fact of the two in five does not mean that of the whole male population of the kingdom there are only two out of five who are fit to bear arms."

In the concluding paragraphs of his paper on "National Health: A Soldier's Study," Sir Frederick Maurice states: "My object is to call upon the great profession, whose immediate concern is health, to give us the guidance and leading we need, and primarily it seems to me that we ought to call upon the Councils of the Colleges of Physicians and Surgeons, as *ex officio* the great national boards of health to help and guide us." I should suppose that they have not at this moment, despite the census, sufficiently comprehensive data on which to pronounce, but if that be so, no Government could or would wish to resist an appeal from them for assistance in getting at the truth on the tremendous question which has been raised by the investigations of Mr. Rowntree: "Is it or is it not true that the whole labouring population of the land are at present living under conditions which make it impossible that they should rear the next generation to be sufficiently virile to supply more than two out of five men effective for the purposes of either peace or war."

The question at issue constitutes a problem by no means easy to solve. Were all classes of the community able to provide their offspring with ample food and air space, a healthy race would be produced, and the proper material to fill the ranks of the Army would probably soon be obtained.

13. Information is wanted as to the causes of physical deficiency and as to the best available methods of remedying defects and improving the national health. Such an inquiry might fitly be undertaken by a commission as to the composition of which the advice of the Colleges of Physicians and Surgeons might be asked. As the matter is one of the utmost importance from the recruiting point of view, it is suggested that the Secretary of State might take the initiative in the matter of getting the opinion of the Councils of the Colleges with regard to—

(*a.*) The necessity for such an inquiry.

(*b.*) The ground to be covered by a commission if appointed.

(*c.*) Composition of commission.

W. TAYLOR, Director-General,
Army Medical Service.

War Office,
2*nd April*, 1903.

(b) REPORTS TO THE HOME OFFICE BY THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

ROYAL COLLEGE OF PHYSICIANS.

Report of the Committee on the Physical Disability of Army Recruits.

14. Committee appointed by the College, July 2nd, 1903, to consider a communication from the Home Secretary, asking for observations on a proposed enquiry into the causes which have led to the rejection in recent years of so many recruits for the Army, on the ground of physical disability, and the possible measures by which this state of affairs may be remedied.

Members of the Committee.—The President, Dr. Poore, Dr. Longstaff, Dr. Pringle, Dr. Newsholme, Dr. J. F. W. Tatham.

In the original Memorandum, signed by Sir William Taylor, Director General of the Army Medical Department, sent to the College under cover of a letter from the Home Office, dated June 11th, 1903, the College was asked to express an opinion as to the necessity for an enquiry into the causes of the physical disability of so large a proportion of men offering themselves as recruits, and as to the available methods of remedying defects and improving the national health.

The general tenour of the report appeared to favour the opinion that an increasing deterioration in physique is taking place in the classes of the population from whom military recruits are chiefly drawn. An examination, however, of the figures given in the tables in the Memorandum itself does not support this view, as we find that the rejections of those offering themselves as recruits have fallen from 42 per cent. in 1891, to 34 per cent. in 1902. If we consider the causes of rejection, the table on page 4 of the Memorandum shows that chest measurements, weight, and height have all improved in recent years; whilst at the same time the rejections from other causes—with the exception of decayed teeth—have all decreased in number. Application was therefore made by the College to the Home Office for further information which might explain the apparent contradiction between the general tone of the report and the figures given. Information was especially asked for on such points as alterations in standard, if any, and more detailed statements as to the occupations of the heterogeneous class No. 1 ("labourers, servants, husbandmen, etc.") from whom nearly two-thirds of the number inspected were drawn, and who, therefore, furnish by far the largest number of rejections.

In reply to this application we were informed through Mr. Cunynghame, C.B., that the College was not asked to enter into an investigation of any alleged deterioration. What was wanted of the College, at this stage, was the expression of an opinion whether, from their point of view, an inquiry was necessary or not; and that they should confine themselves to answering the questions *a*, *b* and *c* at the end of the Director General's Report—

(*a*) The necessity for such an enquiry.
(*b*) The ground to be covered by a Commission if appointed.
(*c*) Composition of Commission.

15. The College is therefore placed in a position of expressing an opinion as to the necessity of an inquiry without any adequate data upon which an opinion can be founded.

Your Committee hold that it is extremely improbable that any general deterioration of the physique of the population is taking place, when they consider (without laying undue stress on the greatly lowered death-rate) how much the food, clothing and housing of the people have improved, together with the diminution of general pauperism. Class 1 (No. 1 of the Director General's statement) must include the *residuum* of the labour market; and, whilst your Committee duly recognise the effect which the increase of urban as compared with rural population may have on the population at large, it must be remembered that there has been a marked increase in the wage of agricultural labourers (a diminishing class) of late years, and that the attractions offered to this class by the Army in the shape of pay are proportionately much less than formerly, and consequently a larger proportion of men offering themselves for recruits may be expected to belong to the class of casual labourers in our large towns.

The Committee desire to draw attention to the fact that a greater change has taken place in the conditions of life in this country during the last fifty years than in any similar period of our history. Could an enquiry be made into the present physical condition of the nation, it is self-evident that it would be of great value, but one dealing with a portion only would be likely to lead to error.

The Committee would, therefore, suggest to the College that its answer to the Home Secretary's letter be as follows:—

Draft of reply to the Home Office.

16. The College has carefully considered the statement of the Director General of the Army Medical Service, forwarded through the Home Office, and would point out that the information furnished by it is not of such a character as to enable the College to express a decided opinion upon the question of whether there is, or is not, a necessity for an enquiry into the causes of the physical deficiency of those offering themselves as recruits for the Army.

The College is in possession of no means for comparing the condition of the population from whom recruits are drawn at the present time with that which obtained in former years. The figures given in the Director General's statement show that there has been no increase in the proportion of rejections, and although the numbers of those discharged from the Service in 1901–1902 are proportionately larger than those in former years, no details are given as to the circumstances under which the increase has taken place; and, indeed, the figures may not be strictly comparable.

17. Any investigation which does not take into account the condition of the labouring classes in the great industries of the country must necessarily give a very erroneous impression of the physique of these classes. The increase in the rate of wages in all forms of labour to that extent diminishes the attractions of a military career for those engaged in regular labour, and leads to a proportionately larger number of the "unemployed" offering themselves for service in the Army.

18. It is obvious that the casual labourers of the large towns represent the poorest portion of the population, among whom the lowest standard of physique would be found; but the College is not in possession of any evidence which satisfies it that there is any physical degeneration of the urban population generally. Moreover, the fact that the urban death-rate has declined between 5 and 6 per thousand, and now more closely approximates that of the rural population makes it unlikely that such deterioration is taking place.

19. The question of what *means* are available for remedying existing defects in and improving the national health may, perhaps, be briefly summed up as those which tend to diminish poverty. At the same time, the College desires to point out that very great changes in the conditions of life have taken place during the last fifty years, the effects of some of which are not yet determined. Among these should be considered the alterations in character of the food, the compulsory education and confinement in schools of young children, and the very great increase of female labour in towns. Could an enquiry be made into the present physical condition of the nation it is self-evident that it would be of great value; but one dealing with a portion only of the population would be likely to lead to error. Such an enquiry would naturally include the above subjects, the experiences of the Royal Navy, and other services of the State.

20. It hardly comes within the province of the College to state its views with regard to the composition of such a Commission as is suggested. If decided upon by the Government, it would be prepared, in conjunction with the Royal College of Surgeons of England, to suggest names, should it be thought desirable to place members of the medical profession on the Commission.

W. S. CHURCH,
27th July, 1903. President.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

21. The Council of the Royal College of Surgeons of England have carefully considered the Circular drawn up by Sir William Taylor, Director General of the Army Medical Service, on the physical deficiencies of the men who offer themselves for enlistment in the Army; and now beg to submit, for the information of the Secretary of State, the following observations in reference to those matters upon which their opinion is invited, viz.:—(*a*) the necessity of a proposed enquiry into the causes of physical deficiency and as to the best available means of remedying defects and improving the national health; (*b*) the ground to be covered by the Commission if appointed; and (*c*) the composition of the Commission.

It is premised in the Circular of the Director General that, while there is reason to believe the physique of the well-to-do classes is improving, "a very large proportion of the men who offer themselves for enlistment in the Army are found to be physically unfit for military service;" and there seems to be a presumption that the proportion is increasing. But the statistics set forth in the Circular do not support this view; and there is no indication that the figures are affected by any change in the standard of physical requirements in recruits during the period under consideration. Nor does it appear that there has been any noticeable change in the personnel of the candidates for enlistment during this period. In the opinion of the Council, however, there are reasons for believing that, compared with former times, most of the men who now offer themselves as recruits are drawn from a class physically inferior, and that a general statistical statement may be, therefore, misleading.

22. Many influences have been at work during recent years to affect the status of the working classes. Increased competition in trade, keener industrial rivalries, the growing responsibilities of employers, the "labour movement," trades-unions, and other social and economic factors have altered the conditions of labour, and raised at once the comparative standard of efficiency of the workman, the standard of living, and the rate of wages. In the struggle for employment the better educated, the more intelligent, and the more active and industrious are attracted to the better paid and more coveted occupations. The result is a large, and probably growing, *remainder* of those who, more or less unfit, fail to obtain regular employment. And it is apparently from this residue that the Army has to obtain the larger proportion of its recruits.

23. Disquieting though this reflection may be, there is no evidence before the Council that the physical disabilities of this class, taken by itself, has increased or are increasing. Indeed, the data supplied by the Circular itself seem to show that they have not increased, but rather that they may tend to diminish.

From Table I. p. 2, it would appear that when recruits belong to a class which may be regarded as first-hand material, namely, "boys under seventeen years of age," the proportion of rejections is only 11·2 per cent. Considering the probable parentage and the early surroundings of these youths, and considering also the numerous possible physical disqualifications, this cannot be regarded as a high rate of rejection. Moreover, this class of recruit affords a fair criterion of the average physique of the lower stratum of society. And it is also this class of recruit which should manifest most improvement under the favouring conditions of better food, better housing, and better surroundings and associations after enlistment.

Again, Table II. p. 3 shows a steadily declining rate of primary rejections from 40·6 per cent. in 1893 and 41·6 per cent. in 1896 to 27·4, 28·0, and 30·7 respectively in the three years 1900–2. Against this is to be set a sharp rise in the years 1901 and 1902 in secondary rejections, that is, rejections within three months of enlistment and after two years' service. The causes of these secondary rejections are not stated; but it may not unreasonably be assumed that many of them were due to preventable causes, physical or moral.

As bearing generally on the larger question of National Health, and more particularly on the physique of those who offer themselves as recruits, Table III. p. 4 is not without some hopeful indications as to the future. The Table shows a diminishing proportion of rejections in each of the assigned grounds of disqualification, excepting that of "loss or decay of teeth." In such a critical test of physique as "chest measurement," the rejections which were 139·64 per thousand in 1896, were only 49·88 and 56·72 respectively in the years 1901–2. "Imperfect constitution and debility" caused 18·40 per thousand rejection in 1891, and only 3·36 and 3·91 respectively in the years 1901–2. On the other hand, the rejections due to loss or decay of teeth which were 10·88 per thousand in 1891, had risen to 49·26 per thousand in 1902.

The Circular does not state whether or not there has been increased stringency of late in the matter of the teeth, or relaxation with respect to the other physical and vital requirements. In the absence of any statement to the contrary, the Council assume that no material alteration has been made. In any case the Council believe that many of the causes of disability will tend to grow less. Greater attention is now paid in schools to the general health of children, to physical training, to the care of the sight, the hearing, and the cleanliness of the mouth and teeth. And the spreading influence of the various social, municipal, and philanthropic agencies for the promotion of the public health, and the strengthening of the character of the individual, cannot fail to beneficially affect the health and well-being of all classes of the people, including the lowest.

24. It may, perhaps, not be altogether irrelevant to remark that many of the grounds of physical disqualification for the English Army, such as defects in vision, weight, height, and teeth, would in countries where conscription obtains be much less important factors in judging of the fitness of men for military service.

The Council desire to state that while they have thought it right to scrutinize the data supplied in the Circular prepared by the Director General, they have not done so in a captious spirit, but rather to illustrate the difficulty they have experienced in forming an opinion or in making any definite recommendation. They cordially recognize the immense importance of the matters to which the Director General has called attention, and the skill and clearness with which he has collated the facts upon which his opinion and recommendations are based.

25. On the evidence before them, and in view of the testimony of the public health statistics, the Council do not think there is need for a large enquiry into the National Health, and they are doubtful whether trustworthy results would be obtained by instituting a special enquiry with respect to the class from which most of the recruits are obtained. The Council are, however, of opinion that much might be done in a less formal manner by emphasizing the necessity of still stricter attention to the health, feeding, and training of school children, and more especially the care of the teeth and the arrest of threatened or early decay.

26. The Council also are of opinion—upon which opinion they would lay great stress—that as much as possible should be done to promote the health, growth, and general physical development of the young soldier by improving his environment and by the exercise of special care in the selection of the kind and quality of his food and in its preparation and preservation.

Should the Government decide to institute the larger enquiry into the National Health, or the more limited one dealing chiefly or solely with the class supplying the majority of recruits, the Committee would suggest that in addition to military men, the Commission should contain employers of labour, representatives of the working-classes, persons who have specially studied matters relating to public health, and members of the medical profession. With respect to the last named, the Council would be pleased in conjunction with the Royal College of Physicians to nominate representatives specially acquainted with the subject-matter of the enquiry.

JOHN TWEEDY,
President.

4th August, 1903.

(*c*) LETTER TO THE WAR OFFICE FROM THE PHYSICAL DETERIORATION COMMITTEE.

October 26th, 1903.

SIR,—

Physical Deterioration Committee.

27. The Committee which was appointed on September 2nd, by the Duke of Devonshire at that date Lord President of the Council, to enquire into the allegations concerning the physical deterioration of certain classes of the population, held its first meeting on the 21st inst., when the Memorandum of the Director General, Army Medical Service, dated April 2nd, 1903, was under consideration.

If reference is made to the Table on page 6 of the Memorandum, it appears that chest measurement, weight and height have all improved in recent years, whilst at the same time the rejections from other causes—with the exception of decayed teeth—have for the most part decreased in number, and the Committee would therefore be glad of any further information that would tend to explain the disquieting tone of the Memorandum, as a whole. It was also decided to ask you to be so good as to furnish the Committee with any information in the possession of the Department that throws light upon the figures included in head No. 1 of the Table on page 4 of the Memorandum. That head comprises "labourers, servants, husbandmen, etc.," and from these classes by far the largest number of recruits are drawn. The Committee would be glad to know what sub-divisions, with the figures attaching to each, are included, and, if possible, what classes of men are employed and what occupations are meant by the terms "labourers, servants, husbandmen, etc.," and it would be of great additional assistance if the tables so expanded could be arranged with the object of showing the local distribution of the conclusions deducible from them.

The Committee are desirous of obtaining as many statistics and records as possible bearing upon the existing state of facts, and will feel obliged for any help you could give in the matter.—I am, Sir, your obedient servant,

ALMERIC W. FITZ ROY.

The Under Secretary of State,
War Office.

(*d.*) FURTHER MEMORANDUM OF THE DIRECTOR-GENERAL, ARMY MEDICAL SERVICE.

28. IN reference to a letter dated 26th October, 1903, from the Chairman of the Committee appointed by the Lord President of the Council to inquire into the question regarding the defective physique of certain classes of the population of the United Kingdom, I think I ought to explain that an earlier statement could not be sent on account of the time taken up in obtaining the necessary information from different recruiting centres and the large amount of work involved in the preparation of the accompanying statistical tables.

Before touching on these tables, there are one or two points of great importance in relation to this inquiry about which I would like to say a few words with a view to bring to notice what I conceive to be a grave misunderstanding as to the main question at issue. In the first place, I think that the idea of "progressive physical deterioration" has occupied a much too prominent position in the minds of those who have had to consider and report as to the advisability of inquiry being necessary, and I also regret that the words "physical deterioration" have been adopted in the designation which has been given to the Committee. I consider that it is impossible to obtain reliable statistical or other data regarding the conditions that have existed in the past, and consequently, as no reliable data are obtainable for purposes of comparison, I don't see how the question can be dealt with from the progressive deterioration point of view. Whether or not there has been, or is, progressive physical deterioration among the classes now in question is a matter of very great importance, no doubt, but, in my opinion, it is not the chief question from a practical standpoint. To my mind the principal question for the Committee is to inquire into the causes and present extent of the physical *unfitness* that undoubtedly exists in large degree among certain classes of the population. The question dealt with in my original Memorandum was not that there was evidence of progressive physical deterioration of the race, either in whole or in part, but that it is a most disturbing fact that from 40 to 60 per cent. of the men who present themselves for enlistment are found to be physically unfit for military service. Even if the proportion is no greater than in the past, surely it is a state of matters worthy of the closest investigation, and one which no thinking man can wish to see continue. Moreover, it would be out of keeping with the progressive spirit of the times we live in for us to be content with the consolation that we are no worse off than we were fifty or even twenty years ago. I trust that the inquiry may end in suggestions that will lead to the institution of measures which will result in bringing about a marked improvement of the physique of the classes from which our recruits are at present drawn. I would again take this opportunity of pointing out that the smallness of the rate of the rejections within three months of enlistment, varying, as will be observed from the table on page 3 of my first Memorandum between ·5 and 1·5 per cent. speaks well, I think, for the carefulness of the primary medical examination of recruits; while the rejection of one out of even every three men examined by the recruiting medical officer points clearly to the poorness of the human material available for Army purposes.

Secondly, I would like that the objects with which the tables given on pages 3 and 4 of the Memorandum were prepared should be clearly understood. The table on page 3 was compiled for the purpose of comparing the evidence given by Army Recruiting Statistics with Sir Frederick Maurice's assertion that 60 per cent. of the men offering themselves for enlistment are unfit for military service. The table on page 4 was prepared in order to show the principal causes of rejection, and it is stated in the Memorandum that the main inference to be drawn from a consideration of the figures in the table is that the bulk of the rejections arise from causes indicating the operation of agencies antagonistic to healthy physical development. These explanations are given, as there appears to be an impression abroad that these tables were inserted in order to in some way lend support to the view that an increasing deterioration in physique is taking place in the classes of the population from whom military recruits are chiefly drawn.

The figures in the tables referred to in the preceding paragraph cannot be taken as either telling for or against increasing deterioration. The apparent improvement which the figures show since 1896, as regards chest measurement, weight, and height, and also as regards some of the other causes of rejection, must be considered in conjunction with the statement made near the bottom of page 3 of the Memorandum: "That it must be borne in mind, when examining these totals, that they do not represent anything like the *total* number of the rejections of candidates for enlistment into the Army. A large number of men are rejected by recruiting sergeants and recruiting officers, and such men in consequence are never medically inspected and do not appear in and returns." The Inspector-General of Recruiting issued these instructions in order to lessen the work of medical officers engaged on recruiting duties. Recruiters had strict orders not to send any recruit before an examining medical officer unless they considered that the man had a reasonable chance of passing. The Inspector-General of Recruiting has stated to me in regard to this point: "My recruiters not being medical men, I cannot check rejections for 'various ailments,' but I can for 'want of physical development,' by having all weeds immediately thrown out and not sent up for medical examination." This radical change in procedure was made on account of the large number of rejections for "under chest measurement," observed up to 1896, and as the change dates from that time, I regret to say that the improvement in the figures since observed cannot be regarded as indicating an all-round improvement in physique on the part of the men presenting themselves for enlistment.

The following statistical tables, which bear on the existing state of facts, are herewith forwarded:— *Appendix VI.*

Table 1.—Return of recruits rejected on inspection at St. George's Barracks, London, Hounslow, Woolwich, Newcastle on-Tyne, Manchester, Liverpool, Birmingham, Lichfield, Edinburgh, Glasgow, Dublin, and Belfast, during 1901 and 1902, showing causes of rejection according to previous occupations.

Table 2.—Return of recruits rejected on inspection during 1901, at the same recruiting stations, showing causes of rejection according to previous occupations, arranged by stations.

Table 3.—Return of recruits rejected on inspection during 1902, at the same recruiting stations, showing causes of rejection according to previous occupations arranged by stations.

Table 4.—Principal causes of rejection, tabulated according to previous occupations.

The heading "Want of Physical Development," includes the following, which are shown separately in the other tables.

Impaired constitution and debility.
Under height.
Under chest measurement.
Under weight.
Not likely to become an efficient soldier.

W. TAYLOR,
Director-General.

War Office,
November, 1903.

(*e*) LETTERS TO THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS FROM THE PHYSICAL DETERIORATION COMMITTEE.

December 1*st*, 1903.

SIR,—

Physical Deterioration Committee.

29. The above Committee have had under consideration the Memorandum of the Director-General, Army Medical Service, dated April the 2nd, 1903, and the Reports of the Royal Colleges of Physicians and Surgeons consequent thereon. They have communicated with the War Office on the difficulty of reconciling the general views expressed in the Memorandum with the actual results that appear from the figures contained therein, and have received in answer a further memorandum from the Director-General together with four tables of figures giving more detailed statistics as to the percentage of recruits rejected and the causes of rejection. Copies of this Memorandum and tables are enclosed herewith.

The Committee will be glad if the Royal College of Physicians will take these documents into consideration and while favouring the Committee with any observations it is desired to make, will be careful to state whether the perusal of the supplementary matter now furnished suggests the modification in any degree of the opinions previously expressed on the subject.—I am, Sir,

Your obedient Servant,

A. W. FITZ ROY.

The President,
The Royal College of Physicians,
Pall Mall East, S.W.

December 1st, 1903.

SIR,—

Physical Deterioration Committee.

30. The above Committee have had under consideration the Memorandum of the Director-General, Army Medical Service, dated April the 2nd, 1903, and the Reports of the Royal Colleges of Physicians and Surgeons consequent thereon. They have communicated with the War Office on the difficulty of reconciling the general views expressed in the Memorandum with the actual results that appear from the figures contained therein, and have received in answer a further Memorandum from the Director-General together with four tables of figures giving more detailed statistics as to the percentage of recruits rejected and the causes of rejection. Copies of this Memorandum and tables are enclosed herewith.

The Committee will be glad if the Royal College of Surgeons will take these documents into consideration, and while favouring the Committee with any observations it is desired to make, will be careful to state whether the perusal of the supplementary matter now furnished suggests the modification in any degree of the opinions previously expressed on the subject.—I am, Sir,

Your obedient Servant,

A. W. FITZROY.

The President,
The Royal College of Surgeons,
40, Lincoln's Inn Fields, W.C.

(*f*) REPLIES FROM THE ROYAL COLLEGES OF PHYSICIANS AND SURGEONS.

Royal College of Physicians,
London, S.W.
30th January, 1904.

SIR,—

Physical Deterioration of Army Recruits.

31. I am at length able to reply on behalf of this college to your letter of December 1st, 1903, enclosing a further Memorandum from the Director-General and four additional statistical tables on the above subject, and asking to be informed if the opinions previously expressed by the college are in any way modified by a perusal of this supplementary matter.

The communication was submitted in December to the same Select Committee as the previous one on this subject, received through the Home Secretary in June last, had been, and their Report was received and considered at a general meeting of the college on the 28th instant.

From the new memorandum, it appears that the college somewhat misunderstood the question which it was intended to place before them on the first occasion The general tenor of the first Memorandum suggested that the existence of a progressive physical deterioration was the most important portion of that question, and their answer was framed under this impression.

32. Having now carefully considered the further document supplied to them, the College are of opinion that an enquiry into the present extent and causes of the alleged physical disability for military service of certain classes of the population is desirable.

In their former reply the College considered that sufficient data were not available for forming a judgment on the extremely complex question of the occurrence or not of progressive degeneration in the classes from which recruits are mainly drawn, and the supplementary matter now brought before them does not suggest any modification of their former opinion.—I am, Sir,

Your obedient Servant,

EDWARD LIVEING, M.D.,
Registrar.

A. W. Fitz Roy, Esq.

Royal College of Surgeons of England,
Lincoln's Inn Fields, London, W.C.
22nd December, 1903.

33. SIR,—With reference to your letter of the 1st instant, forwarding a copy of a further Memorandum prepared by the Director-General of the Army Medical Service, together with four tables of figures giving more detailed statistics as to the percentage of rejection of those who have offered themselves as recruits, and as to the causes of the rejections, the Council of the Royal College of Surgeons beg to make the following observations:—

The Council note that the Director-General thinks "that the idea of 'progressive physical deterioration' has occupied a much too prominent position in the minds of those who have had to consider and report as to the advisability of inquiry being necessary," and they also note the statement that the intention of his original Memorandum

was to call attention to "the most disturbing fact that from 40 to 60 per cent. of the men who present themselves for enlistment are found to be physically unfit for military service," and not to suggest there was evidence of a "progressive physical deterioration of the race," concerning which there are no trustworthy "statistical or other data."

With reference to these remarks of the Director-General, the Council desire to point out that in their Report to the Home Office they did not use the phrase "progressive physical deterioration," though some of their criticisms did assume that the first Memorandum of the Director-General seemed to suggest the idea of progressive physical deterioration among certain classes of the community.

While, therefore, the Council may not in every respect have interpreted quite accurately all the meaning and import of the Director-General's first Memorandum, their opinion was in no sense based upon a misunderstanding as to the main question at issue; and they are entirely in accord with the Director-General in believing that the two principal matters now to be considered are, first, an inquiry into the causes and present extent of the physical unfitness for military service that exists in a large degree among certain classes of the population; and, second, the institution of measures which may bring about an improvement of the physique of the classes from which most of the recruits are at present drawn.

The Council believe that, in addition to any other means which may commend themselves to your Committee, the adoption of the precautions and supervisions indicated in the Council's previous Report would contribute not a little to the physical and moral improvement and well-being of the classes concerned.

In conclusion, the Council beg to state that, after a careful perusal of the supplementary information now supplied, they see no ground to modify the opinions which they have previously expressed upon the subject of the physical disability of many who offer themselves as recruits.—I am, Sir,

Your obedient Servant,

JOHN TWEEDY,
President.

A. W. Fitz Roy, Esq.,
Privy Council Office,
London, S.W.

APPENDIX II.

SCHEME FOR ANTHROPOMETRIC SURVEY OF UNITED KINGDOM.

1. The following table shows the statistics of population, schools and scholars:—

	Population (1901).	No. of Schools (primary).	No. on Register.	Scholars per cent. of Population.
England - - -	32,527,843	20,133	5,881,278	18
Scotland - - -	4,472,103	3,145	768,598	17·2
Ireland - - -	4,458,775	8,712	737,086	16·5
	41,458,721	32,010	7,386,962	M 17·2

The United Kingdom would be divided into 400 districts each containing on an average 100,000 persons. In thinly populated rural districts the number may be smaller, and in large towns the number may be greater.

In each of these districts 18,500 persons are in the primary schools, and 81,500 are adults or very young children. Let us say 80,000 adults are available for measurement in each district.

Let us suppose that a sample of 2,000 adults is measured in each district; the total number of adults to be measured will be $400 \times 2{,}000 = 800{,}000$.

In the case of school children we must measure a sample of 1,000–2,000 for each age interval of twelve months.

The total number of school children in each district is $\frac{7{,}386{,}962}{400} = 18{,}467$. Dividing this number into twelve age groups each of one year, each group will contain 1,539. This number is only just a sufficient sample. Hence, it follows that it will be necessary to measure the whole of the children in the primary schools. There are also a number of children in addition to this in the secondary schools.

Approximately it will be necessary to measure 800,000 adults, and 8,000,000 school children.

Each district should be measured once in ten years. In order to keep the staff constantly employed the measuring of the whole population may be spread over the whole ten year period. It will be necessary, therefore, to measure per annum, 80,000 adults and 800,000 school children, *i.e.*, forty districts.

Taking 250 working days per annum, it will be necessary to measure 320 adults per day, and 3,200 school children per day.

If we have a staff of twenty surveyors it will be necessary that each surveyor measures 16 adults and 160 school children per day.

This, we think, allowing for unavoidable delays in getting at the persons to be measured, is a reasonable amount of work to expect from one surveyor per day.

Qualifications and Duties of the Officials of the Permanent Staff.

2. The formation of a National Bureau would involve the establishment of:—

I. A Consultative Committee.

II. A Central Bureau.

III. Surveyors or Measurers.

The Consultative Committee to consist of three leading Anthropologists who have devoted special attention to Anthropometry; one residing in England, one in Scotland, and one in Ireland. The appointments to be honorary, without salary.

The Bureau to be under the direction of a Director and a Deputy-Director. A statistical department would also require to be organised.

The Surveyors must be accurate and reliable manipulators, capable of being taught by the instructors to make the necessary anthropometric measurements. Their duties will be to go to districts as directed by the chief surveyor, and to carry out measurements as he directs. A certain number of the surveyors should be ladies, to measure school girls and female adults.

Estimate for Scheme in which the School Teachers are Employed to Measure the School Children.

3. There are approximately 32,000 primary schools in

the United Kingdom, with an average of 230 scholars in each. 3,200 of these schools must be measured per annum, if the survey is spread over ten years. A surveyor working eight hours a day measures (as stated above) 160 children; a teacher working at the same rate would measure in one day, working one hour per day, 20 scholars; and would take twelve days to measure the average school.

Taking twenty fortnights per annum as available (when holidays are excluded), one set of instruments passed from one teacher to another would measure twenty schools per annum. To allow for delays in transmission of instruments, etc., let us say sixteen schools per annum would be measured by one set of instruments.

Now it is necessary to measure 3,200 schools per annum to complete the survey in ten years.

Therefore $\frac{3,200}{16} = 200$ sets of instruments would be required.

The cost of 200 sets of instruments at £8 a set is £1,600.

Each teacher will expect to be paid a gratuity of, say, £1 for measuring his school.

This will amount to £3,200 per annum. In order to train the teachers they will require to go for instruction to London, Edinburgh, or Dublin. Taking 100 miles as the average distance from the capitals, the average return fare at 1d. per mile will be 200d.=16s. 8d.

For the 3,200 teachers per annum the travelling expenses will be £2,666 13s.

It will be necessary to pay on an average £1 for hotel expenses to each teacher. This will amount to £3,200

On the other hand, if the teachers measure the children, sixteen of the special surveyors might be dispensed with and £4,800 saved.

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4. Comparison of Cost of Permanent Staff of Surveyors and of the Employment of School Teachers.

Special Staff.	School Teachers.
Cost of instruments £160.	Do. £1,600.
Annual Expenditure.	
Salaries of 16 permanent surveyors required to replace the teachers @ £300 - - - - - - £4,800	Gratuity to teachers - - - - - - - - - - £3,200
	Travelling expenses - - - - - - - - - - 2,666
Balance in favour of permanent Staff - - - - - - - - - - £4,266	Hotel expenses - - - - - - - - - - - 3,200
£9,066	£9,066

By employing a permanent staff of surveyors instead of the school teachers, there will be a saving of £1,440 in first cost of instruments, and of £4,266 in annual expenditure.

Permanent surveyors being constantly employed at the same work, and frequently tested by instructors, would measure very much more accurately than the teachers.

The objections which apply to teachers would apply in a less degree to factory inspectors, if these men in the course of their ordinary duties come frequently to London, Edinburgh, and Dublin. The cost of instructing them would thus be materially reduced. But owing to the act that only part of their time could be devoted to measurement, more sets of instruments would be required, and their skill would be inferior to that of permanent surveyors.

The above estimate, though only approximate, shows clearly, we think, that the employment of a specially trained permanent staff of surveyors to carry out the whole anthropometric survey, instead of employing teachers, factory inspectors, or other existing officials, will be much more economical and much more efficient.

Dated 7th January, 1904.

D. J. Cunningham.
John Gray.

APPENDIX III.

SOME RECENT INVESTIGATIONS AS TO THE NUMBER OF THE "POOR" IN THE COMMUNITY.

By Mr. C. S. Loch.

1. There are two counts of the "poor" which have attracted much attention and which, in my opinion, require more close study than they have received, if their real nature and limitations are to be understood. The counts to which I refer are those made by Mr. Charles Booth in regard first to the East of London and Hackney, and then to the whole Metropolis, and those made by Mr. Seebohm Rowntree in regard to York.

It is not possible to ascertain the limitations of those counts and the qualifications which must be borne in mind in making use of them without a very attentive regard to the text which accompanies the figures and tables. The figures and the text must, so to speak, be read together as one expression, a not very easy task in any case and a task quite beyond the energy or perhaps indeed the ability of the general reader who is not specially interested or well versed in the details which underlie the calculations. Consequently such readers, if they are desirous of arriving at their conclusions quickly and by way of reference rather than slowly, and by the difficult progress of accurate and proven data, seize the figures and forget the text. The text thus becomes little better than a footnote left unread or hastily skimmed, though in fact, if the conclusions are to be tested, it is even more important than the figures.

Such a result cannot but appear serious to those who are dealing personally with questions of social life and habit, and are anxious that the people at large should take a sane and accurate view of social conditions. Above all is it necessary in estimating the improvement or deterioration of the national life, during the past generation, to analyse these counts and classifications of the population—if their evidence is to be admitted as having any exceptional validity.

I have used the word "counts" in the above paragraph. In fact the calculations in these books are only in part counts. To a very large extent they are estimates.

2. To ascertain the nature of these counts and estimates the following points have to be considered: (1) the general method; (2) the methods of collecting the particulars on which the classification is based; (3) the classes—the utilisation of these particulars in forming the estimates and conclusions which are submitted, and (4) the conclusions and recommendations themselves.

I begin with Mr. Charles Booth's book on the "Life and Labour of the People."

"*Life and Labour of the People.*"

THE GENERAL METHOD.

3. Mr. Charles Booth states his object to be: "To show the numerical relation which poverty, misery and depravity bear to regular earnings and comparative comfort, and to describe the general conditions under which each class lives." "I have throughout leaned to the safe side," he says, "preferring to paint things too dark rather than too bright."*

He aims at giving a picture, partly verbal and descriptive, partly statistical. He counts and estimates the people as they are as nearly as may be, at a precise moment, as if he were reporter and photographer combined. He makes no comparison between past and present. He collects no data for such a comparison, nor are his conclusions based on any observation of the changes in the development of the people, their present with their past, numerically or otherwise. He thus passes by all questions of progress or decadence, for in regard to them the comparative method is necessary. He works on a flat surface, so to speak; he cannot measure past and present or account for the present by the past, he can only measure quantities as they appear side by side on a certain date and from that comparison can only presume the conclusions.

Now this is obviously in itself a very misleading method. Without the ascertainment of causes, conclusions cannot rightly be drawn; and causes do not lie on the flat surface, the momentary view of things. They can be ascertained only by the observance of their growth. In this method the observation of growth or development is wanting. Hence it does not supply the data which are necessary if any conclusions are to be drawn.

4. Perhaps I may be allowed to give an instance of this in reference to the statistical side of the question, though the principle affects the descriptive as much as the statistical elements of the method.

Mr. Charles Booth, the late Dr. Hunter, and some other writers adopted the method to which I refer in the controversies as to Poor Law relief some ten or twelve years ago. Each took a particular date and argued from the number and proportion of in and out paupers in unions grouped together in various ways. The instances of the fallacy are perhaps more striking in Dr. Hunter's paper "Out-door relief—is it so very bad?" *Contemporary Review*: March, 1894) than in some of the other documents. I will therefore refer to it more particularly.

Dr. Hunter, like Mr. Booth, took one particular date—that of Mr. Ritchie's return "Poor Law (Indoor and Out-door Relief)" No. 265, 1 Jan., 1892. He grouped the poor law unions according to their population and in other ways. The unions thus grouped he arranged in two sub-groups or sections—one which he called "outdoor relief unions" and another which he called "indoor relief unions." To form these sections (1) he calculated the percentage of outdoor paupers to total paupers in each union of the group; (2) he calculated the mean of these several percentages; (3) he classed as an "outdoor relief union" and placed in that section each union in which the percentage of outdoor paupers to total paupers was *more* than this mean; (4) he classed as an "indoor relief union" and placed in that section each union in which the percentage of outdoor paupers to total paupers was *less* than this mean.

Thus to take an instance:

Group: Unions in Lancashire.

Mean of percentages of outdoor to total paupers in the general Lancashire unions* (as above) 66·9.

Section "Out-door Unions."

Rochdale (and others—with percentage of out-door paupers to total paupers in excess of the mean) 70·4.

Section "Indoor Unions."

West Derby (and others—with percentage of outdoor paupers to total paupers less than the mean) 56·7.

From figures thus compiled—with unions arranged in groups and the groups in turn compared with other groups, he drew various conclusions. Amongst others for instance that "the policy of indoor relief drives into the house." This was an inference assumed from the fact that according to his arrangement of unions there appeared at a particular date in a group or groups a larger number of paupers in the section of "indoor" unions than in the section of "outdoor" unions.

But from this momentary view of pauperism no such inference could be drawn.

First of all, the policy of Boards of Guardians is not so clear and settled that they can be placed in sections on the basis of outdoor to total paupers. Unions both below and above the mean are working usually by haphazard decisions and with no determinate policy at all. So far as such a policy is concerned, it is a mere chance whether they come above or below the line of the mean.

Next when a Board has a definite and declared policy, the inference that indoor relief drives into the house is

*" Life and Labour of the People" I. pp. 5 and 6 (First Edition).

* No detailed calculations appear in Dr. Hunter's paper. The above figures are worked out on his method and to explain it.

falsified, not by the figures of the moment which afford no basis for judgment one way or the other, but by the test of the comparative method.

Take, for instance, the case of a union which is classed "indoor." It is not mentioned by Dr. Hunter by name, but it is included in his groupings. Thirty years before the particular date the paupers numbered 1,019—in two groups—one indoor of 107, one outdoor of 912, and the policy of the guardians had been to reduce outdoor relief. Then in the course of the thirty years many recipients of outdoor relief grew old and died, and in accordance with the policy of the guardians their places were taken by very few new recipients. A few of the old recipients went into the workhouse or infirmary as age and helplessness came on them, and also a few others were admitted to these institutions. Then at the particular date the figures stood thus: 100 paupers in all instead of 1,019; of these sixty-nine in receipt of indoor relief instead of 107 and thirty-one in receipt of outdoor relief instead of 912.

Thus the fact as noted on the particular date in this (and in other instances) was taken as indicating a policy and the conclusion to be drawn from that policy. The fact indeed was taken as equivalent to the cause; because on the particular date there were more indoor than outdoor paupers; therefore indoor relief drives into the house. But the fact is itself a resultant of causes which have previously been at work and which only an analysis of previous facts and conditions can indicate. Isolated from them it has no real meaning. To affirm that to be a cause which is only a statement of fact, as disclosed on a particular date, is really to assume the cause, not to ascertain it—to assume the cause without having collected, analysed, or considered the evidence which would show what the cause or causes were.

In this (and in other instances) on the application of the comparative method it is evident that the inference from the figures of the particular date is quite incorrect. The paupers have not been driven into the house but the result has been quite the reverse.

A generation which began with 1,019 paupers concludes at thirty years later with 100; and the potential pauperism is reduced to that extent. The paupers who, on another policy of administration, would have taken the place of the (1,019—100) 919, are not driven into the house, but into the world of self-support.

Mr. Charles Booth's book on Pauperism is full of instances of conclusions of many kinds drawn from one day counts of paupers "in" and "out" in relation to population, and they are, as can be shown again and again, quite fallacious for the reasons given above.

In the "Life and Labour of the People" the method, so far as the statistics are concerned, is the same—though only to a small extent, comparatively, are problems of pauperism there treated. But so far as figures are given of the "poor" and "very poor" etc., it should be remembered that, putting aside for the moment other points in the method, no conclusions can be drawn from the figures themselves. No one can conclude from them in any way whether the people are more or less independent, or more or less poor. They throw no light on the relative condition of the people, and thus Mr. Booth's object "to show the numerical relation which poverty, misery, and depravity bear to regular earnings and comparative comfort" remains unachieved. In the classes A,B,C,D, there is poverty and clearly to some extent misery, using that word to mean extreme poverty, as presumably in A and B, but depravity as a cause of poverty is like other causes necessarily omitted everywhere from the enumeration. Nor is "the relation between poverty, depravity and regular earnings" worked out. His classes "C intermittent earnings" and "D small regular income" are separated only to be merged altogether and finally; so that the distinction of "regular earnings" itself disappears, just at the point where its influence on social habit should be most carefully observed. On the non-comparative one-day method of count and estimate this could hardly be otherwise.

THE METHOD OF COLLECTING THE PARTICULARS.

6. Information has been obtained from School Board visitors. Of the total area dealt with part is called "tested." The tested area covered "fully one-half" or "from one half to two thirds" of the whole population.

The whole area consists of seven districts, Shoreditch, Bethnal Green, Whitechapel, St. George's, Stepney, Mile End, Poplar and Hackney. The population consists of 891,539 persons. The figures in regard to the non-tested part of this area are arrived at by a proportion as against the figures in the tested part. The latter thu becomes the gauge and standard of comparison. It is not stated however, what is the area or areas of this tested part, or what streets or families make it up. From that point of view the validity of the proportion cannot be checked by the text.

7. The School Board visitors gave particulars of the heads of families with school children. Of these particulars samples are furnished in the specimen streets. "Every house and every family with children is noted with such information as the visitors could give about them. Here are specimens of each class of street" [21]. [21] L., p. 7.

8. The heads of families with school children are scheduled by *sections* according to employment; and then it is assumed that all male adults in the area, (*i.e.* apparently those in the same district) who are not in the schedule follow the same employments as those of the men, who have been scheduled, in the same numerical proportion. Thus, if there are, say, thirty in the "dress and food" trades section among the scheduled male adults (*i.e.* those with children at school), it is taken for granted, there is a proportional number of male adults engaged in "dress and food" trades among non-scheduled male adults [22]. [22] L., p. 4.

9. The adult males whose employment is unknown are thus allocated to employment sections proportionally according to the employments of those adult males whose employment is known. The children not of school age have then to be dealt with on similar lines. The elder children (thirteen to twenty) are assumed to belong proportionally to the several employment sections, the totals of which have been themselves settled by proportion. Thus supposing that in a district the tested families, the families with children attending school, say about half of the whole number, produce 100 railway servants, the other, the untested adult males without children attending school, are taken as producing another 100 railway servants, and then the children and young persons who are in the district according to the census are placed out, section by section, so many to our 200 railway servants, so many to each of the other sections.

10. The relative "poverty" of the section (*i.e.* the *section* by employment) is thus partly settled by the scheduled cases—the cases of the adult males in the employment-section who have children at school. But it is also settled in great degree by proportional calculations and assumptions. Thus, if in the district there are, say, 100 railway servants, scheduled as fifty in B. and fifty in C., all men with children attending school, it is taken for granted that there are among the unscheduled populations, as the census returns of occupations may suggest, say another fifty B's and fifty C's railway servants, whose circumstances are not known; and though these at the time are at least not maintaining children of school age, or indeed may not have had any children at all, they have to be counted as poor as their brethren, and must for their sake, therefore, be themselves also consigned to B. and C.

11. According to the assumptions that underlie these proportional calculations the "non-tested area" has been scheduled "by *other means or in proportion*," for "as is the condition of the tested part so is the condition of the whole population."[24] [24] L., p. 5.

12. The speculative nature of the method is obvious. It is not stated what is the area "of the tested part"—or what are the areas in the different districts which taken together make up "the tested part:" the quantitative distribution of the classes of poverty and the sections of employment is assumed. This is an extremely hazardous assumption, unless the similarity of the population class by class and section by section in different parts of the area is tested and "agreed."

But of this no evidence is given.

13. To complete the population "it was necessary to add 68,451 adult women." These are "distributed amongst p. 62
the classes in the proportions shown for the rest of the population to which they stand in the relation of sisters or daughters." "It may be doubted whether class B should contain its full proportion of these women or of girls from thirteen to twenty." This remark shows the very speculative nature of the process. The number of adult women added to Class B is 7,799,[23] in a total of [23] Table IV.
100,062.

14. Many of the phrases which are used show how difficult it is to check the figures and to give them any real statistical value.* The known and, so to speak, counted families may be placed in the several classes rightly or wrongly. But in addition, to account for the whole population many adjustments have to be made "by other means or in proportion."

But even so, it may be doubted if Class B has its right number of girls and women; and other similar cases of unsettled approximation to the figure ultimately entered will be found later on.

15. Though the classes are selected by the rule of "poverty," etc., judging from the published schedules of cases, wages are not entered in them, nor do wages appear to have been verified in the individual cases; nor are statements of rental or ages supplied. Nor is the number of children above school age or working away from the home noted—though their payments are often a very important item in the family budget. All these are indispensable details.

The Classes.

16. The classes into which Mr. Booth divides the population are—

[1] I., p. 37. "A. The lowest class, which consists of some occasional labourers, street sellers, criminals, and semi-criminals.[2] Their life is the life of savages with vicissitudes of extreme and occasional excess. Their food is of the coarsest [3] I., p. 38. description; and their only luxury is drink.[3] This class is now hereditary 'to a very considerable extent.'[3] At the same time it is recruited with adult men from all others, and the number of children left in charge of it are 'proportionately small' and the number of young [4] I., p. 39. persons is proportionately large."[4]

B.—Class B is "very poor"—"casual earnings, very poor." "The labourers of Class B do not, on the average, get as much as three days' work a week, but it is doubtful if many of them could, or would, work full time and for long together, if they had the [5] I., p. 43. opportunity."[5] "Class B, and especially the 'labour' part of it is, not one in which men are born and live and die, so much as a deposit of those who from mental, moral, and physical causes are incapable of better [6] I., p. 44. work."[6] "From whatever section Class B is drawn, except among the sections of poor women, there will be found many of them who from shiftlessness, helplessness, [7] I., p. 43. idleness, or drink are inevitably poor."[7]

C.—Class C, "intermittent earnings poor." "Those who work by the job, who are in and out of work according [8] I., p. 44. to the season or nature of their work[8] are more than any others the victims of competition: on them falls with particular severity the weight of recurrent depressions of trade." There is a passion for drink "among some of the highly paid irregular workers."[9]

[9] I., p. 46. The employment section "irregular" in C and D taken together "has a very bad character for improvidence."[9]

D. "Small regular earnings, poor." "It must not be understood that all of these have quite regular work; but only that the earnings are constant enough to be treated as a regular income, which is not the case with [10] I., p. 48. the earnings of C."[10] "Of the whole section none can be said to rise above poverty, unless by the earnings of the children, nor are many to be classed as very poor. What they have comes in regularly, and except in times of sickness in the family, actual want rarely presses, unless the wife drinks." As a general rule, these men have a hard struggle to make the ends meet, but they are, as a body, decent steady men, paying their way and bringing up their children respectably. The work they do demands little [11] I., p. 49. skill or intelligence."[11]

The other classes are E regular standard wages. "As a rule the wives do not work, but the children all do." "This class owns a good deal of property in the aggre- [12] I., p. 51. gate."[12] F. "Higher class labour." G. "Lower middle class, shopkeepers, and small employers, clerks, etc., and subordinate professional men." And H. "Upper middle class—all above G. lumped together," "the servant-keeping class."

The classes above quoted are arranged A, B, "very poor"; "lowest class"; and "casual earnings"; C and D, "poor," "irregular earnings," and "regular minimum"; E and F, "comfortable," "ordinary standard earnings," and "highly paid work," and G H, "well to do," "lower middle," and "upper middle."

The following statements further summarise the position:—A, B, C, D are "classes of poverty sinking to want": E, F, G, H, "classes in comfort rising to affluence."[13] [13] I. p. 62.

"Omitting class A, which rather involves the question of disorder, we have in classes B, C and D the problem of poverty."[14] "B," the "very poor," are at all times [14] p. 131. more or less in "want," though only a percentage "not I think a large percentage," in distress. C and D "poor" "though they would be much the better for more of everything are not 'in want.' "They are neither ill-nourished nor ill-clad according to any standard that can reasonably be used."

The Data for the Classes Judged by the Individual Case.

17. As further definition of these classes thirty individual cases are quoted and classified. The test applied is expenditure. A "male adult" standard of consumption is assumed and the members of the family are calculated as equivalent to so many parts of a "male adult." Thus an adult equals 1, a woman ·75, and "in proportion for children."[15] So a family—man, wife, and three children [15] I. p. 132. —a son 18, two girls 8 and 6—make up 3·35[16]; the man [16] I. p. 136. being 1, the wife ·75, the son of 18—? ·75, the two girls ·85 between them.

In this "B" case the man is 38 "in poor health fresh from the infirmary"; his wife 43 is consumptive. The son of 18 earns 8s. a week as carman's boy. The neighbouring clergy send soup two or three times a week. The income is not stated but is supposed to be 10s. 3·4d. but the expenditure is stated to be 15s. 2¼d. or 4s. 6d. a week per male adult.

In another "B" case (No. 4) in which the supposed income is 18s. 10·8d. per week, "the family run largely on credit." "The man, a bricklayer, gets something as caretaker, very little by his trade," The wife works as dressmaker and has to put out the washing. There are six children, thirteen, eleven, nine and a half, three and a half, two, and four months. The family is set down as equal to 3·7 in "male adult" measure and the expenditure at 24s. 5¾d. or per "male adult" 6s. 7½d. a week.[17] [17] I. p. 136. 143.

In a third, a "B" case on the line, it is stated, between "B" and "C" there are a man, wife, and five children (ten, nine, five, three, one). The man has irregular work as a wharf labourer at 20s. to 21s. a week. A girl not counted in the family is in service, and "still receives money and clothes from home." The wife earns 3s. 6d. a week by needlework. By steadiness on the man's part and good management on the part of the wife, they live as well as many families in "D." The "adult male" costs 6s. 8d. a week, the family 21s. 6d.—against a supposed weekly income of 22s.

In regard to these and the other cases quoted as typical the following points may be noted:—

In these cases no figures of actual income are given. There is an analysis of expenditure only. The supposed income is given and the amount expended very largely exceeds this. In case No. 1 (above), the expenditure is nearly a half more than the income. If this is to be taken as representing the normal condition of the family budget it is hardly to be accounted for by debt or the avoidance of payment, or by the thrice-weekly soup. Probably the real facts have not been disclosed. At least, the inference is strong that there must be some grave flaw in the statement.

In the second case the difference between supposed income and actual expenditure is almost as significant. The supposed weekly income is 18s. 6·8d.; the expenditure 24s. 5·75d. If the man's actual income were as great as his expenditure, he would assuredly not be in "B" but in "C," or even "D." Here again, the inference must be that the facts of the case as a whole have not been ascertained.

The third case is significant from another point of view. It is said to be on the line between "B" and "C," but so good is the use of means that the family "live as well as many families in 'D'." Here the income though irregular is taken at 22s. (20s. to 21s. irregular, earned by the man plus 3s. 6d. earned by the wife)—slightly

* So in vol. ix., p. 13, dealing with "crowding and earnings," on certain statements Mr. Booth bases the *average* earnings for an *average* number of employees "not necessarily or probably the true average for the year but an approximation to it."

more than the expenditure. The facts are probably better ascertained. Why then should not the family be placed in "D"? It is not wage, but the use of wage, that makes the difference between well-being and want. But, if that is true, as undoubtedly it is, this factor, socially a more important one than the amount of wage, would upset all these classifications. Here a family in which "poverty" is avoided by the good use of means is put in the same category with a family in which "poverty" is made acute by the thriftless use of means. The grouping indeed is arbitrary, unless this factor be taken into account and given its full value.

These cases then quoted by Mr. Booth to define his distinctions of classes more clearly, fail to do so. They suggest rather that the classes are practically arbitrary groupings based on no common principle. They show that the people have not really been classified by him into "poor" and "very poor."

The Data for Classes as Judged by the Street Notes.

5, 7. 18. Turning to the streets given as specimens of classification [19], we find how large a number of families have to be passed over as unknown. In St. Hubert Street, for instance, an A street: fifty-seven of the families have children at school, and are therefore classified; forty-one having no children at school, and therefore unknown to the School Board visitors, are unclassified. This represents a very large proportion of whom nothing is known, and everything has to be inferred.

16 Or, if we take a C–D street, [20] we find the figures: four B families; four C; ten D; three E families; twenty-one in all; and fifteen families without children, and therefore unknown to the School Board visitors, unless possibly children in these families had recently left school. Another C–D street has four F families; twelve E; twelve D, and five C; thirty-three in all, and eighteen unclassified.

Thus the margin of the unknown is very considerable, and the grouping of the streets—so far as the statistics are concerned—based on something very like guess-work.

The details supplied in the specimen entries are extremely meagre, and many, if not most, of those required for a classification drawn on the lines of social science, are wanting.

If classes A, B, C, D are to be described as "classes sinking to want" this evidence is essential, for C–D, it is stated, are "neither ill-nourished nor ill-clad according to any standard that can reasonably be used; and D are, taken as a body, decent, steady men, paying their way and bringing up their children respectably." Such a conclusion evidently can only be based on comparative statistics, not a single day estimate. But it is impossible to regard all A, B, C, D as "sinking to want." The notes of cases (I., p. 140), for instance, suggest that this is hardly the fact.

A classification of families on the down grade or on the up grade might be of real service, but much fuller information would be required for that.

Are the Classes True Classes?

19. The first question is—are they true classes? A class is strictly a "summoning." Thus we might summon a class of the payers of income tax. Here the lines of division are accurately divided by specific count or admitted valuation. So in the case of paupers; all who apply for poor law relief can be counted accurately, and so from that point of view form a class, a "statistical" class, and in view of a particular law—the Poor Law—a social class. But in an investigation of society we can make no such clear counts or valuations; and our classification, to be valid as representing divisions of the population, must be a classification of people and their conditions in relation to social habits and organisation, or to put the question more broadly, the characteristics of the class must be characteristics which in the persons classified represent real factors in the formation of society.

Under the phrase "social habits," which are real factors in the formation of society, are included: habits of nurture and care of children; industry and use of leisure; income and its use; foresight; arrangements for the settlement of children in life, and their marriage.

Under the phrase "social organisation" are included the relation to religious bodies; to the elementary and other schools, school attendance, etc.; to trade unions or benefit societies; to charitable institutions and societies, and to the Poor Law, and so on.

All these questions have relation to society and social life, to whatever grade the individual and his family may belong. They are thus a basis for the classification of society as a whole; and it is obvious classes with different amounts of income might each be tested by such a rule of "social habit and organisation," though in different classes the actual methods of nurture and care of children, industry, etc., may vary considerably (as, for instance, in education in the elementary school and the public school, etc.), according to the purpose of life which each class has in view.

And classification of the people from the point of view of social life must then be founded on "real factors in the formation of society," real, that is to say, as representing the elements in society actually at work in making it.

20. The question is whether Mr. Booth's classification represents these real factors, or whether it represents rather more or less arbitrary groupings of the people.

If we take Class A we find it consists of those at the bottom of society whose "life is the life of savages with vicissitudes of extreme and occasional success." The measure here applied is strictly that of breach of social habit; and, if this be so, we want to know how many have broken loose from social habit. This is how the number is made up. (Vol. I. p. 37.)

This class Mr. Booth "puts at 11,000 or 1½ of the population, but this is no more than a very rough estimate, as these people are beyond enumeration, and only a small proportion of them are on the School Board visitors' books. If I had been content to build up the total of the class from those of them who are parents of children at school in the same proportions as has been done with the other classes, the number indicated would not have greatly exceeded 3,000; but there is little family life among them, and the numbers in my tables are obtained by adding in an estimated number from the inmates of common lodging houses, and from the lowest streets. With these ought to be counted the homeless outcasts who, on any given night, take shelter where they can, and so may be supposed to be in part outside of any census. Those I have attempted to count consist mostly of casual labourers of low character and their families, together with those in a similar way of life, who pick up a living without labour of any kind."

In calculating the number in this class, then, practically the method of grouping on the basis of school information is set aside. On that basis the number would have been 3,000; the number actually set down is 11,000. What is the ground for this very large addition is not stated. "An estimated number has been added from the inmates of common lodging houses, from the lowest streets and from homeless outcasts." But the data for this estimate are not given.

Yet this class—an important point bearing on the question of degeneracy—is, it is stated, to a very considerable extent, hereditary. On the other hand, it is said also that it is recruited with adult men from all others, and that the number of the children in the class is portionately small—while that of young persons is "proportionately large." This analysis seems to be in itself contradictory. The class as described above may be considered a real class—uncivilised in a manner, living without the ordinary obligations of social habit. But comparative method is not applied to it. It is not possible therefore, from the data supplied, to say of what it is constituted or how far it is actually hereditary.

21. The second class is B—"Casual earnings"—"very poor." It contains 100,000 of 11·25 per cent. of the population.

In it are set 22,000 artisans, and 41,000 "casual labour."

"From whatever section (of employment) Class B is drawn, except among the sections of poor women, 19,095 in number (Table XVII.), there will be found many who, from shiftlessness, helplessness, idleness, or drink are inevitably poor."

This raises the question of the meaning of poor or "very poor"—whether they are or can be defined as a statistical class—or whether they are a social class and represent an aggregation of real conditions in relation to social habit and organisation.

23. Poor, like pauper originally, is "paucus" one of small means—a relative term.

It is clear that in the case of Class B as stated, many are shiftless, etc. The question with them is not of means, but the use of means.

The general supposition is that the people are poor not from such causes, but from not having enough—they would, as Mr. Booth says of Classes C and D "be much the better for more of everything all round." And to carry out his programme Mr. Booth should have made a "depravity" class—thus defining at least two classes of poor—poor by literal want of means, and poor by "depravity." But the poor by literal want of means—who may be called perhaps the "economic" poor are those only who, having ability to use means with a view to wealth or well-being, do not possess them.

But the material for any such division, by which "poor" should present a social class is wanting. Really the term is used by Booth only in a quite general sense—not suitable for the definition either of a social or a statistical class. Poor by depravity, by inability to use means, by weakness of mind, or of body—all very different groups are merged in one mass—so that for any scientific purpose the term "poor" loses all value as a definition. Difficult as it is to give to so vague and relative a word any precise meaning by direct count, it loses all its meaning when it is used for a large mass of the people—without regard to causes. And on Mr. Booth's method the causes cannot be ascertained and they cannot, form, as they should, the ground of classification.

24. In the next class we have "C—intermittent wages" and above it, "D—small regular earnings." Here is an economic difference which is very marked. C are "men who usually work by the job or who are in or out of work according to the season or the nature of their employment. "Many of the irregularly employed could not keep a permanent job if they had it, and who must break out from time to time."

p. 44.
p. 46.

D are, as a body, decent steady men, paying their way and bringing up their children respectably.

p. 50.

Of C and D employment-sections are formed and the two thus find themselves in the same category—under, amongst other divisions, that of "irregular" in Section 3. They the "irregular" (Section 3) "have," it is said, "a very bad character for improvidence"—"wanting in ordinary prudence;" but on the other hand Section 3 "for the most consists of hardworking struggling people, not worse morally than any other class, though thriftless and improvident."

p. 46.

Here are two classes of which one is found on the line of "intermittent wage" with either as result or as cause thriftlessness and improvidence, while the other D on the line of small regular earnings is the reverse. One asks whether the economic difference is the main factor. There is no evidence. Neither by examination of any large number of cases nor by any comparison of past and present is light thrown on the problem. But what is more, these two classes, economically so different, are merged and treated as one; and in the extension of Mr. Booth's method from the East End and Hackney to London C and D as separate classes disappear. The class thus becomes no true class at all, either by economic difference or by social habit.

25. Reference has been made to the absence of any ascertainment of causes. A word more should be said as to this, for Mr. Booth submits a statement of causes, from notes of 4,000 families, and he thus classifies them:—

	A. B.	C. D.
	Per cent.	Per cent.
Loafers	4	0
Questions of employment; casual, irregular work, etc.	55	68
Questions of habit, drink, thriftlessness	14	13
Question of circumstance; large families, illness	27	19

It is difficult to reconcile these figures with the general statements of the classes given above; nor do they furnish much information even as to causes.

Take employment. How far does this mean incapacity? Mr. Booth says, "Incapacity of two sorts is no doubt common: that which leads to low pay and that which leads especially to irregularity of employment." But this does not help us at all. How far we ask does the factor of incapacity affect the question of employment—as a cause? And there is no reply.

Here again also most diverse conditions are brought under one head. Mr. Booth does not give the data for his classification — indeed if we may judge from his entries, he has not the data. The classification fails at the critical point just when it is put to the test.

So if we ask why A, B—the outcast and residual classes—shows 14 per cent. in drink, and C with D the regular and steady class D 13, there is no evidence; and the figures suggest insufficient knowledge.

Useful as school board information may be, it hardly touches the many who send their children without demur, and only require to be "scheduled."

The Remedy.

26. Then as to the remedy. It is to place B under State discipline, as it is a residual class of those who "from mental, moral and physical reasons are incapable of better work." "The life would not be attractive; regular meals and fixed hours of work, which would not be short." This "would not encourage idleness or weaken the springs of energy. The difficulty lies solely in inducing or driving these people to accept a regulated life."

That is so indeed; and the difficulty is not met by the suggestion.

(1) It is proposed that there should be a social standard of State dependence. Membership of class B would hardly suffice, as indicating a good standard for State intervention. A fairer one would be to bring under State supervision the people on the down-grade wherever they might be, if the project were in any way feasible.

(2) A new servile and dependent residual class would be created, but out of this mass of incapacity what hope is there of any ultimate reform? Of the possibility of driving them to the regulated life, no evidence is offered.

(3) In East London and Hackney the B class is estimated at 100,000, excluding C and its bad ones. How shall such a population be brought under State discipline, and what state is strong enough to educate such an amount of adult incapacity as the class represents by direct measures? The grouping of the people in what are after all unreal classes aids not a whit in the solution of the problem. The remedy depends on the cause; and the causes are lost in the classes; and thus the class only confuses the issue.

(4) There is no evidence to show that such persons as are described as in Class B would be driven into regular employment. The evidence is the other way. Life itself is their taskmaster, and probably a more discerning one.

27. Instead of this system of investigation—it is to be hoped that at some time there may be made a real enquiry—based on closer and more complete observation, in which the enumeration will be actual and all the necessary facts verified. The conditions of families thus studied and grouped in types according to social habits might throw some real light on problems of poverty and deterioration.

Summary.

28. The process of this inquiry and its limitations are now clear. Certain data are estimated, counted, and described as brought under view at one time, but without regard to antecedent facts and conditions. Hence, while there is an immense elaboration of statistics there are no data for forming conclusions.

The data thus viewed at one time are partly founded on statements, but very largely based on inference only; and they are far from complete.

Part of the data—that collected in regard to families with children at school in part of East London and Hackney is classified in numerical form and augmented by proportional additions of unknown members of families and in other ways, and thus made applicable to about half of the population of East London and Hackney, and then in turn these results are applied by a series of proportion sums and in other ways to the other, the unknown, half of the same population.

Then, lastly, the East London and Hackney figures are applied by yet other proportion sums and estimates to the metropolis as a whole.

In all these elaborate classifications, proportions, and adjustments there is an immense liability to error—and the errors cannot be checked in any sufficient manner. To *data* of the most general description precise figures are applied. Thus, facts by no means closely analysed and not really grouped at all (*cf.* the merging of classes C and D

above) are shrouded in an appearance of precision which is very misleading. As has been evident over and over again, popular writers and speakers have forgotten the intricacies of the process of making the classes, and have used the figures only, as in themselves evidence, summary, conclusion, confession, and admission of wholesale want and distress. To this result many of the generalisations in the book lend themselves (*cf.* above: "classes of poverty sinking to want"); and to this use of the figures no protest is made; and unfortunately it is not possible to check errors and revise classifications in figures assigned to such conflicting and momentary data as are here brought together (though for the sake of the better guidance of public opinion it would indeed be desirable to do so).

The final consummation of the method is reached when by yet further proportion sums the figures of the metropolis are made applicable to the country at large, and the people discuss, "how the twelve millions on the verge of hunger may be fed."

Poverty is a relative term, a secondary or modifying cause. It may act as an obstacle or a spur according to the temperament and conditions on which it acts. It is applied here to classes more or less in want. But classes are not true classes *qua* poverty, but *qua* social habit. Unless in the lowest residual class to some extent, society is not a solid mass across which lines can be drawn horizontally as representing classes, but it is in a state of constant motion. To test social health, one should measure the upward and downward movements. Strictly, if we use the word at all, poverty, as a relative term accompanying certain social habits, would then represent ill-being, the downward movement, and wealth, or well-being, the upward movement.

To make these absolute classes many opposite and contradictory elements have to be forced into unity:

(*a*) It is taken for granted that there is an equation applicable in all classes (B to F) between (a) members of a family and (b) necessaries, *e.g.*, the man stands for 1 in the expenditure, the wife ·75, and so on.

(*b*) Every one is assumed—class by class—to be, though individual in ability and strength, subject to and acting in accordance with an average—the average which is assumed by placing quite different types in one class, *e.g.*, the careful, the drinking, and the thriftless. Thus the characteristics which are important in the making of good social habit are averaged away—indeed ignored. All that the use of money adds to the value of money is ignored and neutralised.

(*c*) In the same way all physical differences, even those of ordinary and everyday importance—age, sickness, feebleness, etc.—have to be ignored and averaged away.

Thus we have as a statistical creation a degraded society which is from the point of view of social science hardly less like nature than the "economic man" of some political economists.

"*Poverty.*"

The Method.

29. Mr. Rowntree takes the town of York as the subject of his inquiry. Mrs. Bernard Bosanquet has already criticised his method (and Mr. Charles Booth's) very effectively in a paper entitled "the Poverty Line," to which Mr. Rowntree has made some rejoinder, and in a paper in the *Contemporary Review* for January, 1904—"Physical deterioration and the poverty line." Many points dealt with in those papers may be passed over here.

Mr. Rowntree's aim is to ascertain the extent of destitution, *i.e.*, insufficiency of means to obtain necessaries and to learn how far this destitution is culpable—that is due to causes assumed to be within the control of the individual, drink, etc.

His method is this—

1. To count and estimate the number of people just as they are at a given time (as do Mr. Booth and Dr. Hunter) instead of using the comparative method.
2. To ascertain the income of the head of the family and of the children who earn and of the wife's.
3. To class families according to income, on the understanding that a man, wife, and two to four children are a "moderate" family, and that if a man has a larger family, he is placed in a lower income class and *vice versa*.
4. To fix a standard of necessary food and the cost of it and to add the latter *per individual* to the cost of rent, clothing, etc.
5. Then to divide the income class by class by the total cost of necessary living for the class, and thus ascertain how far the income suffices for that purpose.

The sum set out is this:—

$$\frac{\text{Moderate family} + \text{Cost of necessaries.}}{\text{Income.}}$$

The sufficiency of the method turns on: (*a*) the exactness of the investigation of the amount of income; (*b*) the reality of the classification of the families; (*c*) the standard fixed for necessaries and its applicability.

Amount of Income.

30. As to the first—the exactness of the investigation of income.

The income classes are—

A. under 18s. a week.
B. 18s. and under 21s.
C. 21s. and under 30s.
D. Over 30s.
E. Servants.
F. Servant keeping class.
G. In public Institutions.

The population dealt with is 75,000.

The inquiry refers to 46,754 people or 11,560 families.

The inquiry is made by house to house visitors, and the classes are settled after consultation with the clergy, etc., and as to wages, after general consultation with employers.

Everything depends on precision in regard to the income. This is what is said:— p. 14.

The visitor "found that the people with few exceptions were willing to supply the information sought. In some cases there was a disposition to give incorrect information, but experience soon enabled him to distinguish between truth and falsehood, and in doubtful cases the facts stated were checked by neighbours and others." p. 26

"The occupation of each of the workers was ascertained and sometimes also direct information regarding the wages earned. Where this information was not available the wage was *estimated*. In the case of skilled workers the wages *were assumed to be the average wage* which obtains in the district for the particular trade." These "it is believed, have been *estimated* with a large degree of accuracy." "In *all* cases, in assuming wages, allowance has been made for short time, including public holidays not paid for, also over-time, and cost of tools, etc." (The italics are mine.) This allowance is based on information from trade unions, masters, etc. p. 27.

No uniform allowance has been made for loss of wage through illness, but in the estimates of short time some allowance under this head has been made.

A note on this—is given as a "rough indication"—2d. a week in a sick club gives 7s. 6d. for six weeks, and 3s. 6d. for another six weeks of sickness. p. 27.

"Working upon these lines, the earnings of every wage earner have either been ascertained or carefully estimated."

Afterwards the word "estimate" is dropped, and the reader cannot but think he is dealing with actual earnings. On page 116 the words used are "the total earnings of every working class family were ascertained."

31. Now to make some comments:—

(*a*) The system was one of visitation without verification in the individual case, and as to the earnings of the man, the wife, and the children, this, even with the other sources of information mentioned, is quite insufficient—at least, it would be elsewhere.

Take at random a few families visited elsewhere by people of long experience—and then tested by verification:

(1) Man forty-five, dock labourer; stated earnings, 12s. to 18s.; ages and stated earnings of children; girl nineteen; boy fourteen, 12s.; total stated earnings, 24s. to 30s.; total verified earnings, average 41s.

(2) Man thirty-five; railway labourer; stated earnings 23s.; wife 5s.; in all 28s.; total verified earnings 33s.; and so on.

Obviously visitation without verification in the individual case is no sufficient means for ascertaining the truth.

(*b*) Next the special examination of seemingly "doubtful" cases is a most misleading method—the inquirer is left in a position of thinking he knows he is right, without knowing where he may be wholly wrong.

(*c*) Next, the assumption that the skilled worker earned the average wage of the district is quite insufficient in compiling accurate data, which are to be applied to families whose incomes are to be treated as purchasing necessaries in very small amounts per consumer.

(*d*) Next, if deductions are made from the wage—these should be set out in their money value—that the sum may

be before the reader, the notes quoted above are no real guide.

p. 30. (*c*) Lastly, as to the earnings of children: "A girl or lad" it is stated "will pay 5s. or 9s. weekly, while a man will pay 9s. or 14s. to the household." But this is a very large variation surely, on which to base either estimate or average, apart from a knowledge of the actual facts—a difference of 55 per cent. Yet what the child actually gives may make all the difference in the family. The family is the social, and in great measure the industrial, unit. Many cases could be quoted in support of this.

The great variation in the sums available from children in particular cases can be shown by reference to many instances. The variations are hardly such as could be dealt with by general average.

32. In regard to the statements of wages Mr. Bowley's paper in the "Proceedings of the Royal Statistical Society," vol. lxv. of 30th June, 1902, page 359 may be considered. The paper is a note on wages in York, 1899 (B.S. Rowntree). After quoting from Mr. Rowntree's book passages respecting his method and the assessment of wages, etc., Mr. Bowley writes:—

"These figures are not published in detail in the book but merged in family incomes and grouped together. Mr. Rowntree, however, has caused the statements of all adult male wage earners to be extracted from his material." On his basis the wage given has only to be multiplied by fifty-two, to give the annual earning. "The figures are estimates, and in some cases estimates only to the nearest round number. Thus, in many of the skilled trades the average weekly wages approximate to 30s. in some cases being 1s. or 2s. more, in others 1s. or 2s. less, and in such cases the wages are entered at 30s." Hence "the marked grouping is very noticeable, indicating that the gap between skilled and unskilled labour is more perceptible in York than in London, or in the country as a whole." The table divided to show shilling differences is suggestive. The total number of wage earners dealt with is 9,544, the number set down as receiving a wage of 20s. is 1,532, those that receive a wage of 19s., only twenty-seven, those who receive a wage of 21s., only thirty-one. Some other figures stand thus:—

At 23s. - - -	499	At 30s. - - -	2,398
,, 24s. - - -	810	,, 35s. - - -	260
,, 25s. - - -	394	,, 40s. - - -	420
,, 28s. - - -	471		

The intervening entries of wage have but small numbers of earners entered against them.

Thus analysed, it is clear that the wage table suggests rounding such as one finds in census work in the case of ages. This rounding clearly seems due to the method adopted by Mr. Rowntree, and it appears to be a very great defect, especially as the question at issue is the ability to utilise a small income for the purchase of very small quantities of necessaries. It is not possible logically to connect large generalisations as to wage with minute investments of the generalised wages in a large number of particular cases.

Classification of the Families.

* p. 28. 33. The second point is the sufficiency of the classification as to *families*.* It stands thus:—

A.=Under 18s. for a moderate family.
B.=18s. and under 21s. for a moderate family.
C.=21s. and under 30s. for a moderate family.
D.=over 30s. for a moderate family.

34. Some points may be noted:

The great inequality of the classes as measured by income.

Class B stands at 18s. under 21s.

Class C stands at 21s. and under 30s.

Next a moderate family=two to four children—this is an element of great variability in making up the classes.

Next the effect of this adjustment of family scale to income scale is remarkable; thus, if the family income equals 22s. in the case of a parent and four children, the family is put in C, but if of five or more, it is pushed down at least into B. The difference of the one child puts the case within the range of a class earning 18s. and under 21s., instead of in the range of a class earning 21s. and under 30s., and strictly the case might be pushed even further down and become an A case

So again with a family—income 27s., two parents and two children are in C, but if they have only one child, then in D. This is quite arbitrary.

How the question stands is indicated by the following note on Class A. Dividing the income in the class made up in accordance with the rules stated above, we have in it families receiving from under 4s. 5d. a head to 2s. 3d. per head or less:—

Thus A equals moderate family with income *under* 18s. a week.

A moderate family equals two parents and two to four children. (2+2; 2+3; 2+4.)

Eighteen shillings or less is then divisible in a moderate family.

Therefore A equals any sum per head *under* the following figures:—

(1) A equals

18s. (or less)—

s.
2+2=4·5
or 2+3=3·6 } per head.
or 2+4=3·0

(2) If there is one parent and two children, or two parents and one child, A would equal any sum *under* the following figures:—

18s. (or less)—
——————— = 6s. per head.
1+2
or 2+1

Unless these be pushed up into the 18s. to 21s. class—Class B.

(3) But, on the other hand, all the immoderate families in A must remain in A.

So A equals not only the above in (1) but often immoderate A families:—

18s. (or less).
———————
2+2
or 2+3
or 2+4

But the following *as well* 2+5 } as divisers of the
2+6 } 18s. or less.

(4) And into A are also pushed all the immoderate families from B—earning above 18s. and under 21s., and including families falling to it from B to A. Taking shilling divisions the range covers the following cases:—

19s.
———————
2 + 5 or 6, &c., children;
Which =2·7s. or 2·3s., &c., per head.

20s.
———————
2 + 5 or 6, &c., children;
Which =2·8s. or 2·5s., &c.;

21s.
———————
2 + 5 or 6, &c., children;
Which =3s. or 2·6s., &c.

Therefore A, including all the cases in (1) (3) and (4) above, covers any income from 4·5s. per head downwards.

This is obviously a very large range—a kind of sliding scale of income checked by family in which there is no underlying principle at all. For the question must be asked: Are these classes real classes? The answer must be in the negative. The classes are but groups more or less indefinitely formed in connection with differences of income and family. They are not based upon any real characteristics; nor would they be necessary for Mr. Rowntree's purpose, if he rested his case upon observation of particular instances and verified material only.

35. Another test might be applied on Mr. Rowntree's lines of averaging. I have taken fourteen families at hazard—not families in Mr. Rowntree's book, but families of persons who have applied for relief to a Charity Organisation Committee.

The average wage of the fourteen families as returned at 23·14s. In five of the fourteen families there is definite upward movement. These omitted, there remain nine families with an average wage of 9s. This *average* wage would bring all such families into Class A.

But as the following notes show, the relation between average wage and the condition of the families in the class is quite unreal. The cases are as follows:—

(*a*) Pension case, 12s. 6d., man and wife.
(*b*) Infirmary case.
(*c*) Heavy drinker.
(*d*) Discharged summarily: falsification of accounts.

(*e*) Bad eyes; large relief; begging; bad temper.

(*f*) Old, children well able to support, second marriage; family quarrel.

(*g*) Weakly; casual labourer; dependent largely on wife and children.

(*h*) Old, son "disappeared" but when found well able to help, rent 10s.

(*i*) Drink.

It will be noticed in how few of these cases the question of difficulty or "poverty" is one of income as against expenditure. By reference to Class A in Mr. Rowntree's sample of fifty-one entries on page 33 it will appear that in those cases too the true issue is not income as against expenditure but social habit. Thus in his fifty-one cases three are cadger cases, two are mentally deficient, in seven there is drink, five are entered as large families but not further investigated; and twenty-two are set down as poor law relief but not further investigated.

In the notes of these sample cases there is no statement of wages or of finance and no statement of ages. It seems doubtful indeed whether such evidence was obtained. It it were, it would tend greatly to modify Mr. Rowntree's own conclusions.

Standard fixed for Necessaries.

36. We turn next to the standard fixed for necessaries and its applicability. It is evident that the investigation, so far as it has yet been under consideration, does not afford a basis for precise numerical results. Yet it is upon this basis that the utility of the investigation depends. A food test is next applied. This is done in two ways.

The Local Government Board issued three years ago a dietary for people in the workhouses and infirmaries. There were three conditions mentioned in their circular letter—

(1) The inmates were examined by a medical officer.

(2) There were "plain" and "infirm" diets; and

(3) There were children's diets.

"Owing to the great difference of individual appetites in the case of children, it should be remembered that in their dietaries the prescribed rations represent the average allowance for a group of children and not the amount for a particular child."

(4) They note that the bread allowance is excessive; and;

(5) They note that there is a tendency to waste food which should be checked.

From these "plain" dietaries Mr. Rowntree has made a dietary and priced it according to the contract prices of the York Board of Guardians.

Next he has divided his families as grouped on the above plans between "Poverty lines."

Primary Poverty population, 7,230; families, 1,463.

Secondary Poverty (or self-caused), 13,072.

The "Primary Poverty" he has divided into six sections according to immediate cause.

Households affected.	Immediate cause.
403	Death of chief wage earner, 15·63.
146	Illness or old age of chief wage earner, 5·11.
38	Chief wage earner out of work, 2.31.
51	Irregularity of work, 2·83.
187	Large family, 22·16.
640	Regular work and low wages, 51·96.

The whole makes 9 per cent. of the population.

Taking these sections Mr. Rowntree makes budgets charging the cost of food as above, showing a deficiency for the section and then working it out per family. Each adult is taken as requiring an equal amount according to the standard of an average man.

37. To pass to comment. The result of all this cannot be otherwise than unreal, in spite of its being set down in seemingly precise statistics. Thus the consumption of the food depends not on an average of the consumption of adults but on the digestive powers of those who partake of it. Thus the old would take less, the young more; but no ages are given. Weight and size would tell; but the standard figures apply only to a man of eleven stone. The waste which is made in the workhouse need not be made in the home; but here it is not—on this method, cannot be, taken into account. Optional variations in diet, which are petty in themselves, but stand for much in individual cases, are also necessarily ignored.

The method might be of use if applied to individuals who had been medically examined, but here it is applied to the average of a class whose physical condition has not been examined, in conjunction with a statement of income which is after all only an estimate.

Then as to the standard itself. Mr. Rowntree requires in all classes 3,500 calories per diem, food being analysed into calories, *i.e.*, into degrees of heat productivity. The value of the food as a source of energy is measured by the amount of heat it produces on complete combustion. The insufficiency of this method has been recognised and it cannot be taken as finally settled—certainly it cannot be accepted without demur as here applied.

The experiments that have been made are mostly on inmates of Institutions under known conditions and living healthy lives. From these experiments it has been concluded that a healthy man of eleven stone weight and doing a moderate amount of muscular work must have from 3,000 to 3,500 calories if his needs are to be fully covered. "Standard dietaries," it is urged, "are only of limited use . . . . only drawn up to meet the needs of *typical* individuals living under known conditions and doing a moderate amount of muscular work." Further, the calories needed vary according to occupation: so a clerk at his desk is stated to require only 2,500 calories, a man at moderate work, such as house-painting, 2,631, a navvy at hard labour, a highly paid man, 3,513. A point like this makes the greatest difference in Mr. Rowntree's divisors; but for it he makes no allowance.

Many other points may be mentioned, but one will suffice. In the case of women Dr. Dunlop states that "their food requirements have received comparatively little attention," yet these elaborate calculations, with some modifications, are applied to them as they are to men. For all working male ordinary persons, except those of more than usual size, twelve stone in their clothes, and doing ordinary work, Dr. Dunlop furnishes dietaries amply sufficient which would cost say, 2d., a meal.

It may be concluded that Mr. Rowntree's method is extremely speculative, that the information on which it is based is far from sufficient, and that neither method nor information provide the material that would be required for drawing trustworthy "poverty lines," if, indeed, such a task could be accomplished at all with scientific scrutiny in reference to a large population. At least any inquiry should be restricted to observed data, to actual counts, and to classifications founded on social habit.

A Contrast.

38. One contrast may be added.

Mr. Charles Booth applying his method to London concludes that "after deducting loafers and criminals, 29·8 per cent. of the people are in perpetual poverty, owing to the family earnings being less than 21s. a week."

Mr. Rowntree, copying Mr. Booth's method, concludes that 9·91 per cent. of the population of York, which, he holds, is generally representative of urban population, have earnings insufficient for the maintenance of merely physical health.

Mr. Booth includes in his 29·8 per cent. those (*see* above) with 18s. to 21s. a week who are "neither ill-nourished nor ill-clad according to any standard that can reasonably be used." On the other hand, he "does not enter into questions of economical or wasteful expenditure." Accordingly Mr. Booth counts as in the same perpetual poverty alike the wasters and the well-nourished and well-clad.

Mr. Rowntree calculates, as he believes, those whose poverty is due to their own fault at 18·51, and those who have insufficient earnings etc., at 9·91, in all 28·42, and fortifies his conclusion by the similarity of his figures to Mr. Booth's.

It is plain that there is no real similarity. Mr. Charles Booth ignores economical or wasteful expenditure, and includes the well-clad and well-nourished and makes a percentage of 28·8.

Mr. Rowntree recognises wasteful expenditure or self-caused poverty, and finds none in his class provided with sufficient means to command the necessaries of life—none well-clad and well-nourished—and makes a percentage of 28·42.

How these percentages have been arrived at has been shown; and it is plain that they cannot be said to be consistent one with another, nor either of them based on sufficient information.

C. S. Loch.

APPENDIX IV.

INSANITARY AND OVERCROWDED HOUSE PROPERTY.

This Memorandum is intended to be an answer to the following questions, and is confined within the scope covered by those questions; it is not intended to deal with Ireland, nor in any detail with Scotland.

I. What is the state of the law on the liability of owners and occupiers of house property in respect of insanitary or overcrowded conditions?

II. What powers has the local authority to bring home this responsibility to the persons implicated, and how can it be made to exercise those powers?

III. What checks exist upon bad building in the case of new tenements, and how are they enforced?

Introductory.

The general law with regard to housing in England and Scotland is contained in two sets of Acts, viz., the Public Health Acts and the Housing Acts. Of these the following contain provisions bearing upon the points discussed in this Memorandum:—

1. Public Health Act, 1875—38 & 39 Vict., c. 55.
2. Public Health Acts (Amendment) Act, 1890—53 & 54 Vict., c. 59.
3. Public Health (London) Act, 1891—54 & 55 Vict., c. 76.
4. Public Health (Scotland) Act, 1897—60 & 61 Vict., c. 38.
5. Housing of the Working Classes Act, 1885—48 & 49 Vict., c. 72 (see note under II., 3).
6. Housing of the Working Classes Act, 1890—53 & 54 Vict., c. 70.
7. Housing of the Working Classes Act, 1903—3 Edw. VII., c. 39.

Of the above (1) and (2) apply to England outside London, (3) to London, and (4) to Scotland, (5) and (6) to England and Scotland, and (7) to England alone. There are various other minor Amendment Acts, etc., which need not be referred to here.

A most useful book on the subject of housing, both from a practical and legal point of view, is *The Housing Handbook*,* by W. Thompson, published recently by the National Housing Reform Council.

I.

I.—*Liabilities of owners and occupiers under the Public Health Acts.*

The liabilities of owners and occupiers under the above Acts are many and various, and subject to different conditions. An attempt is here made to classify them under the following heads:—

A. Where the owner or occupier is expressly obliged or forbidden to perform or permit any act or thing.

B. Where no legal liability rests with the owner or occupier until he receives notice from the local authority. On default of performance after notice, penalty attached.

C. Same as B., but no penalty attached (except, in most cases, liability to pay the local authority's expenses for performing the work).

(The references given are to the Public Health Act, 1875, except where otherwise stated. There are corresponding sections in nearly every case in the London and Scotland † Acts—for a tabular statement of these *see Thompson*, App., p. 72.)

A.—It is unlawful to build or rebuild any house in an urban district without covered and properly constructed drains. £50 penalty for contravention of this section. S. 25.

It is unlawful in an urban district, without the consent of the local authority, to build over a sewer or under a carriage-way. Forfeit of £5 to the local authority, and 40s. for every day on which the offence continues after notice given. S. 26.

It is unlawful to build or rebuild any house without a sufficient water-closet, earth-closet or privy, and an ashpit furnished with proper doors and coverings. £20 penalty for contravention of this enactment. S. 35.

It is unlawful to erect any new building on ground filled up with offensive matter. Penalty £5 and 40s. a day. 53–4 Vict. c. 59, S. 25.

It is unlawful to remove, or obstruct the local authority in removing, any matters which the local authority are authorised by the section to remove, *i.e.*, house refuse, etc. £5 penalty for each offence. S. 42.

It is unlawful in an urban district—

(*a*) To keep pigs in any dwelling-house or so as to be a nuisance.

(*b*) To suffer waste or stagnant water to remain in any dwelling-house for twenty-four hours after notice by the local authority.

(*c*) To allow the contents of any privy, etc., to overflow or soak out.

40s. penalty for each offence, and 5s. a day during continuance. S. 47.

It is unlawful to let or occupy cellar-dwellings (including any vault or underground room) built or rebuilt after the passing of the Act, or not lawfully let or occupied at the date of the Act.

It is unlawful to let or occupy any cellar-dwellings whatever, except under certain conditions

Twenty shillings penalty for each offence for every day during which the offence continues after notice from local authority. After two convictions within three months, Court of Summary Jurisdiction may order premises to be closed. Ss. 71–75.

The keeper of a common lodging-house shall—

(*a*) Register his lodging-house. £5 penalty and 40s. a day.

(*b*) Lime-wash the walls. 40s. penalty.

(*c*) Give notice of fever or infectious disease to the medical officer and relieving officer. £5 penalty and 40s. a day.

After three convictions, Court may disqualify for keeping a common lodging-house.

Ss. 77, 82, 84, 86–88, and see 53–4 Vict. c. 59, S. 32.

B.—Obligation on owner or occupier, after notice from local authority, to repair drains, privies, etc.

Ten shillings penalty for every day during which he makes default. S. 41, 53–4 Vict. c. 59, S.19.

Obligation on occupier to obey bye-laws, if made, imposing on occupier duty of cleansing of footways and pavements, removal of house refuse, etc., and, when the local authority themselves undertake or contract for the work of removal, duties in connection with such removal so as to facilitate the work of collection, and (in urban district) prevention of nuisances, etc. Penalty may be attached by bye-laws of £5 and 40s. for each day after notice of offence. Ss. 44, 183, 53–4 Vict. c. 59, Ss. 26, 29.

Obligation on owner or occupier, after notice from local authority, to whitewash and purify any house. Ten shillings penalty for every day during which he makes default. S. 46.

Obligation, in urban districts, to remove manure, etc., from mews after public notice by urban authority for periodical removal. Penalty 20s. for each day while accumulation continues. S. 50.

Obligation on keeper of common lodging-house, if required by local authority, to affix a notice to such house with the words "Registered Common Lodging-House." £5 penalty and 10s. a day. S. 79.

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* *Note.*—This book was published before the passing of the Housing Act, 1903.

† *Note.*—The Scotch Act, later in date than the English Act, contains in some respects fuller and stronger provisions.

Obligation on owner or keeper of common lodging-house, after notice by local authority, to obtain proper water supply. If notice not complied with, local authority may remove house from the Register during default S. 81.

Obligation on keeper of common lodging-house, if required by local authority, to report as to vagrants lodging there. £5 penalty and 40s. a day. Ss. 83, 86.

Obligation on keeper of common lodging-house to admit any officer of the local authority to inspect the premises, when required. £5 penalty. S. 85.

Obligation on any person by whose default a "Nuisance" has arisen, or on the owner or occupier, after notice by the local authority to abate such nuisance. On non-compliance with notice, liability to appear before Court of Summary Jurisdiction on complaint by local authority. £5 penalty and order to abate or prohibiting recurrence or for both abatement and prohibition. If nuisance renders a house unfit for human habitation, an order may be made prohibiting its use till habitable. On disobedience to order for abatement, 10s., or for prohibition, 20s. a day penalty. After two convictions for overcrowding within three months an order for closing the house may be made. Appeal to quarter sessions, and other regulations. Ss. 91, 94-99, 103-109, 269.

Note.—In the above sections "nuisance" is defined to mean a number of things, including "any premises in such a state as to be a nuisance or injurious to health" and "any house or part of a house so overcrowded as to be dangerous or injurious to the health of the inmates, whether or not members of the same family."

Obligations to obey building, etc. bye-laws—penalty may be attached by bye-laws of £5 and 40s. for each day after notice of offence.

Ss. 157-159, 183.
53-4 Vict. c. 59, s. 23.

Obligation to obey bye-laws, fixing number of occupiers etc., drainage, etc., and cleansing, etc. of houses let in lodgings other than common lodging houses. Penalty may be attached by bye-laws of £5 and 40s. for each day after notice of offence.

Ss. 90, 183, 48-9, Vict. c. 72, s. 8.

Prohibition to any person to use or suffer the use of rooms over privies, etc. (except water and earth closets), as dwelling or sleeping rooms. Penalty, after seven days notice, of £40 or 10s. a day. 53-4 Vict. c. 59, s. 24.

Obligation on keeper of common lodging house to obey bye-laws for fixing, etc., the number of lodgers, for the separation of the sexes, for promoting cleanliness and ventilation, for giving notices and taking precautions in the case of infectious diseases, and for well ordering of common lodging house. Penalty may be attached by byelaws of £5 and 40s. for each day after notice of offence. Ss. 80, 183.

C.—Obligation on owner or occupier, after notice from local authority, to drain undrained house. S. 23

Obligation on owner or occupier, after notice from local authority, to provide proper privy accommodation. S. 36.

Obligation, in urban districts, on person to whom it belongs, or occupier of premises, to remove accumulation of manure, etc., on notice from inspector of nuisances. S. 49.

Obligation on owner to provide sufficient water supply, after notice from local authority. S. 62.

2. *Liabilities of owners and occupiers under the Housing Acts.*

The Housing Acts, do not, for the most part, affect the owner or occupier directly. They lay upon the local authority certain duties and responsibilities, and give them certain powers of dealing with house property. The position of the owner and occupier is of course indirectly affected, but it seems better to deal with the Housing Acts under the next section of this Memorandum.

There are, however, two points which may be mentioned here—

(*a*) If in any way an owner or occupier obstructs the carrying out of the provisions of Part II. of the Act of 1890, with respect to any house, the court may order the owner or occupier to permit the provisions to be carried out. On failure to comply with such order, penalty of £20 a day as long as the failure continues. 53-4 Vict. c. 70 s. 51.

(*b*) In any contract for letting for habitation by persons of the working classes a house or part of a house, there shall be implied a condition that the house is in all respects reasonably fit for human habitation. The above only applies to contracts made after August 14th, 1885.

The above is extended by the Act of 1903, so as to apply, as regards any contract made after the passing of the later Act, notwithstanding any agreement to the contrary. 53-4 Vict. c. 70, S. 75.
3 Edw. 7. c. 39, S. 12.

II.

1. *Powers * of Local Authorities † under the Public Health Acts.*

(The references given are to the Public Health Act, 1875, except where otherwise stated. There are in nearly every case corresponding sections in the London and Scotland Acts.‡ For a tabular statement of these, see *Thompson*, App. p. 72.)

Obligation to give notice to owner or occupier to drain undrained houses. If notice to drain not complied with, local authority may do the work and recover expenses. S. 23.

Power to urban authority to give notice as to buildings built over sewers, or cellars, etc., constructed under carriage ways. Power to pull down such buildings, etc. and to recover expenses. S. 26.

Obligation, on report of surveyor or inspector of nuisances, to give notice to owner or occupier to provide a sufficient "water-closet, earth-closet, or privy, and an ashpit furnished with proper doors and coverings" in any house. If notice to make such provision not complied with by owner, local authority may do the work and recover expenses. S. 36.

Obligation to provide that all drains, etc., within district are constructed and kept so as not to be a nuisance or injurious to health. S. 40.

Power to examine drains, privies, etc., on complaint of nuisance by any person, and obligation (if found insanitary), to order alterations. If order not complied with, local authority may do the work and recover expenses. S. 41.
53-4 Vict. c. 59, s. 19.

Obligation to provide for cleansing of streets, footways, etc., removal of house refuse, etc., and cleansing of privies, etc. Local authority may themselves undertake, or contract for, these matters, and must do so if required by the Local Government Board. If they themselves undertake or contract for removal of house refuse or cleansing of privies, etc., they are liable to a penalty of 5s. a day, payable to occupier, for neglect to carry out the work. Where they do not themselves undertake or contract for cleansing footways, etc., removing refuse, or cleansing privies, etc., they may make bye-laws imposing the duty on the occupier; this does not extend to the cleansing of streets. Urban authority may also make bye-laws for the prevention of nuisances arising from snow, filth, ashes, etc., and for the prevention of keeping animals so as to be injurious to health. Ss. 42-4.

Obligation, on certificate of medical officer or any two doctors, to give notice to owner or occupier to whitewash and purify insanitary houses. If notice not complied with, local authority may do the work and recover expenses. S. 46.

Power to take proceedings for cleansing offensive ditches. S. 48.

Obligation (in urban districts) on inspector of nuisances to give notice for removal of manure, etc. If notice not complied with urban authority may sell manure and recover balance of expenses from owner of manure or occupier. S. 49.

Power to give notice for periodical removal of manure from mews, &c., in urban districts. S. 50.

Power to give notice as to stagnant water in a house. Obligation to abate certain nuisances § ; and recover expenses from occupier. S. 47.

* In this part of the Memorandum a distinction is drawn between a mere "power" given to the local authority and a power coupled with a duty, *i.e.*, an obligation; between "may" and "shall."

† Rural District Councils can obtain many powers of an Urban District Council under the Public Health Acts by applying to Local Government Board to be invested with the particular urban power required.

‡ See note on preceding page.

§ See preceding page.

Obligation, on report of surveyor, to give notice to owner requiring him to obtain an adequate water supply; if notice not complied with, local authority may do the work and recover expenses. S. 62.

Power to give notice to persons illegally letting or occupying cellar dwellings. Power to close cellar-dwellings on direction by Court of Summary Jurisdiction. Ss. 73, 75.

Obligation to keep register of common lodging-houses, to inspect and approve by an officer, and to make bye-laws for the regulation thereof. Power to require water-supply and to order reports, etc. Ss. 76–89.

Power to make bye-laws for the regulation of houses let in lodgings (other than "common lodging-houses.") S. 90.
48–9 Vict. c. 72. Ss., 8, 10.

Obligation to inspect for nuisances,* and to enforce provisions of Act in order to abate the same.

Obligation to give notice to owner or occupier to abate on receipt of information. On non-compliance, obligation to make complaint to justice. Ss. 91–95.

Power of entry where order for abatement of nuisance has been made, and to abate the nuisance and recover expenses. S. 98.

Power of entry into any premises for examination as to existence of nuisance, etc., etc. S. 102.

If local authority make default, Local Government Board may authorise police officer to institute proceedings. S. 106.

Power to apply in certain cases for closing order against overcrowded house. S. 109.

Power to urban authority, and in most of the following cases to rural authority, if invested with urban powers or to a limited extent where Part II. of Public Health Acts Amendment Act, 1890 is adopted, to make bye-laws with respect to the level width and construction of new streets, and provisions for the sewerage of new streets, the construction of foundations, roofs, walls, and chimneys of new buildings, open space about buildings, the ventilation, drainage, and closing of buildings, water closets, earth closets, privies, ashpits, and cesspools in connection with buildings, the supply of water for closets, the structure of floors, hearths, and staircases, and the height of rooms, the paving of yards, etc., and the provision of means of access for removal of refuse.

Notice to be given of laying out streets or erection of buildings: power of inspection.

Power to enforce observation of such bye-laws by pulling down buildings wrongly constructed, etc., and to recover expenses. Ss. 157–159.
53–4 Vict. c. 59. s. 23.

Power to give notice to persons illegally occupying rooms over privies. 53–4 Vict. c. 59. s. 24.

Power to urban authority to cause to be swept and cleaned common courts and passages, and to recover expenses. 53–4 Vict. c. 59. s. 27.

All offences and penalties, etc., are to be prosecuted and recovered in manner provided by the Summary Jurisdiction Acts. S. 251.

2. *Power to enforce carrying out of duties of Local Authority under the Public Health Acts.*

Obligation for Local Government Board, on receiving complaint that a local authority has made default in providing sewers or water supply, or in enforcing any provisions of the Act which it is their duty to enforce, to make an order limiting the time for the performance of their duty. If duty not performed by the time limited, power to enforce order by Mandamus, or in the alternative to appoint some one to carry out the duty, and recover expenses from the local authority. S. 299.

* For definition, see preceding page.

3 *Powers of Local Authorities under the Housing Acts.**

The main Housing Act is the Act of 1890. This is divided into three parts:—

Part I. provides for the clearing of unhealthy areas, and making improvement schemes; this part applies to London, boroughs, and urban districts.

Part II. provides for the closing or demolition of individual insanitary houses, and the reconstruction of small unhealthy areas; this part applies to London, boroughs, urban districts, and rural districts.

Part III. provides for building new houses for the working classes. This part is adoptive.

The whole Act applies, with modifications, to Scotland; but the Act of 1903 does not apply to Scotland.

Part III. does not affect owners or occupiers of insanitary dwellings, and is therefore outside the scope of this Memorandum. The references hereunder given are to the Act of 1890, except when stated to be to the Act of 1903.

A. *As to the Clearing of unhealthy areas.*

On an official representation, local authority shall proceed to make an improvement scheme. S.4.

Note.—This official representation means representation by a medical officer of health. Any twelve ratepayers, or two justices, may complain to the medical officer, and he is bound to make a representation.

Any twelve ratepayers, on default of medical officer, may appeal to the confirming authority (*see below*, S. 8.) S.S. 5, 16; 3 Edw. 7. c. 39. S.4. (2).

Notice to be served on owners, lessees, and occupiers of lands proposed to be taken compulsorily.
S. 7.; 3 Edw. 7. c. 39. s. 5. (1).

All improvement schemes of the local authority to be confirmed by a Secretary of State† (Home Office) in London, and by the Local Government Board outside London. S.8.

The Act goes on to deal with procedure on making an improvement scheme, rehousing, etc.

B. *As to the closing etc., of insanitary houses, and the clearing of small unhealthy areas.*

Obligation on the medical officer to represent to the local authority any dwelling house unfit for habitation. Any four householders, and in rural parishes, a parish council, may complain to the medical officer, who is then bound to inspect and report. Such householders, on default of action by local authority, may appeal to the Local Government Board.
S.s. 30, 31; 56 and 57. Vict. c. 73, s. 6 (2).

Obligation on local authority to inspect their district, and, if necessary, to take proceedings under the Public Health Acts, for closing houses unfit for human habitation. By the Act of 1903, a closing order may be obtained, where a house is not capable of being made fit for human habitation, against an owner or occupier without previously serving notice on him to abate the nuisance.
S. 32; 3 Edw. 7. c. 39. s. 8.

After closing order, there may be a demolition order; if owner fails to execute order, local authority may do the work. S.s. 33, 34.

In the case of "obstructive" (i.e. preventing ventilation, etc.) buildings, on representation by medical officer or any four householders, local authority may give notice to owner; after hearing his objections, may order demolition of building. May purchase the premises and pull

**Note.*—The Housing of the Working Classes Act, 1885, is almost entirely repealed, but the following section (S.7) remains and is most noteworthy as a solemn invitation to local authorities to perform their duty:—

"It shall be the duty of every local authority entrusted with the execution of the laws relating to public health and local government to put in force from time to time as occasion may arise the powers with which they are invested so as to secure the proper sanitary condition of all premises within the area under the control of such authority."

† But the powers of the Secretary of State may be assigned to the Local Government Board by Order in Council. 3. Edw. 7. c. 39. s. 2 (1).

down the building themselves, or allow owner to retain premises under conditions. S. 38.

Procedure as to improvement schemes* for small areas. Ss. 39. . . . . .

4. *As to the carrying out of duties of Local Authorities under the Housing Acts, and powers to enforce such carrying out.*

As regards Part I. of the Act of 1890, the Local Authority are bound to act:—

(*a*) On the representation of the medical officer †. S.4.

(*b*) On order by the confirming authority.

Such order may be enforced by mandamus— S. 10; 3 Ewd. 7 c. 39, s.4 (1).

‡As regards Part II. of the Act of 1890, the Local Authority are bound to act:—

(*a*) On the representation of the medical officer—† S.30.

(*b*) As regards urban authorities outside London, on Order by the Local Government Board which is made binding on the local authority. S.31.

Note.—There is no provision for enforcing such Order, but as the Order is made binding on the local authority it would appear to be enforceable by mandamus.

(*c*) On information given in the course of inspection. S.32.

(*d*) As regards "obstructive" buildings, on representation of medical officer, or of four householders. S38.

(*e*) If County Council, on default of action by Rural District Council or by Borough Council in London; no supervision, however, over boroughs elsewhere, and urban districts. S.45.

* In London outside the city in improvement schemes under Part II., the borough councils are the local authority; under Part I., the county council.

† The renewals of the appointment of medical officers of health who have not permanent appointments are by the Public Health Acts vested in the local authority, and the Local Government Board have no direct power of interference, though where a moiety of the salary is repayable out of the local taxation account, the approval of the Local Government Board to a new appointment is required. Where the medical officer of health is appointed permanently under the Local Government Board's approval he cannot be removed without the consent of the Board.

‡ This does not apply to the clearing of small unhealthy areas; there does not appear to be any obligation on the local authority in this respect, unless they are themselves of opinion that action should be taken.

III.

The chief checks upon building in the case of new tenements are imposed in London by the London Building Act, 1894 (57—8 Vict. c. ccxiii—local), as amended by the Amendment Act, 1898 (61—2 Vict. c. cxxxvii.); elsewhere, by bye-laws adopted by the local authorities under the provisions of the Public Health Acts, except as regards a few towns which have Building Acts of their own.

A.—The London Building Act, 1894, is a long statute divided into sixteen parts, of which the following may be noted as referring more especially to checks on bad building.

Part VI.—Construction of buildings.
Part XIII.—Superintending architects and district surveyors.
Part XIV.—Byelaws.
Part XV.—Legal proceedings.

Under Part VI. may be found, *inter alia*, the following provisions.

As to thickness of walls—S.53 (and Schedule I.)
Fire-resisting materials for stairs and passages in tenements S.68.
Ventilation of staircases. S.69.
Height of habitable rooms. S.70. (1) (a) (b).
Windows. S. 70 (1) (e).

Part XIII. provides for the appointment, etc., of superintending architects and district surveyors. On neglect by owner of notice given by a surveyor, the County Council may take proceedings. S.153.

Under Part XV. it is provided that the Summary Jurisdiction Acts shall apply for the purpose of legal proceedings under the Act. S. 166.

A tribunal of appeal is constituted, consisting of three members, one appointed by a Secretary of State, one by the Royal Institute of British Architects, and one by the Surveyors' Institute. S. 175.

A variety of penalties for different offences under the Act are given by S. 200.

B.—Building byelaws under S. 157 of the Public Health Act, 1875, have already been mentioned.* These may be made by any borough or urban district council, and the power has been extended (slightly modified) to Rural District Councils by the Public Health Act, 1890. When Part III. of the Act is adopted, a Rural District Council can be invested by the Local Government Board with the full powers of an Urban District Council to make building bye-laws. One of the first duties of a local authority should be, and generally is, to make such bye-laws which have to be approved by the Local Government Board; and the usual practice is to adopt bye-laws based on the "Model Bye-laws" which are issued by that Board. For a specimen of these see *Thompson*, *pp.* 85-92.

* See preceding pages.

APPENDIX V.

MEMORANDUM ON EMPLOYMENT OF MOTHERS IN FACTORIES AND WORKSHOPS.

By Miss A. M. Anderson, H.M. Principal Lady Inspector of Factories.

1. The main points for consideration are :—

I. The existing law, its means of administration, and its effects.

II. The extent and its effects in particular localities and trades, or generally, of employment of mothers of infants in : (a) Factories and Workshops under regulation ; (*b*) unregulated occupations of a kind comparable or likely to be equally injurious.

III. The circumstances and causes of employment of child-bearing women in occupations separate from their homes and the forces to be reckoned with if the existing law were to be strengthened or extended.

IV. The existing means and agencies, other than direct prohibition of employment, for enabling and fitting mothers to devote themselves both before and after confinement to the necessary care of the infant life.

V. Opinions quoted *re* amendment of the law.

I.—The Existing Law and its Administration.

2. So far as the Factory Acts (which have hitherto aimed primarily at safeguarding the life and health of the worker herself or himself under a contract of employment with an occupier of a factory and workshop) are concerned, the existing law (1 Edw. vii., C. 22., S. 61) is, as it has been since the repealed Act of 1891 (Section 17) came into force, as follows :—That an occupier of a factory or workshop (or laundry since 1895) shall not knowingly allow a woman to be employed in his factory or workshop within four weeks after she has given birth to a child.

3. Thus no legal offence has arisen unless the occupier or his agent has, with knowledge of the fact and date of the birth, employed or re-employed the mother of the child. No responsibility has been laid on the father or mother in this matter by the Factory Act, and no means are prescribed to aid the employer of the mother in finding out the fact of the birth and its date, or ascertaining the physical fitness of the mother to resume work. The question of the physical fitness of the infant to be left by the mother has, of course, not entered into consideration. There are naturally many cases where knowledge of the fact and date of birth would be out of reach of cognisance by the occupier ; for instance, where the mother herself changes her place of employment, and being under no legal obligation to state to the employer the date, or even the fact of the child's birth, commences a new contract of employment.

4. No case was taken under Section 17 of 1891 until six years after it had become law. In 1897 proceedings for a contravention were first instituted by one of the lady Inspectors in a Yorkshire town. On this case I reported to the Chief Inspector, Annual Report, 1897, page 96, as follows :—

> "Hardly any infringement of the Factory Acts is more difficult to discover or proceed against than the employment of a woman within four weeks of her confinement, chiefly owing to the burden of proof resting with the inspector as to the employer's knowledge of the facts. Although we have good reason to believe that such employment occurs frequently in certain districts, only one clear case, namely, this one, has yet occurred within our knowledge as suitable for proceedings, and in this case it was owing to the fact that the woman was sent for by the foreman who was pressed for workers, on the ninth day after her confinement, although he had been informed of the reason for her absence on the day she left the mill. This unfortunate woman, although she made some attempt to screen her employers when called as witness by Miss Squire, was nevertheless dismissed from her employment after the result of the case (conviction and small penalty) was known. She obtained employment from one of the magistrates who heard her case soon afterwards, and this removed her personal difficulties* ; it would do little or nothing however, to counteract the effect on the workers' minds of the conduct of the employer, who, by dismissing her, showed his contempt for the law and the kind of course he was likely to pursue with any worker who admitted facts as to infringements of the law to one of H. M. Inspectors."

Miss Squire herself reported at the same time as follows :—

> "Section 17, 1891, although of so great importance to the community, no less than to the individual, must remain for the most part a dead letter, owing to the difficulty of proving the employer's knowledge of all the circumstances, as well as for other obvious reasons. It is probable that much greater control over the evil with which this section is intended to cope could be exercised, and also that both the appearance and the reality of hardship entailed by the present regulation upon mothers dependent upon their earnings would vanish if the production of a medical certificate of fitness for employment in the particular factory to which it referred were made the condition of employment or re-employment after confinement."

In the case in question the mother of the infant had absolutely no choice but to take such work as offered, when and where she could obtain it, as she was unmarried and had no means of support.

5. Other cases have since them come before me for consideration, but until the present time in only two (both married mothers), after a considerable interval of time (in 1902 and 1903), has it been possible to institute proceedings for breach of the law. In four out of seven cases of employment in a factory within four weeks of childbirth, which have been reported to me during the present month, the legal cases fell to the ground because either the mother sought work in a fresh mill without mention of her infant, or having left her work some time *before* her confinement she returned after such an interval of time that the occupier was under the belief that the section had been duly observed. In the majority of these cases outside the section the mother is unmarried, or deserted and destitute. Three cases are about to be heard, two in Scotland and one in England, and the decision of the courts will be shortly accessible to the Committee.†

6. During the seven years that I have been directing the work of the lady inspectors, complaints have been received repeatedly of cases believed to be contraventions of the section as well as of general injury to the health of the mothers and infants through early, though not illegal, return to work. All have been thoroughly investigated, with the result, so far as prosecution is con-

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* The industrial Law Indemnity Fund, organised by Mrs. H. J. Tennant, now affords support and assistance to find fresh employment in any case where a woman or girl is dismissed for giving true evidence on a contravention of the Factory or Truck Acts.

† I have just received the report on the decision of the magistrates in one case heard in Preston yesterday. There it was proved that the mother returned to work in the same mill within four weeks (reason, poverty, husband out of work), that the agent of the occupier, the foreman knew the reason for the woman's absence and that he sanctioned her return, omitting to ask her the age of the infant. The magistrates decided that the occupier did not "knowingly allow" the woman to be re-employed, although they blamed the foreman for not making the inquiry which would have elicited the fact of the infant's age.

cerned, already stated. On the other wider question, the evidence of doctors, nurses etc., has always been conflicting.

7. There can be no question that, while the prohibition is well known in factory districts, and absence for one month fully observed in the majority of cases, especially where pressure of circumstances does not lead the mother to seek early re-employment and wages, there are yet many cases where the spirit if not the letter of the present law is broken. The following are cases found in one town in a single week's brief enquiry :—

Name.	Age.	Condition	Employment.	Date of Child's Birth.	Date of Return to Work.	Reason for Return.	DETAILS.
A.B.	24	Unmarried.	Jute Preparing.	11.2.04.	26.3.04. Change of mill.	Poverty.	Had to leave work, being unfit, seven weeks before confinement. Was in lodgings and became quite destitute, so went to work as soon as she found it possible. Worked before confinement in X Mill, and afterwards went to Y's, saying nothing of the baby. Earns 9s 8d. a week. The child's father contributed nothing.
C.D.	34	Married, but child illegitimate.	Jute Spinner.	29.2.04.	22.3.04. Change of mill.	No means of support.	This women is married, but her husband has been in India (soldier) for seven years. She has two children aged eleven and seven years, who live with her husband's mother. She does not contribute to their support. The father of the child born this year went to Canada before its birth and has contributed nothing. She worked in Y's mill before confinement and started afterwards in X's, saying nothing of the child. She stated that she left off work "months before the birth" but would say nothing of how she supported herself then.
F.F.	32	Married.	Jute Spinner.	7.3.04.	22.3.04. Change of mill.	Poverty.	This woman's husband is a labourer. Had fairly steady work in early part of winter but none at all for the past two months or so. He left town when the child was a week old to look for work and has not been heard of since. Three children, the eldest a boy of fourteen working in a mill with 8s. a week, one under two years and the baby. The mother worked in P's Mill before confinement, went to H's after and said nothing of the baby. She tends a single frame and has 11s.—12s. a week. Her mother takes care of the children, living with her. They occupy a single apartment which was very dirty. Signs of much poverty. I had an interview with her Employer who will not employ her again until April 5th, when the four weeks will have elapsed. I saw the Inspector of the Poor on the woman's behalf and arranged for her to have some help.

8. It is hardly to be doubted that there would be a multiplication of such evasions of the prohibition if it were mechanically extended to three or more months without other amendments of the section tending to make administration more effective than it can be at present. Further, although the present limit of one month is (naturally) most willingly observed by all mothers with means of support, an extension to three months or longer would presuppose the introduction of a real change of practice amongst married mothers in a considerable number of cases (as will be seen by evidence presently to be offered). The consideration would then have to be faced, assuming the section to be made effective by throwing the onus of inquiry on the employer and declaration of the birth on the parents, whether the existing staff of inspectors would be adequate to enforce respect for the extension of the law. One of the inspectors reporting for the purpose of this memorandum, indicates to me her belief that an extension of the time limit must influence to some extent the marriage and birth rate, and another, while approving further restriction, says, "I realise thoroughly the dangers attached to the restrictions, and that increased vigilance would be necessary on the part of other authorities."

9. In view of the difficulties of administration in England of the four weeks' limit, reference should be made to the law in other industrial states of Europe although it would be impossible without careful enquiry on the spot to ascertain how far either by local custom or by methods of administration, the law in those countries is realised in practice.

10. The limitations as regards employment of women after child-birth may be briefly summarised as follows :—

"Belgium:—'Women must not be employed in industry within four weeks after child-birth' (section 5 of the Law of 5th December 1889.)

"Switzerland:—'A total absence from employment in factories of women during eight weeks before and after child-birth must be observed, and on their return to work proof must be tendered of an absence since the birth of the child of at least six weeks' (section 15 of the Federation Law of 23rd March, 1877). An order of the Federal Council, 1897, indicates a further abstinence from employment before confinement (the length of time unspecified) in certain dangerous occupations, *e.g.*, in processes in which fumes of white phosphorus are produced; or in manipulation of lead or lead products; or where mercury or sulphuric acid are used; in dry cleaning works; in india rubber works; any processes involving lifting or carrying heavy weights, or risk of violent shocks. As the limit of the period is undefined, and means of enforcing the prohibition unspecified, it is difficult to see how the regulations does more than outline an excellent theoretical protection.

"Holland:—'Women must not be employed in factories or workshops within four weeks after child-birth.' (Law of 5th May, 1899.)

"Denmark:—'Women must not be employed within four weeks of child-birth except on production of a medical certificate showing that the mother's employment will not be injurious to herself or the child.' (Law of 1st July, 1901.)

"Germany:—The industrial code contains the same prohibition absolute of employment during four weeks as the Dutch Law, but extends it to six weeks if a medical certificate cannot be produced approving employment at the end of four weeks.

"Austria:—The Industrial Code lays down the same prohibition as the Dutch Law.

"Spain:—By a law of the 13th March, 1900, prohibits employment of women within three weeks of child-birth, but lays a further obligation on employers to allow one hour at least in the ordinary period of employment (for which there must be no deduction from wages) to nursing mothers to nurse their infants. This hour may be divided into two separate absences of half-an-hour, and may be fixed at pleasure by the mother, whose only obligation is to notify the time she chooses to the overlooker."

Quoted from "Dangerous Trades" (Comparative Survey of Legislation), edited by Thos. Oliver, M.D., etc. Published by John Murray, 1902. pp. 53-54.

II.—Extent and Effects of the Employment.

11. The extent of employment of mothers in (*a*) regulated and (b) unregulated work of a comparable kind can only roughly be arrived at by considering the census returns with special reference to the particular centres of women's main industries, and above all those centres where at the same time men's industries for the same class are lacking or scarce. The occupiers' returns for factories and workshops give no information as to the proportion of married women; and the inquiries of inspectors on this point in individual factories have to be made with great care and discretion in the absence of direct legal right (where section 61 is not in question) to make such inquiry. The Registrar's records of births and of deaths, which might be invaluable in throwing light on this important question of the occupations of mothers of young children and infants, show only in the case of illegitimate infants the occupation of the mother. The value of the information in this case makes it appear the more regrettable that a record which could have been so easily obtained has not been kept of the occupation of married mothers, and of mothers of still-born infants at the cemeteries and workhouses. (It may be noted in passing that attention was drawn at the International Congress on Hygiene in Brussels, 1903, to the lack of any general records of still-births in great Britain, and the consequent difficulty of comparing the figures as to infant mortality with those for other countries of Europe.) In certain towns, of which Preston, Bury, and Leeds may be named (although there are others), information on the occupations of the mothers of infants dying under one year of age is, or shortly will be, available in a certain number of cases, as the result of inquiries instituted through lady Sanitary Inspectors or Health Visitors by the Medical Officer of Health. In Blackburn a valuable voluntary record has been kept by the Registrars for the use of the Medical Officer of Health, of the occupations of the mothers in the case of all births and Miss Squire has drawn from this record an interesting table to which I refer presently.

12. As regards the effect of employment of mothers in factories, workshops, laundries, or as charwomen or in similar hard work away from home or in heavy domestic work at home, no general information, so far as the health of the mothers themselves is concerned, of a statistical kind is available*; particularly is such information incomplete in some of the centres selected for this memorandum (on account of the unusual proportion of married women in factories), for there it is reported to me (especially by Miss Squire for Blackburn, Preston and Burnley) that there is no lying-in hospital, that maternity cases are not taken in at the infirmary, and an insignificant amount of charitable assistance otherwise afforded.

13. "The workhouse is the only institution where patients are admitted for their confinement and here they are of course destitute cases." Enquiry has to be made at length of physicians and surgeons, nurses and midwives in such districts. As regards the effect on the infants, much may be learnt from the comparison of local and general infantile mortality rates, with particular reference to (*a*) presence (*b*) absence of much employment of mothers, if careful local enquiry be at the same time made as to presence or absence of other recognised causes of high infantile mortality (insanitary surroundings, ignorance of maternal duties, intemperance, poverty, use of means of prevention of child-bearing). The mere fact of extensive employment of mothers in factories in a locality cannot be regarded as significant by itself without reference to the factors of length of hours, character, and condition of the work itself (which vary enormously from one industry to another) and to the ordinary standard and practice of the mothers in the district as to care of infant life.

14. The enquiry of three inspectors on my staff has been during a few weeks directed towards increasing in three main centres, viz., Dundee (jute trade), Preston, Burnley and Blackburn (cotton trade), Hanley and Longton (pottery trade), our available knowledge of the above indicated extent and effects of employment of mothers, adding consideration of the moral and economic effects as well as of causes of such employment. Two characteristic conditions all these towns have in common: (1) presence of a large concentrated industry necessarily employing many women and with a large proportion of married women amongst them; (2) absence of other important occupations for women. Two of these towns, Dundee and Preston, have a characteristic absence of or insufficiency of industrial employment for men of the same class as those of the women employed. The three Lancashire towns stand apart from the other towns named in respect of the comparatively high standard of living established and deemed essential by the workers in question. Serious struggling poverty in the ordinary sense which is prominent in parts of Dundee and in parts of the pottery towns is generally absent in the Lancashire towns. In all these towns the infantile mortality is high, although as regards some of the towns equally and almost equally high rates are elsewhere to be found where the industrial employment of mothers is not a special feature or where the mothers mostly remain at home. In all of the towns a very striking degree and amount of ignorance of maternal duties, especially of feeding and cleanliness, is at once evident, but the general sanitary conditions in the matter of housing and surrounding sanitation vary widely. Other widely varying conditions are seen in the nature of the work of the factories, in the length of hours, pressure and speed of work, heat, dust, and other sanitary conditions.

Extent and Effects.

15. Turning now to the extent of employment of married women and mothers, it is convenient to bear in mind the general extent of such employment as shown in the census

* Except such as might be indicated through careful comparison of the ratio of mortality from special women's diseases to the female population in selected districts. No idea would be given of the amount of illness, nor could it be precisely stated from existing records which occupations were concerned.

1901. This information is given only for England and Wales, not in the census reports for Scotland and Ireland. In England and Wales more than two thirds of the married or widowed women employed in occupations are to be found in the following groups:—(a) Domestic offices, including all laundry workers and charwomen; (b) textiles; (c) dress. The highest ratio of married women is among the laundry workers, whose trade is very little regulated; taking those two branches together, while the total number of women over ten years employed is less than half that in the textiles groups, yet actually a larger number (absolute, not relative) of married women are employed than in the textile group. The details are shown in the following table:—

OCCUPATIONS OF WOMEN. FEMALE POPULATION OVER TEN YEARS IN ENGLAND AND WALES. CENSUS 1901.

	Unmarried.	Married or Widowed.	Total Female Population, Occupied.
A.—All Occupations	3,254,242	917,509	4,171,751
Unoccupied	2,971,399	6,046,435	9,017,834
B.—1. Domestic Offices or Services	1,378,156	312,566	1,690,722
(a) Charwomen	25,378	86,463	111,841
(b) Laundry Work	86,474	109,667	196,141
2. Textile Fabrics (includes dealers)	518,252	144,970	663,212
3. Dress (includes dealers)	553,485	157,476	710,961
4. Bricks, Pottery, Glass	23,947	9,201	33,148

The ratios, however, are not the same when we come to consider selected districts.

LANCASHIRE.

	Unmarried	Married or Widowed	Total
(A) All Occupations	527,400	166,691	694,091
Unoccupied	327,269	770,886	1,098,155
(B) 1. Domestic Services Total	118,918	30,946	155,864
(a) Charwomen	4,328	13,924	18,252
(b) Laundresses	6,739	7,500	14,239
2. Textiles	232,873	74,010	306,883
Preston	12,339	5,313	17,652
Blackburn	15,501	8,368	23,869
Burnley	10,697	6,000	16,697
3. Dress	70,703	16,692	87,395
4. Bricks Pottery, Glass	1,257	302	1,559

STAFFORDSHIRE.

(A) All Occupations	104,230	30,733	134,963
Unoccupied	107,248	227,907	335,155
(B) 1. Domestic	35,502	6,402	41,904
(a) Charwomen	604	2,125	2,729
(b) Laundresses	1,342	1,863	3,205
2. Textiles	4,953	1,503	6,456
3. Dress	15,742	3,681	19,423
4. Bricks, Pottery—Total	14,711	6,537	21,248
In Hanley	3,306	1,412	4,718

16. Looking further into the census figures for Blackburn, Burnley, Preston, it appears that more than half the women over fifteen years of age in the cotton mills of Blackburn and Preston are married or widowed, whereas less than one third are so returned for Burnley. In Blackburn, 31,445 women were returned as occupied (out of 68,660 females), of these 20,906 were in cotton mills; in Preston 25,279 women were returned as occupied (out of 51,669), and of these 16,317 were in cotton mills. Miss Squire estimates that of the total number of occupied women in Blackburn, 37·9 per cent. are married or widowed as compared with 30·5 in Preston and 33·5 in Burnley. I have not been able yet to work out all the corresponding percentages for the Pottery towns, but Miss Martindale gives the following estimate of the percentage of married and widows in china and earthenware factories to the female population between eighteen and fifty years of age:—Longton, 20·6; Hanley, 9·7; Fenton, 14·0; Burslem, 13·6; Tunstall, 9·6; Stoke, 7·1.

17. In Dundee, which in population takes the third place among Scottish towns, and where a larger proportion of occupied females is found than any of the others, the chief employment for women is the manufacture of jute. As the census gives no information about married women the only way of arriving at any estimate is to glance at the figures as to all women occupied, 57·7 per cent.* out of 72,723, at the total number employed in jute mills, 24,879, of whom 13,719 are between twenty and forty-five years of age, and then to proceed, as Miss Paterson did, to take particulars in a group of mills. She says:—

"I visited a group of mills in the north east quarter of the town. These may be taken as representative.... I found it best to make my inquiries personally in the mills, the foremen do not know which women are married and which are not, and they cannot be relied on to get the information correctly from the workers who in one mill where the attempt had been made found great pleasure in giving absolutely misleading information. I, therefore, visited for the purpose twelve jute mills, in which a total of 3,269 women over eighteen years of age are employed. In this way I got information at first hand with regard to the married women, but not the unmarried mothers. In almost all cases I got the information I asked for as to numbers and ages of children and the provision made for them during absence at work, but there was, of course, much greater readiness on the part of some women to give details than was shown by others. On the whole, however, the difficulty was not to get information. . . but to avoid giving hastily the advice so eagerly sought for. . . I found that the managers generally were of impression that they employed more married women than I found they did, but they no doubt included the unmarried mothers."

18. In order to estimate the extent of employment of unmarried mothers, Miss Paterson searched the Registrars' books for details of occupations of mothers of illegitimate infants in 1903. Out of 4,024 births, 400 were illegitimate, and in 278 of these cases the mothers' occupation was given as textile operative. Many of these cases Miss Paterson visited in their homes as well as many of the married mothers. She found that in the majority of the cases no contribution towards support was made by the father of the illegitimate child.

* Paisley follows second with 43·4 per cent.; Edinburgh third with 43·3 per cent.; Glasgow fourth with 38·9 per cent.; Aberdeen fifth with 35·4 per cent.

19. Miss Paterson's details about the 12 Jute Mills may be summarised as follows:

	Women over 18 Employed.	Married.	Widowed.	Separated or Deserted.	Over 45.
Mill I.	36	15	5	4	2
(Total number of Children, *living* 51, *dead* 17, eleven in infancy.)					
Mill II.	122	28	4	—	3
(Total number of Children, *living* 77, *dead* 27, fifteen in infancy.)					
Mill III.	259	36	21	7	7
(Total number of Children, *living* 90, *dead* 37, thirteen in infancy.)					
Mill IV.	243	59	20	10	16
(Total number of Children, *living* 129, *dead* 64.)					
Mill V.	92	38	7	6	45
(Total number of Children, *living* 70, *dead* 54, forty-two in infancy.)					
Mill VI.	109	34	14	9	13
(Total number of Children, *living* 84, *dead* 63, fifty-one in infancy.)					
Mill VII.	274	74	9	10	12
(Total number of Children, *living* 121, dead 23.)					
Mill VIII.	108	25	6	3	6
(Total number of Children, *living* 45.)					

	Women over 18 employed.	Married.	Widowed.	Separated or Deserted.	Over 45.
Mill IX.	250	66	17	12	8
(Total number of Children, *living* 157, *dead* 59, forty in infancy.)					
Mill X.	323	47	16	6	14
(Total number of children, *living* 94, dead 21.)					
Mill XI.	1,130	178	65	24	65
(Total number of Children, *living* 358.)					
Mill XII.	323	62	17	10	6
(Total number of Children, *living* 148.)					
Totals	3,269	662	201	101	197

20. As the census figures distinguish the ages from fifteen, twenty, twenty-five, etc., and all the factory regulations and returns distinguish those above and below eighteen years of age, comparison of the two sets of figures for percentages is not satisfactory. A rough estimate, however, may be made for purposes of comparison with the figures given above for cotton mills in Preston and Blackburn that one-fourth of the women employed in Dundee jute mills are married or widowed.

21. It is impossible, as already pointed out, to make any statistical comparison as regards numbers of mothers of young infants employed in the mills (although, as I shall presently indicate, the inspectors have gathered much scattered information bearing on this point). For Blackburn alone have we got the general figures as to births presented in the following Tables by Miss Squire for the year 1903:—

BLACKBURN.

Births registered in 1903 *with Mothers' occupation.*

Total Births.

Cotton Operatives.	Weaver.	Winder.	Warper.	Rover.	Slubber.	Drawer.	Ring spinner.	Mill hand.	Total.
	805	123	25	74	12	25	54	28	1,146
Servants									20
Charwomen									11
Other Occupations									69
Housewives									2,042
Total									3,288

22. Most unfortunately, this interesting information cannot be brought directly to bear on the problems before us, through lack of parallel information as to the occupations of the mothers in the case of infant deaths. The influence of occupation can only be guessed at by the particulars afforded in the next two tables as regards illegitimate births, and deaths of illegitimate infants under one year in Blackburn during 1903; the figures are so small that too much weight must not be attached to the relative infant mortality. When it is remembered, however, how much higher the infantile death rate is amongst illegitimate children generally than amongst legitimate, and that the general rate in Blackburn ranges from 157 in 1902 to 221 in 1900, it is seen that the death rate shown in the second table affords no positive ground for attributing a specially high rate to the cotton mills alone. A similar observation has been made by the Medical Officer of Health for Bury in his report for 1902, after a systematic inquiry made into the occupation of the mother of every infant dying within the year within his borough; in that inquiry the basis is broader than in the following Tables.

BLACKBURN.

Illegitimate Births.

Cotton Operatives.	Weavers.	Winders.	Warpers.	Rovers.	Slubbers.	Drawers.	Ring spinners.	Mill hands	Total.
	50	15	1	7	—	—	10	10	93
Servants									20
Charwomen									7
Other Occupations									8
Housewives, or no occupation									7
Total									135

BLACKBURN.

Deaths of Illegitimate Infants under one year.

Cotton Operatives.	Weavers.	Winders.	Warpers.	Rovers.	Slubbers.	Drawers.	Ring spinners.	Mill hands.	Total.
	8	1	1	2	—	—	1	3	16

Servants	10
Charwomen	—
Other Occupations	4
No occupation, or since married	3
Total	33

These figures are for two registration districts only, *i.e.*, north and south. Witton registration district is omitted owing to not being able to go to the registrar's office. This table is, therefore, incomplete. But there was only one illegitimate birth registered in the Witton district, a servant's child.

23. The parallel figures for Preston and Burnley follow in the next two groups of Tables :—

PRESTON.

Illegitimate Births.

For first-three quarters of year 1903, viz., Jan. 1st to Sept. 30th.

	Total Births.	Illegitimate.	Occupation of all others.				
			Cotton.	Domestic Servants.	Char-women.	Other.	Unoccupied.
Town of Preston	2,518	117	77	21	4	12	3
Districts of Broughton and Alton (chiefly rural)	461	4	2	1	1	—	—
County Boro' of Preston	2,979	121	79	22	5	12	3

Deaths of Illegitimate Infants under 1 year.

Jan. 1st to Sept. 30th, 1903.

	Total Deaths Under 1 year.	Illegitimate.	Occupation of all others.				
			Cotton.	Domestic Servants.	Char-women.	Other.	Unoccupied
Town of Preston	332	23	16	3	1	1	2
District of Broughton „ „ Alton	44	*15	10	3	—	1	1
County Boro'—Total	376	38	26	6	1	2	3

* 11 of these in Workhouse.

BURNLEY.

Illegitimate Births—Year ending December 31st, 1903.

	Total Births.	Illegitimate.	Occupation of Mother.				
			Cotton.	Domestic Servants.	Charwomen.	Other.	Unoccupied.
County Borough of Burnley	2,857	167	128	11	5	19	4

Deaths of Illegitimate Infants under One year—Year ending December 31st, 1903.

	Total Deaths under One year.	Illegitimate.	Occupation of Mother.				
			Cotton.	Domestic Servants.	Charwomen.	Other.	Unoccupied.
County Borough of Burnley	606	65	45	8	2	8	2

24. The results as regards the one point of infantile mortality in relation to occupation are in this present inquiry similar to those I have had reported to me on isolated inquiries in the past. For example, in 1898 complaint was made to me that among the infants of hearth rug weavers in and near Huddersfield (a very rough type of workers), an excessively high mortality occurred: it was alleged to be at least 50 per cent. All the factories were visited by Miss Squire, and close investigation made as to the ratio of mothers among the weavers, condition of the infants, time before and after confinement for leaving work; registers were searched, doctors and midwives, employers and others interested consulted. A considerable proportion of the mothers were unmarried, but no definite relation between the occupation and the infant mortality could be established. The alleged mortality of 50 per cent. was certainly not supported by the facts discovered. Although the industry and the figures are small the investigation was of interest, as knowledge can only be gained by successive consideration of all the facts in definite selected areas and industries. Although it is certain that the rate of infantile mortality is only a very rough guide (if any) to the effect (which is moral as well as physical) of the mother's occupation on the health of her surviving children, it is of the utmost importance that we should be able to follow the clue further than with existing records we are able to do.

25. Two directions in which information is lacking which we need are: (*a*) localisation of the infant mortality rates in a systematic way for particular areas in industrial towns where the workers of selected industries live; (*b*) general infant mortality rates for selected industries throughout the country.

26. (*a.*) As regards the first of these points, a comparison of the rates in the special centres I refer to with those for non-industrial towns and counties would show what I mean. Dundee with 57·7 per cent. occupied women (and about one-fourth of the women in the jute mills married) has an infantile mortality rate varying from 217 in 1893 to 142 in 1903 (average during representative years 1890 to 1899 is 179). Glasgow with 38·9 per cent. occupied women had rates varying from 149 in 1901 to 134 in 1903, but in the Brownfield district the rates run far higher (242 in 1901, 233 in 1903, much beyond any localised rate in Dundee).

The whole of Scotland with 37·26 per cent. occupied women has a rate of 129·3.

Hanley with 35·8 per cent. occupied women, and 19·8 per cent. in the potteries (of whom 5·9 per cent. are married) has an average mortality rate of 204 (209 in 1900, 212 in 1901, 170 in 1902).

Longton with a rather larger percentage of women and of married women occupied * has an average infantile mortality rate (ten years) 239 (255 in 1900, 225 in 1901, 195 in 1902).

Throughout Staffordshire the average rate over ten years is 172 and 1901 fell to 164.

We may compare some other counties where there is far less industrial employment for women:

Durham average: 167, risen in 1901 to 179.

Northumberland: 160, risen in 1901 to 182.

South Wales: 163, risen in 1901 to 170.

Returning to the county of Lancashire, we find that the infantile mortality rate has remained practically stationary for eleven years, and was 179 in 1901 (average for ten years previously: 179).

Preston with nearly half its female population "occupied," of whom about two thirds are in cotton mills, has an average infantile mortality rate (ten years to 1900) of 236; 30·5 of the total occupied females are married, and of women over 15 years of age in cotton mills one half are married.

Burnley with a larger proportion of its female population in cotton mills, has an average infant death rate of 210, fallen in 1902, an exceptional year, to 177; 33·5 of the total occupied females are married, and of women over 15 in cotton mills rather more are married than is the case in Preston. This is in a town where Miss Squire found far more ignorant neglect of infants than in Preston.

Blackburn with nearly a half of its female population "occupied," under a third of whom are in cotton mills, has an average infant death rate of 200: 37·9 of the total occupied females are married, and of women over 15 years in cotton mills over two-thirds are married.

From this rough outline it is clear that much more localised information with reference to sanitary surroundings in selected areas is necessary before we can definitely connect the infant death rate with the occupation.

27. (*b.*) As regards the second point (above indicated) on which I think there is great need of fuller information, and for which records are now lacking, it seems sufficient to point to the fact, that in the great occupations for married women as laundresses and charwomen, it is at present quite impossible to arrive at either the infantile death-rate or the birth-rate. This is the more regrettable because in several very important features, such as excessive temperature, humidity, over-pressure, straining nature of parts of the work, the influences likely to be adverse to child-bearing women, are found as much in the laundry industry as in the cotton industry. Both these industries of laundry work and charing are naturally refuges for semi-skilled or unskilled working women pressed out of other trades.

28. It has been impossible with the limited staff available to attempt any personal inquiry into the question of the extent and effects of employment of mothers in laundries, though much that would throw light on the whole problem would doubtless be found by such inquiry in West London (especially Acton and Hammersmith), South London and Brighton, and other watering places.

29. As regards the physical conditions to which the women are subject in the various industries under review, reference made to the table of hours of legal employment (already furnished to the Committee) will show the daily and weekly limit of hours permissible. Although legally more hours may be worked in the pottery processes than in textile processes, actually far shorter and easier hours obtain in many non-textile factory processes (but particularly in earthenware and china works), than in either cotton or jute mills. The highly organised conditions, and extraordinarily costly, specialised machinery in these textile trades mean first a far greater pressure as to output, secondly, more heat and noise, often more difficulty as to ventilation; further either dust or humidity is inseparable from certain of the processes.

30. As to the general effect of these conditions on the health of the women and their children, Miss Squire for Lancashire, and Miss Paterson for Dundee report similarly:—

> "That it is the employment of women from girlhood, all through married life, and through child-bearing that impresses itself on the mind . . . that it is useless for any medical men and others not familiar with the conditions of mill life there to pronounce any opinion on the effect of factory work upon the mother and infant; they have no

* The exact figures on which to calculate percentage are not published, but could be obtained from the Registrar General if needed.

conception of the stress and strain and of the general conditions of life and work in these mills."

31. Miss Paterson expressly points repeatedly to cases showing that it is the stress and strain of the work, and the necessity of maintaining a high standard, coupled with decreasing physical capacity of the child-bearing woman under such conditions that generally determine the moment when the manager in a jute mill sends her home; sometimes (as in one of the cases under Section 61 about to come before the magistrates), the woman is sent away to go into another equally unsuitable occupation as charwoman or house-scrubber or as a home sack-sewer. Sometimes a neighbour will take the place in the mill of the woman who has been sent home on account of her physical inability to maintain her output, in return for her taking charge of that neighbour's children for a small sum.

> "How they live during the period of absence is a mystery, but I find that the tradesmen give credit to a surprising extent, and rents are allowed to get much into arrears. . . . Great harm is done and suffering occasioned to the women by their remaining at work too long before confinement, as well as by their returning too soon after it. Factory managers, doctors, health visitors, and workers themselves are agreed that the four weeks' absence is often shortened to three or even less. I have found that a considerable number of the mothers nurse their babies regularly and continue to do so, but this natural food is always supplemented by other given without knowledge."

32. Miss Paterson personally investigated the cases of 207 mothers of young children employed in the mills, but feels that the information given by them as to precise length of time away from the mill is not sufficiently reliable to be tabulated. As to the effects on health, moral and physical, both of the mothers and children, she was able to form very definite ideas of the excessive and injurious strain on the mothers and of the lack of sufficient care of the children. Visits on Saturday afternoons to the homes showed that any energy that was left over by the week's work in the mill was spent by the mother in family washing and house-cleaning, but dirt and discomfort abounded, and she "never saw any attempt at cooking." She sends me particulars of 144 cases where the health visitors recently found two, three or more very young children left alone in the house (in some cases locked in), while the mother was at the mill, with only such food as the mother could prepare overnight or in the early morning before leaving. Definite arrangement with another woman to take charge of the children seems far less common in Dundee than Miss Squire found in Lancashire, or Miss Martindale in Hanley and Longton.

33. Miss Squire and Miss Martindale send me information, but incomplete, of the time of leaving off work before and after confinement. The former tabulates the information in the case of Preston as follows:—

PRESTON.

Time of leaving off work before, and of resuming work after Confinement in the case of 124 *women employed in the Cotton Mills.*

Before.						After.						
Under 1 week to 14 days	Under 14 days	1 month to 2 months	2 months to 3 months	3 months to 6 months	6 months to 9 months	Before 1 month	1 month	5 weeks to 2 months	2 to 3 months	4 to 6 months	6 to 12 months	Not returning
14	7	35	22	36	10	2	12	26	42	34	6	2

34. Miss Squire believes that the usual practice is for the mother, particularly if a weaver, to return to work directly the child is four weeks old, or as soon as she can obtain employment; that although in the last twelve months the marjority of women remained absent two to three months, slackness of trade and difficulty in obtaining employment was given as the reason. Two of the doctors with whom Miss Squire conferred in Preston attributed the large number of premature births to continued work in the mill during pregnancy, and all considered that an exceptional number of cases of uterine trouble existed and was attributable to too early return to work. For reasons already indicated there is no centralised source of statistical information about such cases among cotton operatives. The doctors in Blackburn mention that the evil of employment of women during pregnancy is aggravated by their desire to earn as much as possible during the time before they are forced to give up work. Miss Squire herself received complaints from the women of the hardship of being discharged by the manager four or five months before confinement. She found that it was the general practice of the Preston women to nurse their babies at meal times, and before and after the day's work in the mill. In Burnley this, she found, was exceptional, while greater ignorance and unintentional cruelty in the giving of unsuitable food to the infant seemed to be common.

35. Turning to the conditions and effects in Hanley and Longton, Miss Martindale reports on the large proportion of women employed in what may be termed light work such as gilding, painting, burnishing. Many are, however, employed in "fairly arduous" work in hot and dusty surroundings. In none of the processes are the hours so long as in textile districts, seldom exceeding, often less than, the limits of 8 or 9 a.m. to 5.30 or 6 p.m. (less one and a half hours for meals). In many cases women are employed not more than four or five days a week, and intervals of easy leisurely work are possible where so much is done by hand. The usual practice is to continue work until within a few weeks of childbirth; in a third of the cases questioned Miss Martindale found absences of from five to twelve weeks beforehand. More than two-thirds of the women questioned returned to work six weeks or longer after childbirth. In one case only was return found to have taken place before the four weeks' limit. Miss Martindale found that in all the cases she investigated the women were doing their housework at the end of two weeks. For the same reason as in the Lancashire towns (lack of maternity hospitals or charities) little systematic information as to the immediate effect on the mother's health is to be had. Miss Martindale conferred with doctors and interviewed district nurses and midwives, and found little evidence of ill results. She found, however, that 38·4 per cent. of the children born to the mothers she questioned had died in infancy; this she attributed to improper feeding due to "appalling ignorance and objection to being taught." Even though partial nursing by mothers of their infants is general (and only one-seventh of the comparatively small number of cases investigated was the feeding entirely natural) an almost complete absence of cow's milk by way of supplement was noted. "Boiled bread with butter and sugar" and arrowroot biscuits seemed to be the usual supplement to the mother's nursing. The undersized, unhealthy appearance of the children that survive infancy, and the large number of cripple children in pottery towns Miss Martindale traces to diet of the kind named. She traces the larger number of cases of death from respiratory diseases and bronchitis among infants to the habit of overheating dwelling and bedrooms. Coal is cheap in the district and the workers

are accustomed to high temperature in the workrooms. Infants are taken without any extra clothing from overheated, ill-ventilated rooms to the doorstep by mothers as well as the paid nurses who are somewhat systematically employed. Miss Martindale made inquiry as to the methods of the nurses among competent observers (including the Inspector for Prevention of Cruelty to Children) and the lady sanitary inspector), and could not hear that they took less care of the children than the mothers.

III.—Circumstances and Causes of Employment of Mothers.

36. The circumstances under which the mothers leave their infants and young children to go to the mill or factory have already partly appeared under I. and II. above.

All three Inspectors have systematically directed their inquiries towards making clear the reasons which prompt early return to work after confinement as well as late continuance at work before confinement.

(1) *Classification.*

37. I classified for their inquiry the possible reasons thus:—

(i) Death of the father or lack of employment, or insufficiency of the father's wage.

(ii) Desertion by the father.

(iii) Fear on the mother's part of the loss of future work in the factory.

(iv) Preference for factory over domestic work.

Some of these reasons themselves would be effects of a concentration of a women's large industry in a district where there is absence of men's occupations, such as is spoken of above. In so far as they are effects of large economic and social causes, not immediately alterable, attempted mitigation of the results of employment rather than attempted diversion on any large scale of the employment of mothers appears most likely to prove effectual, and to be attended by fewest counterbalancing disadvantages.

(2) *Summary of Causes in Cases observed.*

38. In case of each mother visited the Inspector has noted in schedules (giving also other circumstances) information if obtainable as to the reason for continuing and returning early to work in the mill. In the great majority the case falls under one or other of the three points in Class (i). In Dundee Class (ii) shows itself frequently. Classes (iii) and (iv) appear least of all. Detailed evidence can be given by the inspectors.

(*a.*) *Dundee.*

39. Miss Paterson says that when she drew the attention of mothers, who had returned within four weeks to work, to the law, they—

> "Admitted that they knew, but asked helplessly 'what could they do?' Poverty was in all these cases the reason for the early return, and that is practically the only reason in Dundee . . . due to one cause or another, for fear of loss of work does not affect the mill operative there; if she does not get back to her own place there is so much irregularity of employment that her chance at a gate is quite a good one, and for some years there has been no difficulty in finding work. In reply to my enquiries as to absence before confinement, I found that only one of the six cases of return within four weeks after confinement had not been absent at least a month before; while there are exceptions, this is much what I have found general amongst the mill-workers. . . . . They leave less often on their own initiative than because they are sent away to make room for a more efficient worker."

(I have already quoted Miss Paterson's experience that this dismissal in Dundee often means merely transference to another occupation, say as "scrubber.")

> "There has been a great scarcity of employment for men recently in Dundee, but unwillingness to work must in some cases be a reason for the man's idleness; 'slackness' was, except in a very few cases, the reason given by the woman. . . . Of the mothers of illegitimate children seen, I only found one who had been since married to the father of the child, and in most cases no contribution was made by him. It is not surprising that an early return to work seems to the mother a necessity in these instances. . . . Very little preference for the mill to the home was expressed among the women, the few who said they were dull at home were women without any children . . . in a number of cases the worker has said of the relative or neighbour who looks after her children: 'She can keep them better than I can, she has not been brought up in the mill.' . . . There is little employment for men in the mills, a certain number of labourers and carters are employed at wages from 14s. to £1. Assistant overseers do not get more than £1, and a great deal of labouring work in the mills as well as in the boat yards is paid at from 15s. to 17s. a week. . . . Womens wages, in the preparing processes, are from 9s. 6d. to 12s. a week; spinners earn 11s. to 15s.; winder's and warpers about 15s.; weavers, 16s. to £1. . . . When a man and his wife are working in the same mill, as they so often are, the woman is probably earning the higher wage. The Inspector of the Poor in Dundee stated that the past winter has been a very bad one for working men. The shipyards have been been practically idle, the building trade, after great activity, almost dead, and there has been a long strike amongst engineers. . . . Not only skilled workmen but labourers, whose earnings do not exceed £1 a week, were out of employment. It is the latter class who become the husbands of the millworkers, when these do not marry in the mill, and any 'slackness' of work soon renders them destitute."

(*b*) *Preston.*

40. Preston resembles Dundee, but is even more striking in scarcity of employment for men. There are no iron works or collieries, as there are in Blackburn and Burnley. Miss Squire says:—

> "The men are said to look out for a wife who is a four-loom weaver, and they have the reputation of being lazy."

Miss Squire herself found that the husbands of cotton operatives visited were chiefly employed as labourers in intermittent work, while "in all cases where the husband was in regular employment as weaver, platelayer, painter, bricklayer, etc., the one wage was insufficient to keep the family in the standard of life they expect."

41. In the textile mills nearly twice as many women are employed as men. Ring spinning, in which women are employed, is being gradually substituted for mule spinning in which men work.

> "One large firm, employing 1,442 women, told me that . . . being unwilling to turn the men out of employment they had offered to teach them ring-spinning and then give them the same wages as on the mules . . . the men tried it for a time and then gave it up. . . . Except for heavy work such as sheetings, where the weavers are entirely men, women are preferred as weavers. The men seem to look down upon the occupation for themselves. The wages for weavers are the same whether men or women."

42. In one-third of the cases of early return to the mill investigated by Miss Squire in Preston, the reason was poverty due to insufficiency of the father's wage, and in two-fifths of the cases it was due to that and lack of employment combined. In three cases visited the mother was unmarried. In only one case was preference for mill-life expressed by the mother. The wage of the husband found to be insufficient in the cases investigated ranged from 16s. to £1. The wages of the wife, if a weaver, range from 20s. to 25s. net, if a ring-spinner, from 18s. to 25s. (recently on short time the wages have been less). While the medical men advocated, in speaking to Miss Squire, a three months' absence at confinement, both on account of the mother and the child, they considered it would be impracticable to enforce it, as the mother was in most cases "the chief wage-earner." Miss Squire visited, amongst the others, nine mothers of young infants, who were doing their best to remain at home for a time, but some of these feared they would have to go back to the mill soon. Miss Squire says:—

"I do not think that in Preston an extension of the legal time during which a mother is compelled to remain away from the factory after confinement would tend to diminish the employment of married women, and this opinion is that of trade union secretaries."

43. I am much struck in Miss Squire's notes on Preston by the number of times (as contrasted with Dundee) the entry appears, "nice, clean, comfortable home," "superior, tidy home and persons," and by the much rarer cases of illegitimate births. Even in those cases the standard of living appears higher, as may be seen from the following:—

"E. B.—Single, weaver, young, neat, nice-looking girl in tidy home, with parents. Baby aged ten months, healthy looking. Left work six weeks before confinement and does not mean to leave baby yet."

44. The number of illegitimate births, while far below that of Dundee, shows much less unfavourably than there the character of the people, because subsequent marriage of the parents is frequent in Preston. Another significant point in Miss Squire's notes is that the high infant mortality occurs where the number of children born to the mother is large and in rapid succession. The following is a typical case:—

"Mrs. B.—Husband a labourer, herself a weaver with 18s. a week. Has had thirteen children very quickly, buried nine. Baby seven weeks old out to nurse (visited, clean and neat). Breast-fed at meal-times, milk and water between. Premature birth at seven months. Pneumonia, measles, convulsions were the causes of death of the majority of the children (ages six weeks to two years). Cause of mother's return to work, poverty."

Another case shows the reason for early return to work:—

Mrs. A.—Husband fireman at factory, short time twelve months, full time wages £1 a week; herself a weaver, 18s. but 10s. short time; has had eight children and buried four; eldest living sixteen years, youngest one month. Returned to factory after twenty-six days on account of poverty, due to slackness at mills; confessed to having told manager it was five weeks since confinement when it was three."

(c) Blackburn.

45. In Blackburn more women absolutely but not relatively to the men are employed in textile factories; there are also more other occupations, such as engineering, for the men, though not to the extent that in normal conditions leaves a large proportion of women (and particularly married women) free to devote themselves to domestic life. Miss Squire found that while "preference for mill life" is the reason given by philanthropic workers and others of experience for the early return of mothers among textile workers after childbirth, the mothers themselves—

"Generally explained to me that one wage was not enough to bring up a family upon, and that the husband would have his 'spending money' whatever the household needs were, and therefore the mother's wage, over which she had control herself, came in handy. . . . The general opinion among those best qualified to judge seems to be that the working classes are well-off, and that if it were not for the proverbial improvidence of the cotton operatives there would be no poverty. Still it seems to be the practice for the women to continue their work in the mill as near to the time of confinement as the manager will allow; always the same complaint was made to me by the manager that he had to keep watch and tell the woman that she must cease work."

46. Miss Squire found that in the case of 234 births registered in 1903 both father and mother were weavers:—

"One would not be surprised to find their children weakly. Probably last year these families would be in poor circumstances, both parents being dependent upon the cotton trade. The men employed in the cotton industry favour restriction being placed upon married women's labour; I received many suggestions on this point."

47. The tendency of the number of women in spinning to increase is the same in Blackburn as in Preston, owing to increase of ring spinning at the expense of mule spinning. Miss Squire finds a high standard of life in Blackburn among textile operatives, comfortable houses and money to spend on excursions, holidays and amusements are considered essentials. She heard adverse comment on the number of weavers and winders, wives of tradesmen, or of men earning good wages, continuing to work and to leave their children to the care of paid nurses or housekeepers. Still she actually found, on visiting at home seventeen weavers, not specially selected, that seven were after several months at home with their infant "not returning;" one was unmarried and likely to return, and the remainder had returned to work because the husband had died, or was out of work or on short time. In one case the mother returned after a month when the father was earning 23s., and the two eldest children 7s. 3d. between them. The mother's return brought in an extra 20s. a week.

(d) Burnley.

48. In Burnley cotton mills the women out-number the men by nearly a third, but there is rather more employment for men in collieries and iron works than in Preston. The standard of life, the sanitary conditions in the houses, and morality, Miss Squire finds lower than in Preston. The illegitimate birth rate is higher. Miss Squire says that the impression produced on her in Burnley, and that it received support from medical men—

"Is that the infants are of a miserable, debased type in a large number of cases. Whereas in Preston the important point seemed to be that the infant should be properly fed, in Burnley it seemed as if no amount of nourishment could build up a healthy child."

The housing conditions are worse, and in some ways conducive to immorality.

49. The notes on the few homes Miss Squire had time in Burnley to visit are painful. Poverty and desertion are the causes of the mother's early return to work. In one case the husband, a blaster, had been injured and could not return to work, so the woman had the whole family to support. In one of the two cases where the mother was not returning to work, it was because she was dying of phthisis, and had worked "as long as she could stand," her husband, a collier, being out of work. She had had seven children, and buried two; the baby, three months old, was injured at birth, no doctor or midwife having been present; the previous infant died from neglect in the same circumstances. In another case, where the mother stays at home, the husband is a collier with good wages, and the wife had ceased weaving since marriage; this, however, did not apparently improve the chance of life for the infants, as she had had twenty and buried sixteen, all having died between one and eleven months of age.

(e) Hanley and Longton.

50. Miss Martindale summarises her information on the reasons for the employment of mothers and early return after child-birth as follows:—

"In order to obtain some reliable facts with regard to this important matter, I questioned sixty-two women, concerning their husbands' employment, and the reasons which prompted them to seek employment outside their homes, with the following results:—

Husbands in regular work - -	24		
„ out of work or working irregularly - - - - -	25		
„ delicate or in an asylum, -	3		
„ dead - - - - -	4	38	13
„ deserted them or separated -	3		
Unmarried mothers - - -	3		

"From the above it is evident that thirty-eight women were obliged to work; of the remaining twenty-four women fourteen had stated that they worked in a factory because either their husbands' wages were insufficient to allow for any additional comforts, or they desired to save while able to work, or they wished to be able to maintain an aged mother or father. Ten women were not actually obliged to work, but found the additional money very helpful.

"The lack of employment for men in this district appears to be serious. The master of the workhouse informed me that a short while ago forty able-bodied and carefully selected men were allowed to take their

discharge for from two to seven days, in order to seek for work, their families meanwhile remaining in the workhouse. By the end of the week all the men had returned, not one having been able to find work.

"From my investigations I have come to the conclusion that in very many cases the early return to work is prompted by necessity. It does not appear to me that the fear of losing future work in the factory plays an important part in the question. This may be owing to the fact that the gang system which prevails on the 'pot-banks' provides a large number of employers for women beyond the actual occupiers of the factories, and also owing to the neighbourly kindness which is so great a feature throughout this district, the women have no difficulty in procuring a neighbour to 'locum' for them during their absence.

"It is impossible, however, not to be impressed by the universal preference amongst the women for factory over domestic life. I was continually being told how greatly they preferred their work in the factory to the minding of children, and how depressed and out of health they became if they were obliged to remain at home. Surprising as this appears at first, it becomes less so on consideration. At thirteen years of age the majority of these women would have begun to work in a factory, to handle their own earnings, to mix with a large number of people with all the excitement and gossip of factory life. They would thus in most cases grow up entirely ignorant of everything pertaining to domesticity. After marriage, therefore, it is hardly probable that they would willingly relinquish this life to undertake work of which they are in so large a measure ignorant, and which is robbed of that all is to them pleasant and exiciting. Until as girls they have been taught to find a pleasure in domestic work, and until there is a greater supply of healthy and suitable recreations and amusements in the reach of all women, to counteract the prevailing squalor and gloom of these pottery towns, it is useless to expect them to relinquish factory life.

"My attention was drawn to the fact which doubtless has to be faced, that the result of restricting married women's employment will be a decrease in the marriage and birth rates.

"I was interested to find from conversations with working women and men, and others, that (1) the opinion prevails that as parents they have not done their duty unless they have seen to it they every girl as well as boy is provided with a trade; (2) that a woman is looked upon as lazy unless she takes her share in contributing to the family income. In Staffordshire the men and boys appear to willingly do their part in the domestic work of the house, and it is no uncommon sight to find a man cleaning and sweeping, caring for the children or even putting them to bed, on the evenings when the women were engaged with the family washing."

51. Miss Martindale analyses at length the occupations of mothers of illegitimate infants, and points to the large proportion occurring among pottery workers. As this forms an important factor in the problem of support of the mother I summarise the information as follows:—

Illegitimate births, 1902.

	Longton	Hanley
No occupation - - - -	11	16
Pottery workers - - - -	67	53
Other occupations - - - -	14	22
Totals - - -	92	91

In these towns as in Preston, marriage of the parents frequently follows, or just precedes, the birth of an infant.

52. Some particulars on lines similar to those given above of the time and reason for early return to work, are in part accessible, or will shortly be accessible, through the help voluntarily given by health visitors in other towns, in the North of England. So far as I have seen them, the facts are very similar both as to causes of early return and effect of occupation. Only one instance of "preference for factory work" by the mother appears.

53. The forces to be reckoned with in any legislative attempt to alter the present withdrawal of the industrial mothers from domestic life seem to group themselves as follows:—

1. The enormous practical difficulties attending the drafting and administering any sort of legal prohibition of employment of child-bearing women. (See in addition to the information in the first division of this memorandum, the press notices of the recent prosecutions in Preston and Dundee.) It is clear that the existing Section 61 of 1901 (and its counterpart in the Act of 1891) has been ineffective as a prohibition even though it extends only to one month. It may have had some indirect effect as a standard in the minds of those willing to be guided.

2. The existence of a considerable number of unmarried mothers without means of support other than their own labour, whose main chance of rescue from degradation lies in the very fact that they desire to labour and know they ought to labour to support their infants.

3. The presence in certain populous industrial districts of a large proportion of married mothers, who are necessarily the chief bread-winners of their families, if those families are to come into existence at all. (There is no doubt that large parts of the cotton industry could not maintain the same standard or be successful without women's labour.) This necessity as regards child-bearing women can apparently only be met by a balanced development in the same centres of men's industries.

Some attention should be given to the strength of the forces of sentiment, constitution, and character, which practically universally secure that the entire earnings of a working woman go to her family. While, no doubt, the girls and young women often spend a good deal on clothes, the married woman who works for "spending money" for herself, apart from her family, is, at present, so rare as to be negligeable.

4. If married women should be against their own will and judgment compelled to forego 18s. to 20s. or more a week (see wages above) of the family income for many months, the allegation that there is increasing use of unlawful means to prevent child-bearing in some of the towns mentioned would have to be further considered. Some of the notes on bad influences in Burnley refer to the presence there of this debasing and disintegrating factor*. My attention has also been called to its presence in Nottingham, Leicester and elsewhere.

5. Although Clause D, (see above), preference for factory life, seems negligeable as a motive for leaving an infant while only a few weeks old some consideration must, no doubt, be given to the spinner or weaver' natural tendency to take pride in her trade-skill and greater ease in doing work for which she is trained and fitted than work for which she has never been trained—(though she might have been trained if this had ever been adequately thought of as part of national policy).

IV.—Means and Agencies other than Prohibition.

54. Turning to the existing means and agencies other than prohibition of employment for enabling mothers to devote themselves to their infants the first claim for consideration seems to be made by the infants of unmarried mothers. It cannot be too clearly borne in mind that these mothers, are discharged from the workhouse infirmaries after their confinement before the four weeks limit in Section 61 is complete. I have never heard of any case where they are kept longer than a fortnight, and I am informed that the time is sometime less. Ordinary voluntary maternity charities are, as a general rule, although there are exceptions, closed to mothers of illegitimate infants, as also Charity Organisation Society aid. This may or may not be expedient, but there can be no doubt that such facts make prohibition of employment of the mother the most serious remaining injury that can be inflicted, unless some suitable organised means of support can be devised. It is not always the worst of these women who decline to enforce a claim for maintenance, or who are unwilling to stay in the workhouse. There are very few voluntary rescue homes or "penitentiaries" in England where the

* It seems to be my duty to mention that complaints in London have been made to me, and sustained, that girls are employed in the manufacture of articles to prevent conception. This employment is not illegal in England, and official efforts to persuade the manufacturer to discontinue such employment have not succeeded.

mother is allowed to keep her infant with her. So far as I have seen, incomparably the best results are obtained in those homes where this is allowed or organised. I learn recently from an American lady of great experience in such work in the United States, who came over to learn what she could here, that, in our neglect in England to use that essential method, and in the lack of effective trained government control and supervision of those institutions we are far behind the work that is being done in the States.

55. Leaving this special class aside, and looking at the position as a whole, general neglect of the possible voluntary agencies for helping mothers before, during, and after confinement, to take care of the infant life is the chief impression gathered. In Lancashire, where insurance of all kinds abounds (including infant life insurance), Miss Squire was unable to find any form of Provident Society to which women expecting confinement could contribute while still able to earn wages. I believe it was established at Mulhouse that organisation of a maternity fund by manufacturers, to which both employer and employed contributed, resulted in a reduction of infant mortality by half. Whether by local trade effort or larger national effort, provident insurance of the kind might be expected in time to eliminate the present grave number of cases where infant lives are lost to the State at birth, and needless suffering caused to hard-working, valuable mothers by total absence of skilled attendance.

56. Miss Squire found in Preston and elsewhere a local "Ladies' Charity" of a languishing, antiquated character, "for the relief of poor married women in child-bed." She found in the case of one that—

> "Since its foundation in 1811 the number of cases relieved annually has decreased from 300 or 400 to under fifty, although the population has increased so enormously. Last year, a time of special poverty . . . only forty-five mothers were assisted. . . . The Secretary was unable to explain this except on the ground that there was very little poverty. The relief given takes the form of medical aid, loan of requisite changes of linen, four ounces tea, one pound sugar, one pound barley, four loaves of bread, one yard flannel, and one pound soap."

57. It is evident that such charities must be fundamentally reorganised and brought into touch on the one hand with increased scientific knowledge and skill, and on the other with the changed economic conditions of the women's lives, if they are to serve their original purpose. The highly-skilled and strenuous cotton operative, with her invaluable sense of personal dignity, can no longer be helped in her heavy double work, as mother and as mainstay of a great industry, by old-fashioned charities. "Give her of the fruit of her own hands."

58. In Dundee there is a maternity charity hospital, which expressly excludes distinction between mothers married and unmarried. In that town one of the chief problems seems to be desertion of the mother.* Miss Paterson found over 100 cases in twelve mills, only among the married mothers, and these did not include the cases where the husband lived apart, but contributed something to the mother's support. Very often the wife seems to be left with the whole burden of keeping the family, for little reason except that she is capable of doing it.

> "Owing to the absence of the mothers in the mills, there is less opportunity for district or other philanthropic visiting in Dundee than other towns, and little information to be gained through these channels. . . . The extensive employment of women with home duties"

is a matter, Miss Paterson reports, which in the opinion of a member of the Social Union is making all social effort ineffectual. I have so far received no information whether effort has yet been directed in Dundee towards organising provident insurance of bread-winning mothers for the time of their confinements.

59. Miss Martindale says of Hanley and Longton—

> "As there is no maternity hospital (with the exception of the workhouse infirmary) in the district, the women are always confined in their own home, and are usually cared for by a kindly neighbour."

60. In the majority of the towns named, the one most important step so far towards fitting mothers better to care for their infant children is the appointment under the medical officers of health, of health visitors, and women sanitary inspectors. Sanitary authorities are in this way providing for instruction of the mother in the case of every birth of which notice of registration is given by the Registrar. Miss Squire visited some houses with one of these health visitors, and was—

> "Favourably impressed with the effect she seemed to produce upon the mothers or nurse, as the case might be. The serious proportion of infant deaths is a matter of common knowledge in the town, and the mothers and nurses seemed to take it as quite reasonable that the Medical Officer of Health should prescribe to them what they might and might not do, and to be impressed with the fact that what their mothers did before them would no longer be allowed to be their guide in the treatment of their children."

61. All the Inspectors have reported on efforts, which have more or less failed to establish crèches for the care of young children, while their mothers are at work. This failure may not be final, but it does appear as though English and Scottish mothers have an instinctive prejudice in favour of individual care by nurses.

> "Generally the nurse is a relation of the mother, who, on account of increasing years, has given up work at the mill. . . . They rarely take more than one baby at a time, but they will take two or three children of one family. The charge, 4s. 6d. a week,* for a baby includes its food and the washing of its clothes."

62. During the recent depression in the cotton trade the master of a workhouse—

> "Had had a large increase in the number of older and widowed women . . . . no longer wanted to mind the home and children while the mother went to the mill."

63. I have already explained to the Committee my belief in the great educational work that can be done by early theoretical and technical training of the girls of this country, the future mothers, in personal, domestic, and infant hygiene. I do not mean by this that anything should interfere with or lessen their chances of having, equally with the boys, all that can be given in primary or secondary education of general training of the mind and understanding. Nor do I mean anything that would lessen the chances for able girls in the humblest classes of rising by means of scholarships to a skilled trade or to higher learning. What I do mean is that for the great masses of future citizens, whether boys or girls, the school education that has nothing to do with and throws out no "ideas" upon the main important duties and occupations of most of their lives, is bound, as education or as instruction, to be more or less a failure.

64. No one can contend, least of all those who have any familiarity with the general ways and objects of factory and workshop girls of, say, fifteen onwards at the present time, that these girls have been given a fair chance of starting life with the beginnings of understanding what they may do for their country as housewives or as mothers. Why should the vast majority of them set a high value on their own services in domestic life, or have even a faint idea that they can be of value as things are treated at present? They are permitted to have for their housekeeping (if they do not earn anything themselves) a fraction of the family income, and they may single-handed work at duties for which the highest knowledge and skill would not be too great, by the dim light of instinct and tradition.† And yet it would be no more irrational to try to fight a modern army with the weapons of two centuries back, than it actually is to leave untaught girls in their

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* Reluctance of the mother to enforce maintenance will always in some cases be a difficulty, but some means might possibly be organised for initiating and bearing the expenses of legal steps to secure contribution from the father.

* In Staffordshire 3s. 6d.; in some towns of Lancashire 5s.

† Such tradition as that which defends the feeding of a five weeks old baby on "bread pobbies" that is bread, salt, sugar, and water, "put in the oven overnight to get the balm out of it."

separate "homes" to raise up, in the midst of all the enemies to infant and child life in our urban centres, the future citizens of our country. Some hopeful beginnings have been made; here and there a little domestic economy as an afterthought in the schools, devoted work of medical officers of health with their sanitary inspectors and health visitors in some of the towns. But who can say that adequate sacrifices in money or anything else have been even thought of, much less attempted, to enable the future mothers and housewives to be fit for their task, or to realise that it is a task to which the governing classes of the country attach any value.

65. Until we have even secured that so many infants are neither injured nor die at birth through absolute lack of skilled care of the mother, it seems strange to be planning for future battleships or future armies or talking of old age pensions, or noting with alarm the decreasing birth rate, or discussing the possibility of prohibiting the mother from re-entering the factory for three months or more. In the case under Section 61 mentioned in a footnote above, the woman was absolutely untended and alone at the birth of her child.

66. It ought not to be impossible to link together in one great national provident and protective association all the isolated, half-informed societies and agencies at work in aid of maternity and for the saving of infant life.* More than that I believe, with Miss Squire, that all over the country, but particularly in the great centres in the Midlands and the North, it needs only an organising mind and purpose to bring such a national movement into being.

67. As regards provision for technical training of the girls, one may point to what is being done for the training of teachers of public hygiene at Bedford College for Women, University of London, and of domestic hygiene at centres such as the Battersea Polytechnic. I need not enter into details or schemes here, but I would point to the striking curves facing page x of the Report of the Mosely Education Commission, illustrating the money value of technical training as compared with trade school, training, shop training, and unskilled labour in the case of men. At present the great masses of housewives and mothers are in the position of the unskilled group, and very few have even such chances as would be comparable with those of the trade-school group. What the nation needs is to sink some of its capital in work that is comparable with that of the technical school group, and then wait till those trained young women are twenty-five years of age to see the returns begin. It is not training only in the art of laying a fire or cooking a dinner, or washing or dressing a baby that I mean by technical training in domestic hygiene. That is comparable to the work of the trade school, and that we have already in a rudimentary stage, still to be well developed, in the schools. It is domestic hygiene in the more scientific sense, as based on simple broad ideas that can be afterwards applied that I especially mean.

* I have not yet been able to ascertain, but am making inquiries into the work that is being done by the great "Friendly Societies" in aid of maternity. One of the largest societies has, I understand, been giving increased attention to this class of benefit, and an investigation with a view to obtaining reliable data on which to base contributions for it is in progress which should prove of great value.

V.—Opinions on Amendment of the Law.

68. Miss Paterson alone offers a definite suggestion as to amendment of Section 61; I have already quoted Miss Squire's suggestion of 1897 (above, on page 3).

> "If any amendment of the present Act were made, I would suggest that the word 'knowingly' should be left out, and the employment made illegal —so that in order that the employer should not be held responsible, 'due diligence' (*see* Section 141) would have to be shown when he or H.M. Inspector could charge the actual offender. I would be glad to see the re-employment at three months made permissible only on production of a medical certificate, showing that the child's health would not be injured by its mother's absence."

69. This does not touch the question of transference of the mother's services to a fresh employer. Unless some provision could be made, comparable to that of Section 73 (which lays on medical practitioners the duty of notifying certain diseases contracted in a factory or workshop), which would require doctors and midwives to report child-birth to the Medical Officer of Health, and thereupon the latter to inquire into and forward to H.M. Inspector of Factories any cases where there is reason to believe that there is return to employment before the proper time, I do not see how such re-employment can ever be controlled.

70. I have already, I hope, sufficiently indicated what I think should be done to improve and make use of the Registers of Births and Deaths.

71. In my earlier evidence to the Committee, I indicated my belief that much remains to be done to make factory work generally less overstraining to the forces of women and girls.

9th May, 1904. A. M. Anderson.

APPENDIX Va

I.

ENGLISH MORTALITY AMONG INFANTS UNDER ONE YEAR OF AGE.

Prepared under Dr. Tatham's direction, from the Official Returns in the General Register Office

The following table is designed to show the changes in the causes of infant mortality in an urban and a rural group of counties during the last quarter of the nineteenth century—the mortality from several causes in the five years 1873–77 being given in comparison with that in the five years 1898–1902. The most striking feature of the table is the comparatively small change during the twenty-five years in the death-rates from all causes—the change in the group of urban counties being a slight increase of between two and three per cent., and that in the rural counties a decrease of a still smaller amount—about 1 per cent. only. These changes being in opposite directions show a wider difference between urban and rural rates in the recent quinquennium than in the earlier one; in the years 1873–77 the rates in the urban counties were higher than those in the rural by 26 per cent. among male, and by 29 per cent. among female children, while in the years 1898–1902 the differences had increased to 30 per cent. and 34 per cent respectively.

Looking at the several causes of death mentioned in the table it will be seen that (excepting diarrhœa which will be reverted to later) the epidemic diseases to which children are most liable were generally less prevalent in the recent quinquennium than in the earlier one—small-pox, scarlet fever, diphtheria and croup, and erysipelas showing a decline among both male and female children in the urban as well as in the rural counties. Whooping cough also showed a decrease of more than 10 per cent. in the urban counties, but an increase of nearly the same amount in the rural counties, while measles showed an increased fatality among children of each sex and in both groups of counties. There was also a general decline in the mortality from syphilis, tuberculous disease of various forms, meningitis and convulsions, laryngisimus stridulus, bronchitis and laryngitis, teething, and in atrophy debility and inanition. In the aggregate of diseases dealt with in this paragraph there has been a marked reduction of mortality during the recent period, when the rate was 22 per cent. lower than in the earlier years among males in the urban, and among males and females in the rural counties, and 23 per cent. lower among females in the urban counties. In other words, from these causes infant mortality generally showed a decrease of nearly one-fourth part. The causes which contributed to maintain the total infant mortality at about its former level were diarrhœal diseases (including enteritis and gastro enteritis), diseases of the stomach and liver, pneumonia, premature birth, and congenital malformations. The increase of pneumonia mortality is coincident with an increased fatality of that disease in the general population, and although this increase between the two quinquennia is proportionally large it counts but little against the decrease from the other causes just mentioned. With diarrhœal diseases and with premature birth and congenital defects the case is far different, the increased mortality from these causes being very marked. Taking together diarrhœal diseases and diseases of the stomach and liver, the recent five years show an increase of more than 70 per cent. in the urban, and of nearly 70 per cent. in the rural counties. From premature birth and congenital defects the increase, though numerically smaller, was proportionally even greater than that from diarrhœal diseases. Among males in the urban counties the rate had increased by 70 per cent., and among females by 64 per cent., while in the rural counties it had increased by 74 per cent. in each sex. The increased mortality from diarrhœal diseases is probably attributable in great part to the prevalence of artificial infant feeding, and this view appears to be consistent with the fact that the increase has been greater in the urban than in the rural counties.

One point must not be lost sight of in considering these rates of infant mortality—namely, the certainty that more accurate certification of cause of death has been secured in recent years. This would probably tend to a transfer of deaths from indefinite to definite headings, but the changes of mortality indicated in the above comments are so well marked that they probably represent with approximate accuracy the changes which have actually taken place, apart from this disturbing influence.

TABLE A.—*Infantile Mortality. Causes of Death from various diseases among Male and Female Infants under the age of one year* (a) *in a group of Urban Counties* and* (b) *in a group of Rural Counties† in the opening and closing quinquennia respectively of the last quarter of a century.*

CAUSES OF DEATH.	* URBAN COUNTIES.				† RURAL COUNTIES.			
	Males.		Females.		Males.		Females.	
	1873–1877.	1898–1902.	1873–1877.	1898–1902.	1873–1877.	1898–1902.	1873–1877.	1898–1902.
Small Pox	586	44	571	37	33	2	23	1
Measles	3,562	4,963	2,979	4,151	536	513	416	433
Scarlet Fever	1,855	372	1,528	296	364	32	261	27
Diphtheria	395	812	296	660	91	71	70	61
Croup	1,055	212	732	135	217	43	145	30
Whooping Cough	7,105	6,993	7,570	7,503	1,664	1,480	1,624	1,503
Erysipelas	1,117	408	1,198	476	221	48	199	58
Diarrhœa, Dysentery, Cholera	24,876	34,481	20,616	29,842	3,392	3,340	2,746	2,556
Syphilis	2,629	2,060	2,349	1,704	362	235	281	182
Starvation, Want of Breast Milk	706	769	674	585	109	114	98	105
Rickets	133	1,015	90	662	24	152	10	106
Thrush, Parasitic Diseases	1,592	386	1,329	315	666	105	563	85
Tuberculous Diseases: Phthisis	1,441	692	1,257	549	426	135	399	100
Tuberculous Meningitis, Hydrocephalus	4,946	2,949	3,308	2,268	740	378	436	305
Tuberculous Peritonitis, Tabes Mesenterica	6,480	5,224	5,173	4,083	1,162	671	958	467
Other Forms of Tuberculosis, Scrofula	1,236	2,139	1,022	1,669	297	274	252	251
Meningitis, Inflammation of Brain	2,872	4,561	2,045	3,455	258	401	172	298
Convulsions	35,458	26,672	26,244	20,124	8,525	5,214	6,162	3,780
Laryngismus Stridulus	918	548	452	293	94	93	51	44
Laryngitis	274	445	200	309	61	76	35	48
Bronchitis	24,366	21,740	18,645	17,136	4,190	3,463	3,104	2,690
Pneumonia	11,740	18,579	8,832	13,954	2,400	2,631	1,657	1,858
Enteritis, Gastro-Enteritis	1,626	14,664	1,130	12,275	319	1,836	240	1,416
Stomatitis	252	526	201	474	53	98	52	79
Diseases of Stomach	841	3,731	679	3,110	218	591	175	461
Diseases of Liver	1,412	974	881	616	329	279	188	129
Premature Birth	16,953	29,878	13,438	23,230	4,224	5,786	3,203	4,485
Congenital Defects	2,373	7,138	2,067	5,331	618	1,289	529	987
Teething	4,311	3,786	3,344	2,954	785	565	540	444
Atrophy, Debility, Inanition	33,203	30,239	27,597	23,816	10,199	6,315	8,086	4,794
All other causes	14,224	14,536	11,759	11,555	4,158	2,650	3,304	2,060
Total from all causes	210,537	241,533	168,206	193,567	46,735	38,810	35,979	29,841
Total Births	1,197,072	1,342,156	1,155,722	1,297,246	333,956	279,687	319,778	269,966

* (i) *Urban Counties.*—Glamorgan, Lancaster, London, Middlesex, Monmouth, Northumberland, Nottingham, Stafford, Warwick, East Riding, West Riding (York).
Estimated Urban population in 1902—17,818,667.

† (ii) *Rural Counties.*—Buckingham, Cambridge, Cornwall, Hereford, Huntingdon, Lincoln, North Wales, Norfolk, Oxford, Rutland, Salop, Somerset, South Wales (less Glamorgan), Suffolk, Westmorland, Wilts.
Estimated Rural population in 1902—4,279,175.

TABLE A$_1$ (BASED ON TABLE A).—*Average rate of infant mortality under one year, per 1,000 births, among male and female infants—severally—in the same groups of Counties as in Table A, in the opening and closing quinquennia of the last quarter of a century.*

CAUSES OF DEATH.	URBAN COUNTIES.				RURAL COUNTIES.			
	MALES.		FEMALES.		MALES.		FEMALES.	
	1873–1877.	1898–1902.	1873–1877.	1898–1902.	1873–1877.	1898–1902.	1873–1877.	1898–1902.
All Causes	175·9	180·0	145·5	149·2	139·9	138·8	112·5	111·0
Small Pox	·5	·0	·5	·0	·1	·0	·1	·0
Measles	3·0	3·7	2·6	3·2	1·6	1·8	1·3	1·6
Scarlet Fever	1·5	·3	1·3	·2	1·1	·1	·8	·1
Diphtheria and Croup	1·2	·8	·9	·6	·9	·4	·7	·3
Whooping Cough	5·9	5·2	6·6	5·8	5·0	5·3	5·1	5·6
Erysipelas	·9	·3	1·0	·4	·7	·2	·6	·2
Diarrhœa, Dysentery, Cholera, Enteritis	22·1	36·6	18·8	32·5	11·1	18·5	9·3	14·8
Syphilis	2·2	1·5	2·0	1·3	1·1	·8	·9	·7
Rickets	·1	·8	·1	·5	·1	·5	·0	·4
Tuberculous Diseases	11·8	8·2	9·3	6·6	7·9	5·2	6·4	4·2
Meningitis, Convulsions	32·0	23·3	24·5	18·2	26·3	20·1	19·8	15·2
Laryngismus Stridulus	·8	·4	·4	·2	·3	·3	·2	·2
Bronchitis, Laryngitis	20·6	16·5	16·3	13·4	12·7	12·7	9·8	10·2
Pneumonia	9·8	13·8	7·6	10·8	7·2	9·4	5·2	6·9
Diseases of Stomach and Liver	1·9	3·5	1·3	2·9	1·6	2·9	1·1	2·2
Premature Birth	14·2	22·3	11·6	17·9	12·6	20·7	10·0	16·7
Congenital Defects	2·0	5·3	1·8	4·1	1·9	4·6	1·7	3·7
Teething	3·6	2·8	2·9	2·3	2·4	2·0	1·7	1·7
Atrophy, &c.	29·9	23·8	25·8	19·4	33·0	23·7	27·5	18·8
All other Causes	11·9	10·9	10·2	8·9	12·3	9·6	10·3	7·5

NOTE.—·0 indicates that the deaths were too few to give a rate of ·05 per 1,000.

II.

Mortality among Legitimate, as compared with Illegitimate Infants.

In the following tables an attempt has been made to show the relative incidence of mortality from several causes on legitimate and on illegitimate children, in urban and in rural areas. Owing to the large amount of work involved in abstracting these deaths from the registers it has been decided to limit the investigation to the mortality in a single year, viz., that of 1902, and to deal only with London, as representing an urban area. For this reason, the figures relating to several of the diseases, such as smallpox, scarlet fever, erysipelas and laryngismus stridulus are of relatively little significance, and are retained simply to keep this and the preceding table uniform in design. Although for the purposes of an exhaustive inquiry a larger basis of facts would be advisable, the consistent character of the results here presented leaves little doubt that they indicate with approximate accuracy the true conditions as to mortality from various diseases which exist among legitimate and illegitimate children respectively. The top line of the table shows at a glance that there is an excessive death rate among illegitimate children, which is in London about twice as great as that prevailing among those born in wedlock, and in the rural counties, more than one and a half times as great. Glancing down the table it will be seen also that there is a marked excess of mortality under almost every heading, the exceptions occuring only in the cases of those diseases which are relatively so uncommon as to give too small a basis for comparison. Diarrhœa (with enteritis and diseases of the stomach and liver) and atrophy cause exceptionally high mortality among illegitimate children, the rate from these diseases in London being two and a half times as high among male, and more than three times as high among female illegitimate, as among legitimate, children; in the rural counties, too, the mortality from these diseases among the illegitimate is about twice as high as that among the legitimate. Syphilis is enormously more fatal among the illegitimate than among the legitimate, both in the urban and in the rural areas, premature birth and congenital defects also cause excessive mortality among the illegitimate, especially in London. Comparison of the figures for London with those for the rural counties shows a great excess of mortality among illegitimate children in the former area; for, whereas, among legitimate children in London the death rates are in excess of those in the country by about one-fifth part, among the illegitimate the London rates exceed the country rates by more than 50 per cent. among boys, and by nearly 60 per cent. among girls. This excess is especially noticeable in the case of diarrhœa, from which disease the rates are about twice as high among legitimate children in London as in the country, and about three times as high among illegitimate. There is reason to believe, too, that this excessive mortality among illegitimate children in London is understated rather than overstated, for it is a known fact that many unmarried women who reside outside registration London are admitted to London hospitals at the time of parturition, and that the births are registered in London. The official records do not show what becomes of the mothers or of the children after discharge from the hospital, but it is almost certain that most of them at least return to the place whence they came, so that deaths among these children which occur more than a few weeks after birth are in all probability registered outside London. On the other hand, some few legitimate children who are born elsewhere than in London may be placed out to nurse with people residing in London, and any deaths among them would be registered in London if they occurred there. It is unlikely, however, that these latter cases would be as numerous as those first mentioned.

TABLE B.—*Mortality among Legitimate and Illegitimate Infants, respectively, in the year* 1902.—*Average rates of death from various causes, under one year, per* 1,000 *births* (a) *in London and* (b) *in the same Rural Counties as in Table A.*

Causes of Death.	London.				Rural Counties.			
	Males.		Females.		Males.		Females.	
	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.
All Causes.	151·2	289·3	118·7	264·1	125·6	190·2	98·8	166·1
Small Pox	·2	—	·1	—	·0	—	·0	—
Measles	4·1	4·2	3·4	6·0	2·9	1·8	2·3	1·5
Scarlet Fever	·2	·4	·2	·4	·2	—	·1	—
Diphtheria and Croup	·8	·4	·6	.4	·4	·4	·3	—
Whooping Cough	6·1	4·2	6·2	8·6	5·2	5·7	5·8	6·6
Erysipelas	·2	·4	·4	·4	·2	—	·3	—
Diarrhœa, Dysentery, Cholera, Enteritis	20·6	48·6	16·3	47·9	9·0	14·1	6·3	13·9
Syphilis	1·9	19·7	1·1	9·5	·4	3·2	·5	4·0
Rickets	1·0	4·2	·6	1·7	·5	1·4	·5	1·5
Tuberculous Diseases	7·9	18·0	6·5	13·8	4·9	6·4	3·3	6·2
Meningitis, Convulsions	13·7	20·6	10·0	20·3	18·7	26·5	13·7	23·0
Laryngismus Stridulus	·4	·8	·3	—	·3	·7	·2	—
Bronchitis, Laryngitis	13·5	18·0	10·5	17·3	11·8	15·2	10·5	16·8
Pneumonia	17·1	18·5	13·1	17·7	11·4	13·1	7·8	7·7
Diseases of Stomach and Liver	2·5	4·6	2·6	5·6	2·2	3·9	2·0	2·9
Premature Birth	23·1	34·4	17·4	33·7	20·3	30·4	15·9	19·7
Congenital Defects	6·4	9·6	4·3	7·3	5·5	3·9	4·2	4·7
Teething	1·7	5·0	1·6	2·6	2·2	2·1	1·6	4·4
Atrophy, &c.	17·2	50·8	12·8	45·7	20·4	41·7	16·9	36·9
All other Causes	12·6	26·9	10·7	25·2	9·1	19·7	6·6	16·3

NOTE.—0 indicates that the deaths were too few to give a rate of ·05 per 1,000.

III.

Age-Incidence of Infantile mortality, in weeks and months of the first year of life.

The following tables are added to show in detail the age incidence of mortality among legitimate and illegitimate children under one year (*a*) in London and (*b*) in the rural counties. Table B_1 gives the actual number of deaths recorded at the several selected age groups of the first year of life: Tables B_2 and B_3 give proportions based upon those numbers, one giving the percentage of deaths at each age to the total deaths registered under one year of age, and the other the number of deaths recorded at each age to 1,000 births registered. Taking, first, the table of percentages of deaths at each age, it will be seen that a larger proportion of legitimate than of illegitimate children die during the first month of life, except among male children in the rural counties where the proportions are practically identical. For the next few months after the first, the case is different, the percentages of deaths being generally the greater among the illegitimate, while in the later part of the first year the proportions of deaths among the illegitimate are again the lower.

Here also the explanation of the curious differences would seem to depend in part upon the number of illegitimate children born in hospitals or infirmaries. Admitting the practical certainty that a larger proportion of illegitimate than of legitimate children are born in such institutions, and further admitting the prevalence of a lower rate of mortality among newly born children in these institutions than in the general population—especially in the poorest and most ignorant part of it—it follows that illegitimate children born in institutions and there efficiently cared for, are preserved during the first few weeks of life, but become subject to a high death-rate on leaving these institutions. These remarks, referring as they do to the *percentages* of deaths registered at the several ages do not, of course, imply that the actual *death-rates* are at any time lower among the illegitimate than among legitimate children: the table giving the proportion of deaths at each age to children born shows that such is not the case, but that, on the contrary, the mortality at the earlier ages, is much the higher among illegitimate children. It shows, however, that this excess is proportionally much greater among children during a few months of life after the first, and that towards the end of the first year the rates among the illegitimate approach very nearly those among the legitimate children.

It might be objected that the number of deaths of illegitimate children is so small as to render unsafe any comparison of death-rates derived from them. On this point, however, it must be remembered that they are the deaths of illegitimate children occurring among more than 130,000 births in London and more than 100,000 births in the rural counties; while the consistent nature of the results obtained would seem to indicate that the figures here presented represent very nearly the true conditions of mortality which prevail among legitimate and illegitimate children respectively, in London and in the selected rural counties.

TABLE B_1.—*Deaths among legitimate and illegitimate Infants respectively, in the year* 1902. *Age incidence of deaths at the several age groups under one year* (a) *in London and* (b) *in the same group of rural counties as in Table A.*

Ages at Death.	London.				Rural Counties.			
	Males.		Females.		Males.		Females.	
	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.
Under one week	1,776	100	1,163	99	1,515	112	1,074	87
1-2 weeks	455	26	318	28	330	38	237	23
2-3 „	435	28	325	20	298	26	259	25
3-4 „	317	27	308	13	241	21	164	11
Total under one month	2,983	181	2,114	160	2,384	197	1,734	146
1-2 months	1,026	103	764	86	738	73	570	57
2-3 „	764	88	594	64	556	53	418	39
3-4 „	707	73	555	44	491	39	332	41
4-5 „	603	40	450	45	384	31	301	30
5-6 „	552	43	394	39	336	33	244	24
6-7 „	565	37	421	39	320	28	248	27
7-8 „	534	34	412	31	301	25	231	22
8-9 „	541	28	421	28	303	15	219	17
9-10 „	468	25	401	24	282	15	212	25
10-11 „	481	20	397	19	243	16	224	15
11-12 „	444	18	414	33	204	13	202	12
Total under one year	9,668	690	7,337	612	6,542	538	4,935	455
Total Births	63 952	2,385	61,824	2,317	52,093	2,828	49,962	2,739

TABLE B$_2$.—*Mortality among legitimate and illegitimate Infants respectively, in the year* 1902. *Proportional age incidence of deaths at the several age grounps, to one hundred deaths at all ages under one year* (a) *in London, and* (b) *in the same group of rural counties as Table A.*

AGES AT DEATH.	LONDON.				RURAL COUNTIES.			
	Males.		Females.		Males.		Females.	
	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.
Under one week	18·4	14·5	15·9	16·1	23·2	20·8	21·8	19·1
1–2 weeks	4·7	3·8	4·3	4·6	5·0	7·1	4·8	5·1
2–3 „	4·5	4·1	4·4	3·3	4·6	4·8	5·2	5·5
3–4 „	3·3	3·9	4·2	2·1	3·7	3·9	3·3	2·4
Total under one month	30·9	26·3	28·8	26·1	36·5	36·6	35·1	32·1
1–2 months	10·7	14·8	10·4	14·0	11·3	13·6	11·6	12·5
2–3 „	7·9	12·8	8·1	10·4	8·5	9·9	8·5	8·6
3–4 „	7·3	10·6	7·6	7·2	7·5	7·2	6·7	9·0
4–5 „	6·2	5·8	6·1	7·4	5·9	5·8	6·1	6·6
5–6 „	5·7	6·2	5·4	6·4	5·1	6·1	4·9	5·3
6–7 „	5·8	5·4	5·7	6·4	4·9	5·2	5·0	5·9
7–8 „	5·5	4·9	5·6	5·1	4·6	4·6	4·7	4·9
8–9 „	5·6	4·1	5·7	4·6	4·6	2·8	4·5	3·7
9–10 „	4·8	3·6	5·5	3·9	4·3	2·8	4·3	5·5
10–11 „	5·0	2·9	5·4	3·1	3·7	3·0	4.5	3·3
11–12 „	4·6	2·6	5·7	5·4	3·1	2·4	4.1	2·6
Total under one year	100·0	100·0	100·0	100·0	100·0	100·0	100·0	100·0

TABLE B_3.—*Mortality among legitimate and illegitimate Infants respectively, in the year* 1902. *Deaths per* 1,000 *births at the several age groups under one year,* (a) *in London, and* (b) *in the same group of rural counties as in Table A.*

Ages at Death.	London.				Rural Counties.			
	Males.		Females.		Males.		Females.	
	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.	Legitimate.	Illegitimate.
Under one week	27·8	41·9	18·8	42·8	29·1	39·6	27·8	31·8
1–2 weeks	7·1	10·9	5·1	12·1	6·4	13·4	4·7	8·4
2–3 „	6·8	11·8	5·3	8·6	5·7	9·2	5·2	9·1
3–4 „	5·0	11·3	5·0	5·6	4·6	7·4	3·3	4·0
Total under one month	46·7	75·9	34·2	69·1	45·8	69·6	34·7	53·3
1–2 months	16·0	43·2	12·3	37·1	14·1	25·8	11·4	20·8
2–3 „	11·9	36·9	9·6	27·6	10·7	18·7	8·4	14·2
3–4 „	11·1	30·6	9·0	19·0	9·4	13·8	6·7	15·0
4–5 „	9·4	16·8	7·3	19·4	7·4	11·0	6·0	11·0
5–6 „	8·6	18·0	6·4	16·8	6·4	11·7	4·9	8·8
6–7 „	8·8	15·5	6·8	16·8	6·1	9·9	5·0	9·8
7–8 „	8·4	14·3	6·7	13·4	5·8	8·8	4·6	8·0
8–9 „	8·6	11·7	6·8	12·1	5·9	5·3	4·4	6·2
9–10 „	7·3	10·5	6·5	10·4	5·4	5·3	4·2	9·1
10–11 „	7·5	8·4	6·4	8·2	4·7	5·7	4·5	5·5
11–12 „	6·9	7·5	6·7	14·2	3·9	4·6	4·0	4.4
Total under one year	151·2	289·3	118·7	264·1	125·6	190·2	98·8	166·1

INTER-DEPARTMENTAL COMMITTEE ON PHYSICAL DETERIORATION.

MINUTES OF EVIDENCE

TAKEN BEFORE THE

INTER-DEPARTMENTAL COMMITTEE

ON

PHYSICAL DETERIORATION.

Vol. II.—List of Witnesses and Minutes of Evidence.

Presented to both Houses of Parliament by Command of His Majesty.



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MINUTES OF EVIDENCE

TAKEN BEFORE

THE INTER-DEPARTMENTAL COMMITTEE

ON

PHYSICAL DETERIORATION.

(PRIVY COUNCIL OFFICE, WHITEHALL, S.W.),

FIRST DAY.

Wednesday, 9th December, 1903.

PRESENT

Mr. ALMERIC W. FITZ ROY (*in the Chair.*)

Colonel G. M. FOX.	Colonel GEORGE T. ONSLOW.
Mr. J. G. LEGGE.	Mr. JOHN STRUTHERS.
Mr. H. M. LINDSELL.	Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary*).

Sir WILLIAM TAYLOR, M.D., K.C.B., K.H.P., L.L.D., called; and Examined.

Sir W. Taylor.

1. (*Chairman.*) You are the Director-General of the Army Medical Service?—Yes.

2. How long have you occupied that position?—Two years.

3. So that your experience of the subject-matter of these documents does not cover more than a small fraction of the time occupied by the figures?—That is ten years. Well, I was in the office before that as Deputy-Director-General.

4. For how long?—From 1893 to 1898.

5. So that you practically do cover the period?—Well, my knowledge of the office does cover it except in this way, that my tenure of office was broken by various appointments in the field—with the Japs in China in 1894 and 1895; Ashanti, 1895 and 1896; in Egypt in 1898 and 1899.

6. But not sufficient to interrupt the continuity of your experience?—No.

7. We are very much obliged to you for providing us with a second memorandum and the figures attaching to it. You rather complain in that second memorandum of unfair deductions, perhaps unwarrantable is the better word, which have been drawn from the use made of the figures included in the first memorandum?—Where is the complaint?

8. Well, you seem to think that there has been some misunderstanding as to the main question at issue owing to the impression produced by your first memorandum?—No; I think, if I may say so, my complaint was that there was a misunderstanding of its object. Although in the first memorandum "deterioration" or "deteriorating" was mentioned four times, the words were quotations.

9. Your memorandum hangs to some extent upon the Report of the Inspector-General of Recruiting?—To a certain extent it does. What forces itself upon me is that 37·6 of those presenting themselves for examination as anxious to be soldiers now are unfit to bear arms, and whatever may have happened before, I think that is sufficient to demand special inquiry.

10. You remember the Report of the Inspector-General of Recruiting does speak of the gradual deterioration of the physique of the classes from which the recruits are principally taken?—He is not justified in that. We have no data on which to form that opinion. That is the Inspector-General of Recruiting's expression, and not mine.

11. Are you inclined to think that your figures are calculated to confirm the alarm excited by Sir Frederick Maurice's speculations?—Well, if you look at the table, page 3 of my original memorandum, you will find that table was made up on purpose to compare the results of recruiting from our Returns with Sir Frederick Maurice's statement, and you will see that the ratio per cent. (take column 5) is 34·6 as against Sir Frederick Maurice's 60 per cent. Now, that is the result of the primary medical examination; and if you take Sir Frederick Maurice's 60 per cent. and the total of the ratios worked out in columns 5, 6, and 7, *i.e.*, those rejected at the primary inspection, those discharged within three months (·9), and those within two years of enlistment (2·1), you get a total of 37·6.

12. Further, while we are on this statement I call your attention to the fact that if you divide the period into two quinquennial periods the inferences are more indicative of an improved state of things?—In the year 1897 we were so much bothered by absolutely unfit recruits that came up to us that we rather protested against examining "Weeds," and the Inspector-General issued an order to all recruiting officers as well as to recruiting sergeants that men manifestly unfit because of inferior physical development should not be taken before the medical officers

Sir W. Taylor.

at all, and a very large number of men who used to come before them do not come now. That is a great boon to the medical examining officers. I am not in a position to prove it, but I think that that accounts for a decrease in the number of rejections at the primary medical examinations.

13. You think that that is the only cause of it?—No. When you come down to 1899, when the War broke out, men were perhaps sometimes taken who at other times would have been rejected.

14. (*Colonel Fox.*) Of the number of rejections for recruiting were there not a vast number that came up over and over again?—No. I think that has been very much exaggerated. It does happen at places like Woolwich and London. A man tries to enlist at Woolwich and fails, and he may probably try again at, say, St. George's Barracks.

15. (*Chairman.*) But no record is kept of those rejections by the recruiting sergeant, so that you have no means of knowing?—That is so. One of my officers had a conversation with Sir Francis Howard on this subject. He promised to have a record kept for a certain period of the men rejected by recruiters at some of the larger recruiting centres.

16. Will not that be done systematically in the future?—I hope so. It is being done at the present time for fourteen days at certain large centres.

17. The curious thing is that General Maurice's statement is not established by any figures, and cannot be?—General Maurice, I know—because he told me so when he came to see me—says that he has got a very large number of figures with reference to Manchester. Manchester—if you carefully look at the tables in the second memorandum—you will find always takes the lead in rejections.

18. That is not owing to any special stringency, is it?—No.

19. You have the same standards everywhere?—Yes. Here are the twelve largest recruiting centres in 1901 and 1902, and their relative positions with regard to the number of rejections are these:—In 1901, Manchester, Belfast, Liverpool, London, Hounslow, Newcastle-on-Tyne, Birmingham, Woolwich, Edinburgh, Lichfield, Glasgow, Dublin. In 1902 Manchester is first again, Liverpool second, instead of being third, Belfast third, instead of being second as in the previous year, Hounslow fourth, Newcastle fifth, London sixth, Lichfield seventh, Woolwich eighth, as in the previous year, Glasgow ninth, Lichfield tenth, Birmingham eleventh, and Edinburgh twelfth. That is a very constant or very nearly a constant order.

20. Even if the number rejected by the recruiting sergeant is as large as General Maurice supposes, does it not merely imply that large numbers not fit for or disinclined to permanent work present themselves to the recruiting sergeant on the chance of being passed, and that the condition of those rejected is only representative of the state of the wastrels of the large towns who live by casual labour?—That is a very big question. Of course we know that under present conditions largely those who have failed in civil life offer themselves as recruits. I may say that figures regarding previous occupation are unreliable.

21. There is no precise differentiation?—No, and we find that men of various professions come up for enlistment who describe themselves as labourers.

22. It would not do in the case of a clergyman for him to say that he was a clergyman?—No, but there are also cases of medical students and art students who have broken down or have got into trouble, and they almost universally return themselves as "labourers." I do not think that the point you are trying to make can be borne out, because a great many would-be recruits of known respectability are rejected.

23. Don't you think that that conclusion is rather borne out by your remarks on the Public Health Statistics? You say the teachings of the Public Health Statistics "appear to show that the progressive improvement of the national health has steadily followed the improved conditions of life which have been brought about by the advance of sanitary knowledge and its practical application"?—That is so.

24. I suppose the improvement has extended to the lower classes?—There comes in another factor, and Dr. Tatham will endorse it, that the compulsory attendance of the lower classes in Board Schools is not tending to increase the physical development.

25. Not even with the physical exercises?—I do not think that the physical exercises are proportionate to the confinement; not in the very lowest class of society.

26. (*Colonel Fox.*) I do not quite follow what you mean?—What I mean is this—although the upper classes have athletic courses and competitions—and I have referred to the fact that records are constantly being broken for all sorts of feats of strength, agility, and endurance, thus showing no deterioration—that has only reference to the upper classes. You take the lowest stratum of society from which we draw the recruits generally, and you will find that the enforced attendance at Board Schools and the confinement resulting from that is acting injuriously.

27. Do you mean that they get too much mental study?—Well, they have been put to things they have not been accustomed to for generations. It is putting them under new conditions that, at any rate in the beginning, are not conducive to physical development; more indoor and less open-air life.

28. (*Chairman.*) You admit that the "bulk of our soldiers are drawn from the unskilled labour class, and consequently from the stratum of the population living in actual poverty, or close to the poverty line"?—But remember I have just said we cannot rely upon those labourers' statistics.

29. But still you do say that so far as the figures teach anything they teach that?—Yes.

30. But you say, "Further, the physical deterioration caused by hereditary or acquired disease must not be forgotten, and in illustration we need only instance the part played in this by tubercle and syphilis"?—Yes.

31. You are aware that the deaths from phthisis in twenty years have fallen, in the case of males, from 1,902 per 1,000,000 to 1,570, and in the case of females from 1,735 to 1,110?—That does not get rid of the constitutional taint. You may have a very much decreased mortality from tubercle, *i.e.*, you may prolong the lives of tuberculous patients by providing favouring conditions that will enable them to live.

32. And multiply?—Yes, and that is the pity. You are putting them under better conditions, enabling them to live much nearer the natural term of life, but you do not get rid of the taint.

33. Is there not evidence that both in extent and virulence syphilis is on the decline?—If it is, it is because of the measures taken against it.

34. But there are not many measures taken in this country?—There are in India, and the number of syphilis cases sent here from India by the Army has a very great effect in affecting the population here.

35 You think that is so?—There is no doubt about it.

36. I have just one or two points to ask you about. I observe that "defective vision" ranks very high. In the Tables you gave for rejections for 1901 and 1902 I see that the labourers' class ranks first. I want to ask you as to the method in vogue for the examination of recruits? Is it only acuteness of vision that you aim at testing?—Yes, but if a man has chronic disease of the eyes—apart altogether from consideration of his range of vision—we reject him. A man with chronically inflamed eyelids we reject.

37. You don't employ ophthalmic surgeons?—Oh, every one of my men are specially trained.

38. It may be that a recruit who did not come up to your own standard as to acuteness or range of vision still might prove a valuable soldier?—Well, that is a big question. What is the use of a soldier who loses his glasses in the field. If he is getting tired of the strain—and a great many broke down under the physical strain in the late war—he will get rid of his glasses if he wants to. The case of false teeth is very much on a par with glasses. There are men who, after bearing the strain of active service in the field for some time, I have no doubt broke down nervously, and probably some of them had been fitted with false teeth. On more than one occasion men have been seen secreting their false teeth in

the corner of their blankets, so that they could get out of the field, making the loss of teeth their excuse. You will find the same with glasses. When I say that, I make no reflection upon a man's courage. It is a nervous break-down. Even officers broke down from too much strain. If a man feels a little "jumpy" (he may have been the bravest man in the world in several actions, and probably that fact has told upon him), he begins to feel nervous, and as the result of his nervous breakdown his glasses get lost or broken. That is a matter that military authorities have to consider—viz., whether that is good or bad for the Army.

39. (*Colonel Fox.*) Do they lose their glasses very often? A soldier is careless, and he goes to a stream to wash himself, and he loses his glasses, and the same thing happens to his teeth—he leaves them on the bank of the river.

40. (*Chairman.*) Touching this question of teeth, it does appear that there has been lately a very great increase in the number of recruits who present themselves with bad teeth, but that is partly accounted for by increased stringency, I understand?—Yes, in the later years that table refers to, because a great many men were found to be sent out with bad teeth, and especially in the Imperial Yeomanry. The Imperial Yeomanry, I may say, were not examined by officers in my Department; the Yeomanry made their own arrangements for physical examination.

I do not know whether it was so—whether the teeth were carefully examined or not, but a great many who went out to the Cape were affected and unable to masticate the service ration, and they were sent back.

At Shorncliffe, I heard from the medical officer in charge that the number of men who came back with bad teeth was very large.

A great deal of attention has been paid to this subject, and the expense of fitting in false teeth, as was done during the War, considerably raised the expenditure on the medical vote.

41. But still the increased number of rejections on the score of teeth swell, of course, the percentage in your Table 3, which goes to augment the force of Sir Frederick Maurice's and other people's plea that the race is deteriorating. But, on the other hand, those who are familiar with the subject of teeth will tell you that dental caries is not, as at present advised, due to these causes which are shown to produce physical deterioration; that a tooth with a lot of caries in it is perhaps as full of lime as a perfectly sound tooth. In the Report of the Departmental Conference between the War Office and the Admiralty it is distinctly said that "mal-nutrition teeth,"—that a circumstance of that sort has nothing to do with physical deterioration, but it plays a large part in the tabulation of returns which are permitted to influence public opinion upon the subject of physical deterioration?—But I did not start it with physical deterioration at all—I must repeat that. Whoever has talked about physical deterioration is responsible for all that, not I. I only say that in this day of grace, 1903, certain percentages of men are unfit for military service, because of certain defects; that is all. I do not know whether our teeth are worse now than formerly. I have an impression that they are, but I have not said that they are. That is not my point. My point is the number of men we have to turn away in trying to get recruits for the Army, and I have given the chief prevalent causes.

42. We shall form our own opinion as to whether that is borne out?—I would rather not express an opinion upon it. The Joint Committee on teeth went into the subject very thoroughly, I think.

43. Am I right in saying that the want of cleanliness is the chief cause of the caries?—I think so. We are taking steps with a view of getting rid of it in the Duke of York's School. The boys' teeth were in a bad state two years ago, and we asked that a dentist might be appointed to go twice a week at first, and the deterioration in teeth has been largely checked. Now we give toothbrushes to soldiers in the Army, and we lecture them on the absolute necessity of taking care of their teeth, and it is having an effect. If you, with your Committee can do anything to make responsible authorities take some little interest in instructing boys and men in the importance of the caring for their teeth, that would be well.

I think that food has a good deal to do with it. I am very strongly impressed with impure drinks being very bad for the health. What we have to look to, is to see that impure beer and raw spirits are not given to the men. If something could be done in that way, it would be useful. *Sir W. Taylor.*

I am certain that impure and improper food and impure drink are responsible for the production of physical deficiency. The State ought to take measures to ensure the provision of pure spirits as well as pure beer.

44. They can get them in regimental canteens, can they not?—Not spirits.

45. (*Colonel Fox.*) They do not sell spirits in a canteen?—Not since rum was done away with. But there is alcohol in beer, and there is no doubt that it is injurious.

46. The beer is pretty good in canteens, is it not?—In some canteens; if the men are allowed to choose their own brewers it is not always satisfactory.

47. It is better than in a "pub."—Yes.

48. (*Chairman.*) Are the men themselves judges of pure beer?—No, not always. It is not in the canteen that the men get bad spirits. Men get tired of the canteen, and especially of the barrack square. Barracks are often in the slums of a big town. Take Sheffield and Manchester, for example.

49. (*Colonel Fox.*) I know from experience that Manchester is in this respect a bad station for soldiers, but do you not think that in most towns the drink which is sold in public-houses is little better than poison?—Yes. I think that the spirit sold to the men is quite a raw spirit, capable of being purified, undoubtedly. There was a Committee, I think, on spirits some time ago—a Select Committee in 1891 on this subject.

50. (*Chairman.*) Do you mean a Committee of the House of Commons?—Yes.

51. There have been several Pure Beer Bills brought before Parliament.—That is important. If there is deterioration at all, you know probably better than I do, Dr. Tatham, what the effect of drinking impure spirits is. Lunacy in the Army has increased of late years. The evil effects of impure spirits are seen in some of the Colonies, as for example the "white-eye," I think it is called, of Cape Town. In Canada, I have known a man drink "white-eye" and tumble down dead.

52. There is one more point with regard to the percentage of those discharged during the year under two years' service. There is a considerable increase in the last two years under that head?—In 1901 it rises to 4·9.

53. Is that due to the greater ingenuity in malingering?—No, not at all. It is due to enlisting at a time of pressure. Men were sent back in hundreds in the late war.

54. That is a falling cause, then?—Yes.

55. You do not think that malingering has much to say to it?—There is very little malingering in the Army now. I am speaking of the men at home.

56. (*Colonel Fox.*) I have often discussed this matter with non-commissioned officers and men of experience, and they have generally agreed that malingering is a common thing amongst young soldiers. When these youngsters become tired of restraint or are worried by a non-commissioned officer who has in his time been bullied, they either desert or resort to smoking rank tobacco twisted up in brown paper, or a course of soap pills, either of which produce palpitation. Have these devices ever been brought to your notice?—I have known one or two instances. To begin with, the service is too short now. It is only three years. In the old days I have found a man lying in hospital with coppers tied on the ulcers of his leg, which he had probably tied on himself. I have known men take the white-wash off the walls and put it on their eyelids. That has all gone. There is nothing like that now.

57. You think there is nothing like the proportion of malingering that there was?—Nothing like there was in the old days.

58. (*Dr. Tatham.*) I am glad to hear you say bad spirits and bad beer have an evil effect.—I am sure of it. I should like to make that point. When a man comes into the service he gets good food. If you could prevent

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our lower classes from taking bad food, and especially bad drinks, beer and spirits, I think you would do a great deal to stop this deterioration.

59. Now, about the point of age. Do you agree with Professor Parkes' opinion, when he places the lowest desirable recruit age from twenty to twenty-one years ?—Yes, that has been gradually forced upon me. At the time of the Maiwand disaster, I had to examine a very large draft of recruits for India—at that time an order existed that no man should go to India under 20 years of age—and two-thirds of them were rejected as being under age. Owing to pressure, however, orders were given to pass every man who was physically fit irrespective of age. I have heard of some recruits at Manchester lately some of whom were thought to be under 15 years of age.

60. (*Chairman.*) Under fifteen ?—So it was thought.

61. (*Dr. Tatham.*) In your medical reports for the years 1897 to 1900 the majority of the recruits were under nineteen years of age ?—I am not in a position to say that at the present moment.

62. I will tell you where I got the information from. It was in a letter from Surgeon-Colonel Welch in the *Lancet* of March 7th of this year, in which he says that 44 per cent. of the recruits are from eighteen to nineteen years of age, and that a considerable proportion additionally are under eighteen ; that would bring up the whole to more ?—That is what I have said already. The majority are between those ages ; a great many are under that. It is a very difficult thing to tell from physical appearance ; you may be misled. It is difficult to get at the actual ages.

63. I am glad to get your opinion upon that point because I think that is most important ?—It is most important.

64. (*Colonel Onslow.*) There is one point with reference to General Maurice's figures. If you add the rejections by recruiters to those by medical officers you would easily arrive at the 60 per cent ?—We do not do this.

65. I know that, but in the Admiralty recruiting we do it, and we could I think easily make up the 60 per cent. ? —We might do it, but I can only ask the Inspector-General of Recruiting to keep such a record.

66. You are simply representing the medical officers. Regarding the age of entry, is not twenty rather old—is not eighteen better ?—I do not think so.

67. That is before the bones begin to set ?—I think that in the Army we should take care of our recruits, as is done in the Navy, and not start by giving them gymnastic exercises that all recruits are not physically fit to go through. I think when we get our half-starved recruits from the slums or the lanes of the country, the first thing you ought to do is to take care of them and give them good food, as they do in the Navy, and afterwards try to improve their muscular development. We do not want big men, but men of medium stature able to carry their own weight. I would not lessen the age at all ; if we could get the men at twenty-one it would be better.

68. Is it not more likely that those individuals having damaged their own physique, either by drink or syphilis or anything of that sort, the older you get them the more chance of those cases appearing ?—I do not think there was so much difficulty in getting recruits formerly. We did not want so many as now, but I do not think that we found syphilis in the two years.

69. (*Chairman.*) Do the two services recruit from the same class ?

70. (*Colonel Onslow.*) Yes, take the Marines ; they are practically the same as the Army.

71. (*The Witness.*) The pure sailor comes from the boy.

72. (*Chairman.*) Do not the conditions of the Marine service attract a higher class of men ?

73. (*Colonel Onslow.*) Curiously not. I do not suppose that one man in ten entering the Marines but thinks that he is going to be a soldier.

74. (*The Witness.*) That is quite true.

75. (*Colonel Onslow.*) Of course we keep them eight to ten months at the depôt, where they get an extra half pound beyond the average rations, and they are worked gradually into the service.

76. (*Witness.*) The man wears a red coat and the recruit does not know the difference. You get the boy at fifteen to sixteen and put him into a training ship, where he is well fed, and leads an open air life.

77. (*Colonel Onslow.*) About ten years ago the Navy started taking in youths at the age limit of sixteen years and nine months, to eighteen, sending them down to sea in H.M.S. "Northampton" and her tenders. Statistics referring to 200 boys and 200 youths who entered the first year have been obtained, and the youths come out far ahead in every way. A larger number of boys wasted by being invalided, etc. The boys had not come forward in efficiency as they were expected, and the Admiralty are so impressed that they are actually raising the age for boys ?—That is exactly the point with reference to the importance of increasing the age for recruiting. You cannot tell what a boy is going to turn out at twelve or thirteen. You cannot do it with officers. You are much more certain of getting the class of men you want by taking them at a later age.

78. (*Colonel Fox.*) Take, for instance, the boys at the Duke of York's or the Hibernian Schools. They leave when 14 years old, and are, as a rule, small, but after leaving, shoot up rapidly. Is this not the natural course with boys who have passed the time of puberty ?—That is not a general law.

79. But you can see it in those boys ?—That period of shooting up is a very dangerous period. It is a period that a great many boys break down at, and if you get the boy after that period you would avoid that.

80. (*Dr. Tatham.*) One of the reasons, and an important reason, why you get so many losses by wastage from breakdown in young soldiers after enlistment is the fact that they are introduced into the Service too early, you think ?—There is no doubt about it.

81. (*Colonel Fox.*) But in all other continental countries they take them at twenty ?—Of course, I recognise the necessity.

82. (*Dr. Tatham.*) You would prefer their enlisting at twenty-one rather than twenty ?—Yes.

83. (*Colonel Fox.*) Do you find that there are a great many rejections owing to flat feet ?—Not many.

84. I have had cases of flat foot, but it was not the simple flat foot, but the ill-formed foot. I found that the men with flat feet walked from the calf rather than the thigh ?—I have found some of the best men flat-footed. If the arch of the foot is gone altogether, and the bones that formed the arch fall to the ground, that man should be rejected. There is a great deal of difference of opinion as to what constitutes flat foot.

85. (*Chairman.*) It does not rank amongst the highest causes but amongst the lowest ?—I have a table here that is rather an interesting one. It shows in two years the position occupied by various diseases with reference to the number of rejections according to occupation. Defective vision is first in labourers, but in trades, such as cloth workers, weavers, and lace-makers, tailors, etc., it is fifth, and in mechanics it is third, and shopmen and clerks it is third. There is a very great uniformity in most of these.

86. (*Chairman.*) We have got that.

87. (*Witness.*) The want of physical development occupied the first place everywhere except in one, and that is in boys under seventeen.

88. (*Mr. Struthers.*) About the chest measurement, the class of mechanics is favourable to development, and yet I see that the want of measurement is the first cause, whereas it is second and third and fifth in some of the others.—Is that peculiar ?

89. If those were occupations particularly favourable to chest development, I think that there would not be so many rejections for want of chest measurement ?—At that age an occupation has not had time to effect development ; boys between fifteen and nineteen have not been long enough at any occupation to be affected by their employment. I do not know at what age they get away from the board school.

90. (*Chairman.*) Fourteen, and a great many much earlier.

91. (*Colonel Onslow.*) Artificers, Royal Navy, are recruited from twenty-one to twenty-eight. They are skilled mechanics in employment favourable to development,

and the rejections are 25 per cent. of the whole number of candidates. Number 3 of your list, as to their constitution and health, are far better than in the Navy in the artificers' class?—Really.

92. Of course they come from a superior class of men?—Quite so.

93. But they are not quite so good, as a rule, in chest measurement?—As to want of physical development, the table I sent you, of course, includes these five things: "Impaired constitution and debility; under height; under chest measurement; under weight; not likely to be an efficient soldier."

94. (*Chairman.*) That is rather speculative, "Not likely to become an efficient soldier?"—That is after trying him for two or three months.

95. (*Colonel Onslow.*) That is from medical opinion?—Purely medical. The commanding officer can discharge from the disciplinary point of view.

96. (*Mr. Lindsell.*) When you take a recruit there is no means of ascertaining where he has been bred at all—whether he is country-bred or town-bred?—In some instances; but, as a rule, recruits conceal their antecedents.

97. There is no means of telling whether his physical condition is due to his having been reared in a crowded town, or to his having only come up to town quite lately from some country place?—There is, in this way: after he has been enlisted, but not by the medical officer enlisting—he will not confide anything to him—but afterwards, as he gets to know the medical officer and has no fear of him, he may say where he has been brought up.

98. There is no means of ascertaining whether the physical condition of a youth is due to himself or perhaps one or two generations being brought up in crowded surroundings, or whether he has come from the country?—No, I do not think there is any means of ascertaining that at the primary medical examination. As I tell you, there is the greatest difficulty in ascertaining what employment a man has been in.

99. (*Mr. Legge.*) As things are at present arranged, you could not get anything by going to the recruiting centre. Have you no centres that you could group as country centres?—Yes.

100. All these are notably town centres, with the one exception of Lichfield which might possibly be a country centre?—Lichfield comes within the first twelve recruiting centres showing the greatest number of rejections.

101. (*Mr. Struthers.*) Is Lichfield a country centre?—Lichfield is a county town.

102. It is a centre, and as a country centre it would be comparable with others?—It is in the middle of a mining district.

103. (*Mr. Legge.*) It is a long way from a mining district?—I know Lichfield, and the barracks are four miles from the town.

104. (*Chairman.*) What about Hounslow?—Hounslow is practically London.

105. (*Colonel Onslow.*) It does not mean that that district is the centre of a very large area. Recruits are taken from all round?—Yes.

106. Take York or the Royal Navy. In the Navy recruits are taken from the whole of Yorkshire, Northumberland, and Durham, so that it is difficult to say from what part they come. Is that the case in Army recruiting?—Ours is not so extensive as that. We have a medical officer wherever we can examine recruits. The recruiters take them to the nearest stations. It would not be necessary to send all recruits recruited in Yorkshire to York, because we have many other stations in that county.

107. But if a man is examined at Lichfield, it does not say that he has come from Lichfield. Cannot you get at it by having characters from them?—The only way is by inquiring, and inquiry would often lead you to a wrong conclusion.

108. (*Chairman.*) It would not be worth much if you got it, you think?—I do not think so.

109. (*Colonel Fox.*) They get a long way from home?—Yes.

110. (*Chairman.*) The localisation of the Army has not led to enlistment has it?—No, not to the extent expected.

111. (*Mr. Lindsell.*) You attribute a good deal to want of exercise and compulsory attendance at school?—I said that might be. I think that it is very likely. You put a boy into school who comes from ancestors who lived their lives in the open air often without schooling at all, and you keep him indoors four or five hours a day.

112. That would hardly apply to town boys, would it, if they have forced attendance in the country as well?—I do not think it would affect the country boys. Often in going to school they have a long way to go. I asked a boy the other day in the country how far he had to come to the school, and he said, "I have walked five miles."

113. (*Mr. Struthers.*) So that the compulsory attendance does not affect the country children?—Quite so. The boys in the towns who go to the Board schools, and are there for four or five hours a day, would otherwise probably be running about the streets.

114. (*Chairman.*) A good deal of pains are taken in the ventilation of the schools, you know.—Yes, and the warming of the school also.

115. (*Mr. Lindsell.*) You do not wish to press that point?—No.

116. (*Colonel Fox.*) You think if they had a more animal life they would be more healthy?—Yes.

117. (*Mr. Struthers.*) Supposing that these boys went into the country it would be better than being in the streets or in the sweating den?—Yes.

118. You were talking of the effect of a possibly increased compulsory attendance on the physique of the children generally?—I only mentioned that incidentally, it is not a point I originally brought up.

119. (*Mr. Lindsell.*) Do you attach flat feet to any particular employment?—No.

120. But Manchester is very extraordinary in that way?—But Manchester takes the first place for everything.

121. According to this table they are very high?—Flat feet in Manchester is 159 in 1901.

122. There is nothing above fifty-eight in any of the other places?—Yes, to put that into ratios the ratio is 40 per thousand. I do not think you have got the ratios on that table.

123. The total in Manchester is three times that of any other place, which is rather curious?—Manchester is not the highest in flat feet; for instance, in 1902 Manchester has a ratio per thousand of twenty-two, whereas Glasgow has a ratio of thirty-eight—that is in 1902.

124. Manchester has flat feet 159 in 1901, and 99 in 1902?—These are the totals, but I have had the ratios carried out in my two tables here, and in 1901 Manchester has forty per thousand for flat feet, and in 1902 it has only twenty-two; and the highest in 1902 is Glasgow with thirty-eight, and Manchester is highest in 1901, and Belfast next with thirty.

125. (*Colonel Fox.*) As to that point about the manufacturing districts?—Those twelve towns that I have given you are nearly all manufacturing towns.

126. If you believe in heredity, take the case of the Ghoorka, who is a hill man and is constantly using his calf and his instep; he has a well developed calf and a well shaped foot. But on the other hand take the manufacturing operative who is perpetually standing still at his work with the weight of his body depressing the arch of his instep, would not the result naturally be a flat foot?—There is no doubt about that, and especially when you have boys made to stand still, with very badfitting boots; the arch breaks down.

127. And the next generation will have it a bit worse until they become a flat-footed race?—Probably.

128. And therefore the manufacturing districts produce flat feet.—I think the habit of wearing clogs a great deal has to do with that condition. They are not only heavy, but the sole of the clog does not yield into the arch.

129. The constant downward pressure must affect it?—Yes.

130. (*Chairman.*) Have you in those returns something further worked out which we have not got?—I have got the ratios worked out here, and I will send you the copies of the ratios as worked out.

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131. (*Mr. Lindsell.*) About the teeth generally, you very strongly advocate a State examination of the teeth of children in the State schools?—Oh, certainly, and I should advocate very careful attention to physical development.

132. (*Chairman.*) Would you systematically make an inspection?—Yes, there ought to be dental inspection.

133. And a medical inspection?—Yes, a medical officer, and there should be a competent dentist as well.

134. Would it be possible, with the various recruiting agents all over the country, to establish a system for the collection of anthropometric facts and figures in reference to those which are passed through the hands of the recruiter?—It would be of very great interest, but it would be very difficult in times of pressure.

135. Would it be worth while, with the results to be obtained from such a system, to face the additional cost in connection with the information?—I think it would.

136. That would, to some extent, provide us with some material for a comparative estimate of the physical condition of the people under, at any rate, certain aspects?—I do not think it would be as valuable as it would be if we could get the antecedents of the individual.

137. But would not a comparison of the decennial periods give a clue as to the condition of that class from which recruits are drawn as to whether they were deteriorating or not?—It would certainly help.

138. That is what we find at the inception of our inquiry; as you say, in one of your memoranda, that the material for any comparative estimate is absent?—Yes.

139. (*Mr. Legge.*) I gather from you that there is an enormous increase in lunacy in the Army?—There has been a great increase.

140. I do not want to discuss it, but can you let us have figures to show how it compares with the general population?—Yes.

141. If you turn to column 7 of your Table on page 5, where you give the percentage of rejections under two years' service as 2·1, is that a high and alarming percentage; you say that 2·1 per cent. were discharged as invalids?—No; that was not brought out to show a high percentage.

142. I was asking your opinion. Do you think it is a high percentage?—The purpose for which these three calculations were worked out was to compare figures with Sir Frederick Maurice's 60 per cent. Rejections for being medically unfit for service were at the primary examination 34·6; within three months after enlistment 0·9 per cent.; while 2·1 per cent. were discharged as invalids under two years' service.

143. The object of my question was to get your opinion bearing on the harrowing passage at the beginning of Sir Frederick Maurice's article in the "Contemporary Review," where he is talking of the cost to the country of patching up men who are no good and who are sent to the Herbert Hospital, and who must be ultimately discharged after large sums have been spent upon them without their having rendered any effective service in return?—I do not think that 2·1 per cent. can be called a very large percentage.

144. There is another striking statement by Sir Frederick Maurice also in that article on which your figures have some bearing, and I think myself they support your opinion. He says that in that Herbert Hospital he found a smaller proportion than he should have expected, of the causes for which these persons were discharged, of cases immediately and obviously traceable to one fatal cause of maladies—I take it he means syphilis. Looking at your figures, for instance—at St. George's Barracks and Hounslow—there are only twenty-one rejections for syphilis out of a total number of rejections of 3,908. Do you agree that that bears out Sir Frederick Maurice's views?—Syphilis as taken here is, as a rule, primary syphilis, but what Sir Frederick Maurice means, I take it—Is that a great many soldiers break down through the first two years of service because of an inherited constitutional taint. That could not always be detected at the primary recruiting.

145. But he says he finds far fewer than he expected were discharged for causes traceable to syphilis?—Yes, I daresay.

146. The popular opinion seems to be that it is a very serious matter indeed. Sir Frederick Maurice did not find it as serious as he expected, and your figures show that it is not so serious as is sometimes imagined?—That is a very wide subject, as you know. I should be very sorry to go into it now.

147. You show very few men rejected on that ground, at any rate?—Very few. I take it that he means inherited syphilis, and very few men are rejected on that ground.

148. (*Chairman.*) He does not say so?—Of course one or two men are found. It may be said that no boys of eighteen and nineteen have had syphilis, for it has not had time to develop; at any rate, not secondary syphilis we hope.

149. (*Mr. Struthers.*) What exactly is your view as to the value of those statistics you have given us? I understood you to say that they did not afford any basis in coming to an opinion as to whether there is deterioration or not?—None. We have no data for comparison.

150. Take the other point. Do you think that we can get from it any indication whatever as to the physique of the people, of whole classes of people, in either certain districts of the country or certain occupations?—As to the districts of the country certainly, so far as the class from which recruits generally come is concerned.

151. Do you think that the percentage of rejections at a given centre in a general way indicates the general physique of that town as compared with another. Take the centres you have; take Dublin and Belfast right through and you have the ratio of rejections: Husbandmen and labourers 283 at Dublin, 405 at Belfast. Take the next class, 258 and 333; and the next class is 282 and 359; and it is the same right through. Are we to conclude from that that the physique of the population of Dublin and its neighbourhood is better than the physique of Belfast?—I should be very sorry to say that the recruits recruited in Dublin belong to the Dublin district. I should be very sorry to say that recruits recruited in Manchester belong to Lancashire.

152. Do the figures give any indication whatever as to the relative physique of those two districts?—No, because I do not think that they come from those districts. I do not think that there is much value in any of those tables with reference to the points that are meant to be elicited. I have no data on which to form an opinion as to the physical deterioration.

153. Nor as to the physical condition of the different districts?—It is quite sufficient for the point that I want to make, viz., that the whole nation is in that condition that it cannot supply more than say 50 per cent. of those examined who are able to bear arms.

154. (*Chairman.*) It cannot be supplied under the conditions of recruiting in this country?—No.

155. (*Mr. Struthers.*) How far that affords a general index depends upon a hundred circumstances which it would be very difficult to disentangle?—Certainly. My point is this, that out of a hundred men who come up willing to be soldiers we have to turn away between 40 and 60 per cent.

156. (*Dr. Tatham.*) The question of pay comes in does it not?—I do not say what comes in.

157. You could get recruits if you paid for them?—Still there are between 40 and 60 per cent. of the population unfit for soldiers.

158. (*Chairman.*) Has the effect of the extra 6d. come into operation?—Hardly.

159. (*Colonel Onslow.*) The extra 6d. has not come in, but the 2d. has?—I daresay it has not.

Major-General H. C. Borrett, C.B., called; and Examined.

160. (*Chairman.*) You are Inspector-General of Recruiting—for how many years have you held that position?—Four years. Before that I was Assistant Adjutant-General of Recruiting for two and a half years.

161. So that the period of your recruiting experience covers between six and seven years?—Yes.

162. You have sent in a statement of your evidence?—Yes.

163. Will you be kind enough to read it?—

In my Annual Report for 1902, as Inspector-General of Recruiting, in paragraph 150, I wrote as follows: "The one subject which causes anxiety in the future as regards recruiting is the gradual deterioration of the physique of the working classes, from whom the bulk of the recruits must always be drawn. When it is remembered that recruiters are instructed not to submit for medical examination candidates for enlistment unless they are reasonably expected to be passed as fit, one cannot but be struck by the percentage considered by the medical officers as unfit for the service."

Paragraph 75 of the same Report shows the result of the order that all "Rubbish" was to be weeded out by Recruiters, and only apparently "good" material sent forward for medical examination. The percentage of rejections "for want of physical development," which was fourteen in the year 1898, decreased to thirteen the next year, then to eleven, and during 1901 and 1902 was down to between nine and ten. The books kept by examining medical officers give the measurements of all recruits examined by them—whether passed or rejected, and at my inspection of recruiting areas, I found fault if men had been rejected by the medical officers who the Recruiters ought to have themselves rejected for not being up to standard.

The percentage of rejections for various ailments the Inspector-General of Recruiting cannot interfere with. He never takes a man unless pronounced "Fit" by the examining Medical Officer. This percentage was 16·3 in the year 1900; it rose to 19·46 for the year 1901, and for 1902 it increased to 22·46.

The statement in paragraph 150 of the Report that physique of working classes is deteriorating is based on the personal knowledge of the Inspector-General of Recruiting (myself) as the result of his visit of inspection in the various recruiting districts, and also on the annual reports of the officers responsible for recruiting in the districts. Out of seventy-eight Annual Reports rendered on the 31st December, 1902, no less than sixteen, these practically the large recruit-giving centres, called attention to the large rejection for teeth and flat feet.

During the war a better, stronger, and more mature class of recruits might reasonably have been expected to come forward, and thus, if anything, reduce the percentage of rejections; but the percentage went up. The number of rejections for "loss or decay of many teeth" in 1891 was 10·88 per thousand; in 1902 it was 52 per thousand.

During the South African War there is no doubt that some men were accepted for the Army who ought to have been medically rejected. I am not prepared to say that this was entirely wrong under the circumstances. During the war we had a large number of civilian practitioners employed as examining medical officers in place of military doctors sent to South Africa. No doubt these civilians did their work conscientiously, but of course they could not be expected to know what was required of a man to make a good soldier as well as officers of the Army knew. During the war I made it my business to get every man I could. I could not tell when the war would be over, neither could I guess what the causalties might be, and I certainly thought it better to have too many than too few men. With this object in view, in speaking to officers commanding recruiting areas and to examining medical officers, I certainly requested them to rise to the occasion, and to remember the wants of the Army. In plain words, I said to every medical officer, "On no account whatever pass a man as fit, whom you consider *unfit;* but in the case of men you feel a little doubtful about, do not hesitate to take responsibility, and pass them fit, if you think there is a good chance of their making good soldiers." I think that in peace time we ought to be careful, and only accept the really good men, so that when starting a war we have nothing but first-class material; then we can afford to relax somewhat. I allude to this, because perhaps evidence will be given regarding men who have been medically passed breaking down not long after commencing a soldier's life. This may account for some of the breaking down. *Gen. Borrett.*

Since the South African War military examining medical officers have been more particular, and there is no doubt it is now harder to pass medically fit than before or during the war.

With regard to my reported physical deterioration of the class recruits mostly come from, I may say that I soon learned what percentage of medical rejections to expect at every class of recruiting area. When I visited Manchester, London, Liverpool, Leeds, Glasgow and other large cities I was prepared to find a large percentage of rejections, and I got it. When I visited agricultural districts—Bury St. Edmunds, Lincoln, Exeter, and so on—I expected to find but few medical rejections, and so I did find it; or if I did not so find it, it was the fault of the medical officer, who was too strict. Now, every year more recruits come from the cities and fewer from the country. This points to deterioration; for surely the country lads are healthier than the town lads.

I have no figures to give showing the number of men sent away as "Rubbish" by Recruiters. We used to have figures, but I stopped them as they were so very misleading. We have about ninety recruiting areas, and it is impossible to get them to render returns all made up in the same way. For instance, I found men came up several times to try and enlist, and several times were rejected as "rubbish" and counted several times. Again, if we could get these figures correct, it would not give the number of men who would enter the Army if they could medically pass; for there are thousands who, knowing they are under standard, never present themselves, much as they wish to be soldiers. The figures were so misleading I stopped them, and contented myself with the numbers offering for enlistment whom the Recruiters accepted as having a reasonable chance of passing.

I believe that some people say that physique is not deteriorating. Supposing this is so, all I can say is it is a vast pity the physique of the recruit-giving class is as poor as it is, so as to cause such a large percentage of rejections for the Army. That our standard for the Army is too high I cannot admit; some people call it low. I consider it a very fair standard, and a standard that it is most unfortunate more Englishmen do not come up to.

To sum up the situation. It is the fact, that although I used every justifiable means to keep the medical rejections down, and notwithstanding the fact that the standard can hardly be classed as "high" (I class it as "very fair"), no less than 29 per cent. of would-be recruits were medically rejected in 1901, and 32·22 in 1902. This cannot be considered a satisfactory state of things.

164. The paragraph in your Report for 1902 on which all this hinges is paragraph 150?—Yes.

165. There you do take the responsibility, which Sir William Taylor said he had not taken, of saying that, "The one subject which causes anxiety in the future as regards recruiting is the gradual deterioration of the physique of the working classes, from whom the bulk of the recruits must always be drawn?"—Yes. I formed the opinion because every year there were more medical rejections than in previous years.

166. Then you go on to say, in paragraph 75 of the same Report, it shows "The result of the order that all 'rubbish' was to be weeded out by recruiters, and only apparently good material sent forward for medical examination." Does not the use of the word "rubbish" rather indicate what is the source of the whole evil—that unfortunately, it is the "rubbish" that to a very large extent presents itself to recruiting agencies throughout the country?—I use the word "rubbish," because in talking to my recruiting doctor I always talk plain English. When I looked over a Doctor's book, and found a man rejected for being two inches under chest, I would say to the Recruiting Officer—"you had no right to put that in front of the doctor." I call that "rubbish." I learnt from

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experience that the medical rejections do me a lot of harm. I was Inspector-General during the war and the recruiting went well, and we like it to go with a swing, and do not like to check it; and I do not like a lot of men being rejected, it gets a bad idea about, and I like to press upon recruiters to reduce the making of rejections, and I felt it very much better to send up men with a reasonable chance of passing. If I sent up "rubbish," I could run the figures up to anything you like. You might send a man up with one leg or a man with one eye.

167. You have no means of judging now whether Sir Frederick Maurice is correct in his view that, over and above those rejected by the doctor, something between 20 and 30 per cent. are also rejected by the recruiter?—It is probably true. We used to get figures. I do not much believe in figures myself. It is not only London we have to run, but we have ninety recruiting districts throughout the country, and although officers are doing the work conscientiously and well, still it is impossible to work in the same way. They do not know what is in my mind; they all try to send in figures correctly, but they come in differently. The colonels and people who make them out have different ideas. Sometimes they are recruiting the same people over and over again. I found at Manchester a tremendous lot of men rejected over and over again. When a man wants to be a soldier, by Act of Parliament he has to be given a certain form called a Notice form, and I found that the recruiters there were in the habit of giving a great many men those forms, and they rejected them immediately on the spot. That made me think about it, for you see they all came in amongst the rejected. When they gave them the form they rejected them. Well, the recruit could pass that form on. It all advertises the Army, and does no harm. But when I put those figures down as rejected recruits it is all wrong, and I stopped those numbers because they have been so misleading, and I cannot tell you how many should be put down as rejected. In the old days there might be thousands and thousands out.

168. But in acting under your instructions to exclude "rubbish," what methods do the men employ? Do they measure them, and that sort of thing?—Before any non-commissioned officer is made a recruiter he attends at the hospital before the examining medical officer, and they keep that recruiter in the hospital for a week or ten days, seeing recruits being examined. If a recruit has varicose veins the recruiter ought to see them, and also to see a man measured. Of course, with regard to heart disease and lungs he does nothing; but all these men are roughly taught how to measure and to know bad varicose veins and bad teeth when they see them, and the men are instructed in these matters.

169. Then every recruiter is a fairly good judge of raw material?—Yes, and the officers are trained in the same way.

170. Then you say: "The statement in paragraph 150 of the Report that the physique of the working-classes is deteriorating is based on personal knowledge as the result of your visits of inspection in the various recruiting districts." How do you base that knowledge?—When I go round these regimental districts, before I look at the books in the hospital, I have formed an opinion in my own mind what the medical rejections ought to be; and if I go to a certain medical district I expect low medical rejections; and if I go to towns like London, Manchester, Birmingham, Sheffield, and Leeds, I expect to find high medical rejections, and if I do not find them so there is sure to be something wrong. There are more recruits from the towns than the agricultural districts.

171. And I suppose you recruit in the towns men who may have come from the agricultural districts?—That may be, but still the greater proportion would be townsmen. If I go to Sheffield and business is good, the recruiting is bad; and when I go to Manchester if cotton is bad, men come to enlist. We get more men from the towns than from the country districts. I go to medical officers and ask them how they are getting on, and continually the officers have said to me. "The same class of men are not coming up"; men of good character are coming forward, but I know that I am not getting such good men physically. When they tell me that, and I look at the percentages of rejections going up, I could not help forming the opinion that I have done.

172. This is a matter of impression?—And I think that it is right too. I have had a great deal of experience. I know the total number of rejections has gone up enormously.

173. Are we justified in thinking that the increase of dental caries is an indication of the physical deterioration of the race? Might it not be due to more personal and external causes?—I have often spoken to medical officers on this question. I saw one report of a medical man at Liverpool; he was very strict and had a fad about teeth. That is one of the difficulties. I should like every recruit to be inspected by the same doctor. But I may have 100 different doctors, and they cannot have the same opinion of recruits. Well, I was saying I saw him reject two men for being short of teeth; and I looked at the men, and they were most magnificent men, both of them. I asked, "Are these men in perfect health?" He said, "Perfect." Then I said, "Is it not common-sense that a man in perfect health who has lost teeth won't go on losing them? "Now it seems to me," I said, "that if a man is in a bad state of health—in a poor and weakly state—he ought to be rejected; but not these two men." He said, "That is perfectly true." I said, "Won't you pass them?" and he said, "No, I can't." When my last inspection was made at Preston, I found the medical rejections very high. Lancashire is very bad for teeth. I learned that a lot of rejections were made on that ground, and I made allowances. When I went to Liverpool and those places in Lancashire I expected to see a lot of men rejected for bad teeth, and I was prepared for that. Devonshire, I know, has a reputation for flat feet.

174. Is Devonshire a bad place for that?—Yes, that is so. I was going to say when I was at Preston, after going round I was in the canteen, and I saw three children come in belonging to the depôt, and the Colonel said, "These are some of our children; ask them to show you their teeth." There were two girls and a boy. I said, "Do you mind showing me your teeth." Well, I never saw anything so frightful—quite young children, and the whole of the children there are in the same state. Teeth are bad in Lancashire, and therefore I was prepared to hear of many rejections on that account.

175. That is the worst quarter in England for teeth, is it not?—Yes. Everywhere it is going up, but in Lancashire it is very bad.

176. You say that it is "a pity that the physique of the recruit-giving class is as poor as it is so as to cause such a large percentage of rejections for the Army." Is that the fact, for it touches directly the subject-matter of our inquiry? It may be that the recruit-giving class is very poor, but it does not follow that the physique of the nation is deteriorating?—I do not say that it is, but I cannot help thinking that it is a most unfortunate state of things that so many get rejected, and that so many men cannot be soldiers and cannot pass. The standard is not too high; it was all fixed fairly and by experts, too.

177. You admit that the standard is not very high?—Quite so. And it is rather a serious state of things that so many men who want to be soldiers get rejected.

178. You say it is "most unfortunate that more Englishmen do not come up to the standard," but the vast proportion do come up to the standard. But still it is the unfortunate class that presents itself to your recruiters which does not come up to the standard. It is unfortunate that the better class do not come forward?—That is so.

179. When you say "men who want to be soldiers," you mean those people who have no opening in life, or who have no occupation, and who drift to the recruiter on the vague hope that he may pass them and get into the Army?—There are a great many of that kind no doubt. I must confess a great many are that way.

180. They are the people who have drifted into the dust-bins of society?—My experience is rather with the young men. We take a recruit for the Line at eighteen, and I would rather take a man at eighteen than any other age.

181. You mean rather than older?—Yes.

182. Because Sir William Taylor held just the opposite opinion this morning?—I hold this view—if a man comes to enlist at twenty, I cannot help thinking, and my experience bears me out that there is something odd

about that man. Why does a man of twenty want to enlist? It must be because he is out of work. Why is he out of work? He must have been in work because the class of men that enlists cannot be idle until they are twenty. Now, a man at twenty gets out of work for some reason. Perhaps he gets drunk and his master won't have him; and he is turned out. But when you come to a man of eighteen that is a different matter.

183. I can understand on the question of character that that may be so. But when a man of eighteen comes to you even with your standards you may have more disappointing material than in the case of a man of twenty?—But a man enlisting at eighteen has at twenty got good food and healthy training while in the Army.

184. No doubt the healthy training would be more important to his physique than the ordinary civil employment, but still a larger number of breakdowns take place after enlistment in the case of those who enlist at eighteen than at twenty. Would not that be so?—Yes. I have not got the Orders under which men are enlisted, but they are made so that the older a man is the more we expect of him. A man of twenty must have greater measurement round the chest and weigh more than a lad of eighteen.

185. That is one of the points Sir William Taylor mentioned. Supposing we enlist at an early age we pass a certain number in the hope that they will develop, and they do not develop?—I would rather have a man of twenty if he was of good character; but taking it all round I take it to be better to have the younger men.

186. (*Colonel Fox.*) Do you not think that the majority of the recruits are men who are more or less failures in civil life—the majority of them—either from want of grit or want of intelligence, and who are incapable of a start in life?—I would not like to say that.

187. Do you not think that there is a vast number who nearly always present themselves in poor clothes and starving?—There may be a great many. That is why I like the men of eighteen best.

188. Do you not think that a large majority of the recruits that come up are of that stamp?—A great many. But we must remember that strikes and things of that kind give us a lot of recruits; sometimes a place is shut up and therefore it is through no fault of their own that men are out of work. We all know that strikes do us a lot of good.

189. If we competed with the skilled artisan, do you think we should get a better class of men into the Army?—Certainly.

190. Which tends to show that we do not get now the representative men of the nation to enlist into the service?—That is so. We do not get them.

191. The fact of the soldier population being of such poor physique and the rejections so numerous, does not necessarily mean that the physique of the nation is deteriorating?—No, it does not.

192. (*Chairman.*) You do say that the physique and character of the recruits appear to be satisfactory?—Yes. The general officers reported that they are well satisfied, that is, looking at the recruits that you pass. It has nothing to do with those who do not get through.

193. There appears to be some discrepancy between the figures on page 153 and those included in Sir William Taylor's memorandum on page 3; the percentages appear to differ?—You are referring to my paragraph 75?

194. Yes?—I got those from the Army Medical Department, which shows the number of recruits. I have to get those figures from that Department.

195. There are discrepancies; perhaps they are not very striking, but still they are discrepancies?—I cannot help that.

196. (*Dr. Tatham.*) It has been stated in your memorandum here, and it is stated in Sir William Taylor's Report, I think, that the recruits which come up to you are for the most part, the majority, under nineteen years of age?—Yes.

197. That is true at the present time, just as it was in 1897?—Yes.

198. And you personally would prefer even that they should come at the age of eighteen rather than nineteen? Is that so?—Of course when I was first Inspector-General of Recruiting the Secretary for War had not issued his orders strictly about obtaining characters as we have now, and certainly, when that was the case, we did not go so particularly into the character. I cannot help saying I have some doubt about a man who is twenty—I do not mind eighteen or nineteen—but when a man gets to twenty there is always something suspicious about his being out of work; it is from his own bad character, or he is a fraud, or he is a man who has enlisted and deserted, and is trying to enlist again. *Gen. Borrett.*

199. What about recruits of seventeen?—They are too young for the Army, we take no man under eighteen.

200. Do you know that the Army Medical Reports of 1897 to 1900 show that there is a very considerable proportion indeed under eighteen, between seventeen and eighteen?—No man is enlisted unless he says he is eighteen, except for the Militia.

201. That is a mis-statement on the part of the recruit, is it not?—On the first page of the attestation a man declares his age. We do not ask him to produce a birth certificate, and as Mr. Brodrick has answered in the House of Commons, it would never do to get the birth certificate. You cannot get a man to enlist unless you enlist him at once.

202. Would it be impracticable to get the birth certificate?—It would not pay us; we could not do it. On the second page of the attestation you have doctors' opinion of the man as to his measurements and whether he is fit, and he puts down the apparent age, and that apparent age is what he thinks he is. If a man says, "I am eighteen years and six months," then, perhaps, the doctor puts down the apparent age "seventeen years and six months." When he goes before the colonel, he says to the young fellow, "The doctor does not think you are eighteen, and you must get a birth certificate. But if the doctor is wrong, I will take you."

203. (*Chairman.*) In the last resort you do ask for a birth certificate?—Yes, and it is the business of the approving officer to ensure that the lad is eighteen.

204 (*Dr. Tatham.*) With regard to obtaining the birth certificate in every case, would not that be very easy to get?—I think it would be very difficult.

205. Where would the difficulty be?—The delay.

206. (*Mr. Legge.*) A single day's delay would lose you the recruit, you think?—Recruiting is a curious thing. We want men, and we must get them. When this order came out about the character, I had to give certain orders on the subject about getting characters. The recruiting in towns was going frightfully down because the colonels ran the character scheme too hard, and I had to issue orders privately to tell them how to run it. I said, "You can't get recruits without assuming responsibility. If any young man comes before the commanding officer and looks a healthy and athletic chap, take him at once, and get his character afterwards. You lose the man if you don't, probably." I found a great many cases in which the colonels did not take the responsibility, and when they did ask for the characters, the relations of those very respectable would-be recruits induced the men to change their mind. You cannot run recruiting like that. If a colonel takes responsibility and enlists a likely man, and applies for his character afterwards, then if the parents want the man to change his mind it is too late, because the man is already a soldier.

207. (*Colonel Onslow.*) Do not you think also that a great many men cannot trace where they were born?—A great many cannot. I am sure that it is impossible.

208. (*Chairman.*) They could say where they were at school, and all schools keep a register of ages?—Yes.

209. (*Colonel Onslow.*) I have found the greatest difficulty in getting the age witness?—I do not think it necessary to get certificates. If the doctors look at the man and he has the appearance and the physique of a man of eighteen, I am prepared to take the man.

210. (*Chairman.*) Are doctors prepared to back their judgment as between seventeen and eighteen?—They are taken in sometimes.

211. You do not think that the number of cases in which they are taken in is large?—Not with good doctors. We have loads of cases where the doctors put down seventeen, and we find that the doctor is wrong and the man is eighteen. There are a great many more the other way tough. If a man is found to be under seventeen—there are

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cases when men get in under seventeen, with extraordinary physique—then according to law he is discharged right off and we do not keep him,; he is immediately let go.

212. (*Colonel Fox.*) There are plenty of men enlisted at 5 feet 5 inches and 5 feet 6 inches who grow into 6 feet men: and many N.C.Os have told me that they have enlisted at sixteen?—I heard Sir William Taylor say this morning that he thought that these figures did not prove very much. I should like to back that up, because I base my opinion on the physical deterioration more on experience, going around and talking to the doctors, and looking at the men, than I do on figures. When I have ninety different places where men are enlisted it is impossible to get medical officers to work all in the same way. Some reject them and do not put them in their Returns, and others act otherwise. They are all conscientious, no doubt. It was found by experience that a certain district (I think it was Bury St. Edmunds, one of our best recruiting districts in the whole United Kingdom)—the eastern counties is doing very well indeed, and Bury is one of our best places—and it was found not to be a good thing for the recruiters to reject the men. The recruiting was going very well at Bury St. Edmunds, and they found that it did not do for the men to go back to their fellows, who would say, "Ain't you a soldier?" and he would reply, "I saw a fellow. He said 'you are no good!'" "Did not you see the doctor?" "No, I did not." In consequence of that kind of thing the colonel consulted the doctor, who wanted to work it well with him, and he said, "I shall see everybody for you, and then the men that come up cannot go back and say that they were not properly seen by the doctor." The way they work is this: they have perhaps twenty recruits in the morning. The doctor sees the first ten, who have been passed by the recruiters as having a reasonable chance of passing, and then the doctor looks at them and he either passes them or not. And then come the men whom the recruiters would have rejected, and of course the doctor rejects them, and does not enter them in his book.

213. (*Chairman.*) What proportion were passed by the doctor?—I cannot tell you; a fair number. It is impossible for all doctors to work alike. If you take the medical department they will tell you that every man that comes before the medical officer must be put down in the books, and a great many of them keep to that. When this officer asked me, I said, "You are working in a common-sense sort of way." The figures are misleading therefore.

214. The Bury St. Edmunds district is entirely agricultural?—Yes, and the rejections were only 12 or 13 per cent.

215. It is rather a pity that Sir William Taylor did not give us Returns from a place like Bury St. Edmunds?—You can easily get them.

216. (*Mr. Legge.*) But I put that particular point to Sir William Taylor, and he said that there is no guarantee of their throwing light on this point. Now General Borrett has a paragraph which states when he visited Manchester and London and certain towns he expected to find a high percentage of rejections because they were towns. Then you speak of Bury St. Edmunds and you expected few medical rejections because they were countrymen?—Quite so.

217. Therefore in your judgment you could have a set of returns from the recruiting returns of big towns and also a set of returns from recruiting centres such as Exeter, Lincoln and Bury St. Edmunds, and we could draw conclusions from these two returns as to the comparative physique of countrymen and townsmen?—I daresay you could.

218. Sir William Taylor said you could not?—It is only common-sense. Anyhow, the classes in the country who want to be soldiers are a better class than the men in the towns.

219. (*Colonel Fox.*) The reason that he mentioned was that a man might get into trouble with a lass and want to get right away from the district to recruit?—There are a great many such cases.

220. And it might be from other causes?—Yes.

221. (*Colonel Onslow.*) Take Manchester, for instance; in that town you get a great many country lads, but in the country you won't get town lads?—Certainly not.

222. (*Chairman.*) If we can get figures dealing with rural districts it might be useful. Could that be done?—Yes, with the greatest of ease. You have only to ask for them.

223. I wondered this morning that Sir William Taylor, in the places he selected, did not give a greater variety?—He has only to get that from the doctor's books; I always see the books.

224. (*Colonel Onslow.*) Do they not include the whole of these recruiting places? Have you seen that? (*Showing same.*) Those are the names of his districts.—They are all big places.

225. (*Mr. Legge.*) Perhaps General Borrett could give us a list of agricultural places that he could recommend as the main ones?—Yes, I could.

226. (*Chairman.*) What recruiting centres in the agricultural districts would you recommend us to ask for?—There is Norwich and Bury St. Edmunds.

227. (*Colonel Onslow.*) Would there be any difficulty in getting the whole?—No difficulty whatever. For the last year each one would send it in. It would not take three minutes and I could find it out.

228. (*Chairman.*) Could you give us it with the different causes?—It would take longer with the different causes.

229. We should require to have it under the four causes mentioned in the summary?—This return of the Director-General is only made up from districts sent in to him, and instead of adding them all together he has only to keep them separate. When I get a general return I get it from the whole districts, and then add them all together.

230. How many districts have you?—About ninety.

231. (*Mr. Struthers.*) We might get two or three typical country districts?—Yes.

232. (*Chairman.*) Will you give us the places where we should ask for recruiting statistics?—Carlisle, Norwich, Lincoln, Reading, Bury St. Edmunds, Exeter, Shrewsbury, Chichester, Taunton, Armagh, Omagh, Clonmel, Stirling, and Aberdeen.

233. (*Mr. Struthers.*) I see the percentage in Glasgow is low as compared with some of the other towns?—It depends very much upon the doctor again and the way he works it.

234. Can you tell us to what extent bad teeth are any indication of weak physique?—I cannot tell you to what extent, but common-sense tells you that it is so.

235. In this report of the Committee of the Dental Association there is a brief statement of the results obtained by the British Dental Association, who have investigated the condition of teeth in school children, in two classes of schools—the well-to-do children, and those of the poor children in Edinburgh; and the percentage of defective teeth in the case of the poorer class of children is 158·2, and in the better class of children 273 per thousand; so far as that is of any value it shows that you might expect to have bad teeth in the well-to-do classes rather than the poorer class of the children?—Well, there is no doubt since the war in South Africa the medical officers have been more particular about teeth than they were.

236. (*Chairman.*) That is admitted?—There were a great many break-downs for teeth. The Director-General told me that it was not all owing to the doctors, but the climate was bad for teeth in South Africa.

237. (*Mr. Struthers.*) You mentioned the prevalence of flat feet in Devonshire?—I think I am right there.

238. Is there any other defect which attaches to any district or where you find bad teeth more numerous than in another district?—I put down Lancashire as very bad for teeth.

239. (*Chairman.*) Have you any reason to give why Lancashire should be so bad?—The doctor at Preston put it down to the water, but at Liverpool it is the same.

240. (*Colonel Onslow.*) The medical men put it down to the chemicals in the air; and it is the same in a great many cases where there are foundries and chemical works, and so on.

241. (*Mr. Struthers.*) Is there any other defect which attaches itself to any district?—Only flat feet. Teeth is the great one. I think there is no particular district that I find heart disease or anything of that sort more prevalent.

242. (*Chairman.*) You heard me ask Sir William Taylor as to how far the recruiting agencies in the country could be utilised with the view to the collection of data upon an anthropometric basis touching the physique of the people or of that section of the population where in the past you found the recruits. Would it add greatly to the work that is now thrown upon the recruiters if certain limited numbers of observations, which upon medical authority would be held to be useful for the purpose of a comparative survey, were made on the introduction of a recruit into the Army ?—What sort of opinion would you want ?

243. Chest measurement, height, weight, and so on ?—That is all done now.

244. Is it all recorded ?—Yes. In a Return which was stopped during the war, the average height and weight and age of all the men that enlisted were given.

245. So that all these facts are actually collected ?—Yes.

246. (*Colonel Fox.*) The sight would have to be all right, and do you not admit them with a limited number of teeth ?—The Orders are, enough to masticate, and then he should be passed ; and if he has not enough then, to reject. Some doctors asked the Director-General to state a certain number of teeth, but we always said that if a man can bite his food don't reject him. I am all for the medical officer using his experience, and judging of a man as he finds him. Some will take the responsibility, and those who take the responsibility, I always think, get on much better than the others.

247. (*Chairman.*) These data that you say are collected are to be found in that volume ?—The General Annual Return by the War Office, which gives the ages of all the recruits that enlist.

248. Does it give the chest measurement and height relative to age, or does it merely give an average ?

249. (*Colonel Fox.*) Have they got the age opposite each one ?—No.

250. That could be done ?—Yes.

251. If you could put in the collected figures and facts it should be done relative to age, with the view of establishing a relation between the two ?—Yes.

252. There is a minimum of sixteen ?—Seventeen for the Militia, and eighteen for the Line.

253. (*Chairman.*) Within limits, do they join more or less at the same age ?—How do you mean ? *Gen. Borrett.*

254. Up to what age do you take recruits ?—Twenty-five.

255. Do you take many at that age ?—No, we take the greater number between eighteen and nineteen.

256. The relation of chest measurement to average age would be at about nineteen ?—The average age is nineteen on enlistment. We go from eighteen to twenty-five.

257. Do you say that 80 per cent. of your men are recruited at eighteen ?—Eighteen or nineteen. We have very often to close up eighteen and only take men of nineteen, and this is done for Indian purposes—no man is allowed to go under twenty to India. Supposing the 14th Hussars are short of 100, then we should enlist 100 at nineteen, to have men ready next year fit for the draft. If we enlisted them at eighteen they would be no use for India, and so we often close at eighteen. And the same thing happened with the Boer War, no man was sent out unless he was twenty years of age. Of course a few were under twenty, but that was their own fault.

258. What is the exact name of the Return ?—The General Annual Return for the Army. It was stopped during the war.

259. Has it been resumed since the war ?—They are doing it now. There are Tables, I know. It is not done in my department.

260. What date would you put upon that ?—I think 1899 was the last Return issued, just before the war broke out. I think one is coming out now.

261. (*Colonel Onslow.*) Could you not give us the Returns before 1899 ?—Yes.

262. (*Mr. Lindsell.*) In those Returns from the different Departments would it show the numbers from the different districts, whether town or country ? You say every year there are more recruits from the cities and fewer from the country. Could we have figures showing that—that is to say Bury St. Edmunds—the number of recruits presented each year would show a falling off if that view is correct ?—That is seen in my last Annual Report, which shows the number of recruits raised in each recruiting area during the past five years.

General Sir FREDERICK MAURICE, K.C.B., called ; and Examined.

263. (*Chairman.*) You were for some years a General Officer Commanding at Woolwich ?—Yes, for seven years. *Sir F. Maurice.*

264. Terminating when ?—Terminating in September last year.

265. It was during those years that your attention was drawn in a somewhat special manner to the question of the physical health of the classes from which we draw recruits ?—Yes.

266. And, in consequence of what came under your observation at that time, you had some interviews with the Inspector-General of recruiting thereon ?—Yes.

267. Could you favour us with what passed on those occasions ?—I had been very much struck by the fact that we were taking some very bad bargains into the Service, who had evidently cost a great deal of money, and who would never make soldiers at all, and, therefore, I went to see the Inspector-General of Recruiting thereon, General Borrett. I called his attention to certain men who had been passed into the Service, and he immediately drew my attention to the fact that his great difficulty was, that if he stopped the recruiting doctors from taking these men by making their examination more strict, they rejected much too freely. I learnt that in the course of conversation.

268. What was the date of the conversation ?—Well, I used to go up pretty frequently.

269. Was that before the war ?—Yes, and also after the war had begun ; and, in fact, a good deal was subsequently to the war. I used generally to have my attention called to a bad case, and I would go and have a talk to him ; I would at a single inspection at the Herbert Hospital find half-a-dozen men perfectly unfit for military or civil life. I very soon found that the practical point was that the doctors had had such bad recruiting subjects before them that their eyes had got wearied with the classes they were inspecting, and they passed those men in because, relatively to some of the others they had been seeing, they were not so bad.

270. In a spirit of sheer exhaustion ?—Yes, and also that the standard of their eyes was lowered by the men they had been seeing. That, of course, rather alarmed me as to the class from whom we were getting our recruits. Then the question arose, whether it was simply that we were getting only refuse for the Army, or whether the failure in physique did not affect other classes, whether my experience was not applicable to these also.

271. The question was whether the condition indicated applied only to the loafing classes, or to the poorer classes generally ?—Yes. After that I began to get a good deal of evidence from other people in Woolwich, and I found two most startling cases in my own family ; that is to say, a daughter-in-law of my own engaged for a short time a temporary cook who is a married woman, and the house was kept awake at night by the screams of a baby in arms, night after night. We very soon found that the reason of this was that the mother was giving her six months' old baby habitually for supper cold cabbage, though the woman was quite able to give it proper food.

272. Was it pickled cabbage ?—I think it was cold ordinary cabbage.

273. It was not uncooked ?—I am not prepared to go into those details ; how far it was cold after it had been cooked, or before it had been cooked, I cannot say ; but the child was certainly given food that it was quite unable to digest.

Sir F. Maurice.

274. Did the child survive?—It was not dead at the time I speak of. But I was perfectly convinced that that would have an effect upon young men at eighteen years of age if that was the way they were treated when babies in arms. Then the question arose whether the case was exceptional or representative. I naturally went about among the ladies who visited the homes of the people, such as district visitors, clergymen's wives and others who had experience, and I found that it was their experience that the children were fed in that way, that the ordinary answers of the mothers when they were speaking of the feeding of their children was, "They eats just what we does."

275. You say that the universal testimony was that parents feed them off their own plates, and include raw herrings, pickles, fried fish, and the like?—Yes. I found also that the societies which sent out children into the country districts, on the system of giving town children a few weeks of country air and country food, habitually received reports that the children could not eat the food natural for their time of life, because in their town life they had been accustomed to what they called relishes, the kind of unwholesome food of which I have spoken.

276. The things that were stimulating to the palate?—Yes. The other case arose from my own experience in my own family. My second son was very suddenly taken with scarlet fever, and before the infectious stage it became necessary to have him taken out of the house, and I had to send him to a hospital. At that time one could not put anyone into a paying ward, and he had to go into the ordinary ward at Blackheath; and, as he was always fond of looking after children, as soon as he was well, he helped the nurses to look after the children in the hospital. There was one little puny three-year-old child, who had had a penny given to him to play with, and the poor little wretch held out his hand to every visitor with this penny in it asking them to get him with it "just a ha'porth of gin." It was his one idea of the way to use the penny. Gin was his ideal of happiness. That led me to make inquiries, among nurses and doctors, as to their experience in this matter, and the answer I got was that livers diseased by gin, "gin-livers," for children under three years of age, were a common experience of hospital practice.

277. That's what you call a representative case?—Yes. The question was whether those cases were exceptional or representative, and I came to the conclusion that they were representative. That led me to write, not that article which you have before you but an earlier one.

278. Which I have not seen?—It is of no importance to you because it was my first sketch. The point of view, from what I had at that time learnt which then impressed me was that it was no use our talking of compulsory service; or of universal service; or of any other mode of increasing the inducements for getting soldiers for the Army if there were men in numbers quite sufficient for us ready to enlist, if they were only in fit condition to make soldiers. Obviously the cases that were coming under my observation showed that many who were willing were not fit, not from any hereditary deterioration, or from anything of that kind, but that the children who could have been healthy soldiers, or anything else in civil life were being destroyed in their earlier years owing to their being improperly nurtured from the time of their being babies in arms, and so on. I therefore drew attention to the question in an article under the title of "Where to get Men." It was in the January before that article in the *Contemporary Review*. You will see, at the beginning of that article, I mention the fact that I had written "Where to get Men." It so happened that the Civic Society of Glasgow, which is a society formed partly from the university and partly from the chief people in the town interested in general social questions, had some time earlier asked me to deliver the inaugural lecture of their season, in September or October of last year. I wanted to deal with quite a different subject, but some of them had known that "Where to get Men" was by me, and they insisted on my taking up the subject again. I put this to you to show how very little I myself have had anything to do with the agitation of the question more than flying a kite that everybody has shot at. They were so interested already from their experience in Glasgow, and from what they had been concerned with on the question of health or deterioration (whichever way it may be put) that they insisted upon my taking up this subject, and it was solely on their urgent desire that I gave the lecture, the substance of which I brought into the article now before you.

279. It may be taken for granted, I suppose, that the conditions of existence in Glasgow are perhaps worse for the great mass of the population than those in any other town in the British Isles?—In many ways that is true, but in many ways it is true as a consequence that there is a more serious effort made to combat these evils in Glasgow than in almost any other town. I rather think a point I shall come to presently is closely connected with the point you raise. I do not think that our most serious danger arises from places where the conditions are most difficult, and most attention is drawn to them, but in those places where the thing has gradually arisen and nobody has looked after it. But I did find this in Glasgow, that there was one particular part of the question which, as it seemed to me, had been practically solved in Glasgow; that is to say, we all know the London County Council and other bodies have endeavoured to meet the difficulty of children not being properly fed who have to go to school. But the people who really know the poor, and who are in close touch with them, are alarmed at the idea of your pauperising, if you feed the children.

280. If you feed them gratuitously?—I shall come to the gratuitous part of it in a moment. There was quite an agitation in London because they said that the immediate effect of feeding the children was to reward the careless parent and to take away his responsibility. But in Glasgow what they have done is this. They have worked with the Charity Organisation Society and the police. They have made it a rule that the children should be fed. They then brought home the responsibility, and the practical result was that what they had done had diminished the applications for gratuitous food and not increased them.

281. Can you favour us with the machinery that they adopted?—I almost think that the most useful way of doing that is to put you on the track of direct evidence, and I think the better plan would be to suggest the names of people in Glasgow who could speak specifically on that subject.

282. Can you mention the names of anybody?—I had better give the secretary some names a little later. I have some names in my mind, but I could very easily find people in Glasgow who would give you the best and most direct evidence.

283. We want to limit the evidence to representative persons who will give us in the smallest compass whatever is best to be known, without risk of endless repetition?—Quite so, naturally. I would rather find out from Glasgow the people you want, because, although I know good names, I am not sure that they are the most representative people. That is a point that I was looking to in my previous answer. It so happens, after the article in the *Contemporary Review* appeared, I received a similar request to go to Manchester, and without entering into all the circumstances of what I said down at Manchester, I may say that I found that there was another side of the question that appeared to me to have been most admirably solved, and that is as to the looking after the mothers in the feeding of their children and the nurture of their children. There they had a system of ladies, who work under the direction of medical men and who get into touch with the homes as soon as they are notified of a birth. The evidence is very completely given in a little report that I certainly think ought to be before your Committee—that is, the report of the Jubilee Meeting of the Manchester Sanitary Association.

284. (*Dr. Tatham.*) That is the Ladies' Health Society, is it not?—Yes. The point I want to make is this: that Manchester, as far as I am able to see, has practically solved that question if they could do it on a sufficient scale. Manchester is working on very small means as compared with the wealth of Manchester, but still the principle is solved, and the evidence is not only as to the great benefit to the children, but as to the fact that the mothers welcome the coming of the ladies who act under the instructions of the doctors. Of course it is necessary that you should have ladies selected who will exercise a good deal of tact, and where that has been done, the mothers actually welcomed their coming and were proud to show the improvement in their babies.

285. (*Chairman.*) Is that commensurate to the cost in Manchester? The cost is ridiculously small. You will

see the figures in the report of the Jubilee Conference. Of course there has been a great deal of voluntary work which costs the town nothing.

286. (*Dr. Tatham.*) Sir Frederick is quite right. The reason why the Ladies' Health Society do so admirably is that they are now under the ægis of the Corporation, it is the Corporation which supports them. Is not that so?—Certainly; I can give other instances that Corporations are quite ready, where they see there is really a good case, to find all the money wanted (I do not say in all boroughs) for such purposes as that. For instance, at Woolwich the medical health officer had a number of little cards printed with a heading "How to feed Baby"; and a series of quite simple directions were given as to the different stages at which babies' food should be given, and those were printed in very large numbers at the expense of the corporation, and they were distributed through the different agencies, the clergymen, the dissenters, and the district visitors, and so on. My point is, that so far as I was able to see whilst in Manchester, the question of the feeding of the children at their homes has been most admirably solved; the question of the feeding of the children in the schools has likewise been solved in Glasgow. Therefore, I think that the great thing that is wanted is something that will bring the experience of Manchester to bear upon Glasgow, and the experience of Glasgow to bear upon Manchester.

287. (*Chairman.*) And the experience of the two brought to bear upon the whole country?—Yes. One of the most alarming features of that report of the Jubilee Conference in Manchester is the statement made by the Chairman of the Medical Health Board of the County Council of Chester (because for this Jubilee those most conversant with the facts came from all parts of the country), that the most terrible conditions prevail in the large villages, and small towns that have been growing up without any kind of organisation to look after them. You will find his statement there, and it is most frightful. He says that the death-rate in many of those places is not, as in many places, 200 or 300 per 1,000: but that of all children born of all classes (of course that practically shows a higher percentage yet for the poorer classes), but he takes the whole birth-rate of all children born during certain months of the year, and he finds the death-rate is 800 per 1,000. You can see the statement and the authority. All I can do is to give you the best evidence the case admits of.

288. That is under one year old?—Yes; and then, what he says is, that so far from that slaughter being discriminating, that is leaving a survival of the fittest—on the contrary the very causes that have led to the slaughter lead to the result that those who have escaped the slaughter are being brought up under conditions in which it is quite impossible to be virile.

289. Permanently unfitted for life?—Yes. That was very much confirmed by the view of Dr. Ashby, who I think is acknowledged by almost all the profession as having devoted more special care to the culture of children than almost anyone else. He was speaking at the opening ceremony of the "Infants' Hospital" at Blackheath, as to which I might hand to you this paper. He was speaking *à propos* to that article of mine about the 11,000 people who offered themselves for enlistment in Manchester in 1899, of whom 8,000 were rejected straight off, and he said: "I am prepared to produce, so as to account for every one of those 8,000 recruits who were rejected, 8,000 children now in Manchester at quite a young age who are rickety and unfit to make soldiers, or anything else, because of their improper nurture and improper care."

290. Is that owing to malnutrition?—I am not prepared to say that altogether. One other frequent cause of failure in physique, for instance is "flat feet," representing another form of want of care, because the greater and there would be very few cases of flat feet if the mothers, number of flat feet are due to want of proper care properly treated them. The same is true of bad teeth, resulting both from improper feeding and improper care during childhood.

291. You do not say anything about the housing problem?—That has an enormous deal to do with it. I have expressly mentioned it in the *Contemporary* article you have before you. But I suggest one person who has been working at that question, Mr. T. C. Horsfall, who for at least twenty-five years has been pouring out pamphlets on that subject, and his knowledge is so great that I am sure he would give you the cream of the whole thing. *Sir F. Maurice.*

292. Is he in Manchester?—Yes. There is another man who would be useful, who has taken up one branch of the subject which is very important, and that is Dr. Clifford Albutt, the Cambridge Professor of Hygiene. At the Sanitary Congress in Bradford, where he presided in the medical section he took up the subject whether the processes by which medical men have been saving life had been a cause of deterioration?

293. By the survival of the unfit?—By prolonging the life of the unfit, and he certainly dealt in an exceedingly powerful argument with the negative of that. He maintained very strongly indeed that, of all the discriminating agencies to produce the survival of the fittest, disease was the worst. He argues that the injury to those who survive is so great that all measures which combat disease tend to improve the race. I have had an enormous correspondence with all parts of the country, and I have had sent to me all the theories that have been put forward by many people. The question is so large a one that it is quite certain that there is no one cause. Undoubtedly, the revolutionary change that has taken place during the 19th century affects the habits of the country, and it is rather that than anything else, that needs to be taken into account.

294. Do you mean the accumulation of the people in the great towns?—Yes: the change from the 75 per cent. of the people in the country at the beginning of the century as compared with the 75 per cent. now living in the towns. But I would not say that the danger is so much attributable to the transition to the towns as to the fact that we have not made adequate provision to deal with that change. There is the whole housing question, and the whole drink question, and an enormous number of questions involved in it. I think, as regards evidence to come before you, there are several people who have studied this question. There was a man I was talking to yesterday who would be a useful man. He is writing a book upon the subject, and he has been in touch with a very large number who have taken up different aspects of the question. He is the London Editor of the *Manchester Guardian*: Mr. Atkins.

295. We propose to call Mr. Charles Booth, who has perhaps more right to speak authoritatively than anybody else in the kingdom?—Most certainly. There is one thing that I have just alluded to in the article you have in your hand, and that is the danger of something that one says getting completely perverted, as it is stated in the different newspaper reports in the country. I have been repeatedly quoted as having said what I did not say. Lord Meath, in the House of Lords, quoted from a report of my speech my having said that three out of five of the men who are enlisted in the Army were lost to the Army in the course of a couple of years. I never said that in any shape or form. I have contradicted it, wherever I have seen the statement, but it is almost impossible to catch a misstatement once started. What I said, was that, as the closest estimate I could reach, 3 out of 5 of those willing to enlist were physically unfit.

296. Even as you put it it is a serious thing, if there are any facts or figures in support of it?—I merely summarised an impression because there are no statistics available for that. I would strongly put to you that the rejections by the medical officers alone are no criterion because they are pretty nearly a constant factor. Unless the recruiting sergeants and recruiting officers who have been ordered not to bring up men not likely to be passed by the medical officers, make a mistake, or unless the medical standard varies by mistake, it is bound to be a constant factor. They get a standard and they stick to that as well as they can; it may be a little too low or too high. Then there is rather an interesting point in the founding of the Infants' Hospital at Hampstead. As one of the steps taken, it to my mind is of very little importance as regards the Hampstead infants, but it is of very great importance as setting up a central school where medical officers can be specially trained in the treatment of infants. I hand that in.

297. You said three out of every five, did you not?—Yes, three out of five of those willing to enlist.

Sir F. Maurice.

298. But that is merely a surmise?—It is merely a summary of impressions derived from a good deal of research, and is a mere rough estimate.

299. And from impressions gained at Woolwich?—Originally from Woolwich, and then in comparison with a great many things. Broadly speaking, the impression that I have had since then has never led me to think I had put it too high in those figures, though as I have said in that article, in dealing with so vast a subject, one necessarily makes mistakes, and has to change one's impressions as one goes on. For instance, when I wrote that that article, I thought that the total rejections were the constant factor. I now think that the rejections by the medical officers are the most constant figures you have to deal with. The total rejections of those willing to enlist are, so far as I can estimate, certainly not less than 3 in 5. They may very often be much more.

300. But Woolwich being a place where the people have fixed and remunerative employment, the children of the working-classes who submit themselves to the recruiting agencies are probably comparatively few?—I am not taking it from the actual recruiting at Woolwich, but I started from my experience at Woolwich, and then I began to investigate all over the country. The difficulty was that when I came upon that case at Manchester, the impression I got was that I had very much under-rated it. When you have 8,000 rejected out of 11,000 in Manchester, where the local recruiting officer had endeavoured to get the actual figures, and they came out that way, I thought that their rejections were enormously in excess of three out of five.

301. We understood from the evidence of General Borrett and Sir William Taylor that things are particularly bad in Manchester?—I suppose it would be the case in any great manufacturing town. You have exceptional conditions all over the country, not normal. No doubt, when Mr. Rowntree gives the condition of York, that is an exceptional town.

302. I have always understood that, and that there is a large class of Irish who are very wasteful, and Mr. Rowntree admits that amongst the class that he describes as poor, or what was called secondary poor, the waste is to some extent under the control of the class described?—Quite. And, moreover, York is practically below the level of the river.

303. (*Colonel Fox.*) Is it not about 12 feet above the level?—It is very liable to be flooded.

304. (*Chairman.*) In your article in the *Contemporary Review* some prominence is given to unduly early marriages. Have you something to say upon that point?—It is one of the subjects that requires investigation.

305. You know in the latest figures supplied by the Registrar-General's Department it would seem that the marriages of minors in the last twenty-five years have diminished, in the case of men from 77·8 per 1,000 to 50, and in the case of women from 217 per 1,000 to 160?—Yes.

306. That is a very marked diminution?—I have no doubt of that.

307. You are aware that one of the causes that has perhaps stopped the growth of the birth-rate is the diminution in the number of illegitimate births?—I have no doubt that is so. But then probably the other process has been going on very largely. I think probably certain causes difficult to discuss have fully come before you in other forms. Our fathers and grandfathers never kept statistics to arrive at any conclusion, but all the time these tendencies have been at work. One of the most serious things is that the country districts are losing the milk as the natural food for the children; the milk has all gone up to the towns and been much poisoned in transit; and I have lately heard in Ireland in the country districts, since the foundation of those creameries and places for making butter, the visible effect of the loss of the milk to the children in the country districts is clear.

308. That fact last autumn came under my personal knowledge from what I was told?—It is the case.

309. (*Mr. Lindsell.*) You do not confine that remark to Ireland?—No, it was in Scotland also. In Scotland people noticed that if they went out for a walk twenty or thirty years ago the habitual form of hospitality exercised by the peasant was to offer a glass of milk. Now they never can do it and it has gone out, and in many districts it is the greatest charity to sell to the people skimmed milk.

310. (*Chairman.*) I know some people who keep goats to furnish the poor with nutritious milk. On page 49 of the *Contemporary Review*:—"Does my ugly figure of the five to two imply that the class from which we have hitherto drawn the bulk of its defenders is from some cause or causes ceasing to supply the numbers of healthy men that it used to do, or at all events to such an extent suffering in its virility that it cannot now supply them?" May it rather not be the case that owing to the operation of many causes voluntary enlistment has had to depend more and more upon the wastrels of large towns for the supply of recruits?—It is necessarily the case that they are drawn from the towns rather than the country districts.

311. And from that class of the towns which supplies the ranks of casual labour?—I am not prepared to speak upon that with authority.

312. Would not you say that it is probable?—Yes, I should think it is. But it is an enormous proportion when you get that figure in Manchester of eight out of eleven thousand persons, and what brought in the great numbers was the actual enthusiasm for the war, which did not touch the wastrels, but rather the other way.

313. (*Mr. Struthers.*) Was that 11,000 more than the ordinary recruiting?—I should say it was very much larger. I have no doubt that is so. Perhaps in 1899 the average willing to enlist was very much exceeded everywhere at the beginning of the war.

314. (*Mr. Legge.*) In 1902, the total number in Manchester was 4,400?—Quite so.

315. (*Mr. Struthers.*) In what year was this 11,000?—In 1899. But the percentage of rejections was very little different in the following year of 1900.

316. But the total number is the total number who offered themselves, but the number given here is the total number of men who came before the medical officers?—Yes, I doubt whether you would get anything about that. This is rather an exceptional thing, the recruiting officer having taken pains to get at the number of men who did offer themselves. What steps he took I do not know.

317. (*Chairman.*) The fact is the Inspector-General of Recruiting says that it is impossible to show that the Army draws its supply from a lower class now?—Quite so.

318. But the period of industrial activity that we have passed through, may be a contributing cause?—Yes.

319. (*Colonel Fox.*) And education is beginning to tell, and being educated they get employment, is not that so?—Yes. Under that aspect you have statistics of firms in very large numbers who have employed doctors in testing the lads in the factories in different places. There are a number of medical officers who have been employed by the employers themselves to ensure their not getting in those who are likely to put them under the Employers' Liability Act, so that they have carefully watched the importation into the factories of persons who might come into their employ to be brought under the Act. They show that the percentage of the unfit is very serious indeed. I think that those statistics ought to be obtained for the Committee.

320. (*Mr. Struthers.*) Could we get those statistics anywhere?—I cannot at this moment tell you where they are published, but I am sure I could get them for you before long.

321. You have not known whether there has been a falling off in the number of navvies who seek employment on the railways?—No, it would be very interesting to have that. But I am under the impression that the porters at the railway stations and a good many other people of that class have certainly fallen off in physique, and I think that is the evidence of the railway companies, too.

322. (*Dr. Tatham.*) It would not be right to state that it is only in the year 1903 that this question has been brought before the public?—Certainly not.

323. Am I right in saying that more than a quarter of a century ago Sir James Crawford brought this matter forward?—I have no doubt that is so, I only know of it casually.

324. And he complained that the physique of the nation was deteriorating, and not only amongst the lower classes but among the higher classes?—I can hardly imagine the upper classes having deteriorated—it is rather the other way.

325. I believe I am right in saying that it is pretty well twenty-five years ago, so that the matter does not come up for the first time now?—For nearly the whole of this time Mr. Horsfall has been pressing the question as far as Manchester is concerned, and also the towns at large. But what has struck me is that everywhere throughout the country the people who go most seriously into the question are the most seriously alarmed; it was the accidental circumstance of my happening to touch, without knowing it, upon a subject about which, all who had been really studying it were red hot, that has made me appear to have had more to do with it than I have had.

326. I understood you to say in answer to a question that you fully recognise that the class from which we now derive our recruits is not the same class that we derived them from twenty-five years ago?—Not of the same class certainly as the bulk of recruits 100 years ago. You say twenty-five years, but it would be rather difficult to fix a particular period. The tendency has been growing. Formerly all the best recruits were from the country districts, now the bulk must be derived from the towns; but a great many of those enlisted in the towns have migrated from the country into the towns. Naturally they come up to the towns and they do not find employment, and they are on their beam ends, and they offer themselves for recruiting.

327. (*Mr. Lindsell.*) You have not mentioned what you put down here about the Jews. Has it not struck you that the Jewish child, although coming from extremely poor quarters and under very unsavoury conditions, is as a rule a stronger and healthier child than the Gentile, and that is owing to the Jewish mother giving it proper food, and knowing the proper way of giving it food?—Yes, and then she does not just before giving birth to a child and for sometime after leave her home. As a rule she is kept at home looking after the family, and is not the wage earner, whereas a great number of the Gentile women are wage earners, and the men loaf and live on their wives' earnings.

328. No amount of distributing advice could easily act as a remedy?—No.

329. This condition of things prevails among the Gentiles and not amongst the Jews?—Certainly. I do not think that any one remedy is at all a cure; you must do a great many things.

330. You consider that infant food is one of the main factors of what is wrong in the physical condition, and that the people get improper food and drink; and I understood you to say you think that it has shown itself in other employments besides the Army. You mentioned porters, and you will find the evidence given is considerable. Is not that due to the fact that milk and other things are not obtainable in the same way as they were?—Certainly.

331. Would not you also attribute it to the facilities for getting tinned food now?—That is a most important feature, and there is also adulteration, and I think that is very serious.

332. The mothers can get tinned food cheap and there is no trouble in cooking it, and rather than prepare proper food for the child she uses this stuff?—Certainly.

333. And then you attribute a great deal more, in fact, so improper food than deficiency in food?—I think so.

334. And the remedy for that state of things is to go on some of the lines of what is being done in Manchester and Glasgow?—Certainly. The difficulty is to apply it to the small towns and large villages where you have hardly the same *personnel* available for the work.

335. And where it is more needed?—Where it is more needed.

336. There is more ignorance as to the proper preparation of food in the country than in the towns?—Certainly. According to the evidence given in the Manchester Report it is worse in the country.

337. Anything that has a tendency to provide the necessary food by way of free food would be very serious, and probably increase the evil?—Certainly it would. But it is quite possible that every child that goes to the school could be fed and the responsibility be brought home?

338. (*Colonel Fox.*) If they provide a good nourishing meal during the day you see no reason why parents who are neglectful should not be obliged to pay for it?—That is the principle of Glasgow. Where it was at all possible they were made to do it, and if there were exceptional circumstances that really did not admit of their doing it, the people were helped. You know that evidence you and I heard yesterday of Mr. Atkins; his sister has contrived to give a penny meal of a most valuable character, and to charge that to the parents. So that a good deal can be done to help them without pauperising them.

339. (*Mr. Legge.*) I am going to refer to your article in the *Contemporary Review*. You do not mind my questioning you on it, but it is done simply for the purpose of getting out your views?—Certainly.

340. You draw rather a sad picture in the second paragraph as to the very great number of rejections within two years of a man's joining?—It is a very small percentage relatively to the whole lot who are willing to enlist. When I first had my attention drawn to it I was startled by the number of men who had to be discharged after they had been enlisted, and before they had even been trained as soldiers, but I soon found that it was a comparatively small percentage as compared with the previous rejections, of those who had offered themselves for enlistment.

341. Exactly what we brought out this morning, viz.: that over the last ten years the average is just a trifle over 2 per cent.; of those passed as fit for soldiers only 2 per cent. were discharged as invalids. You agree that that is not high?—Most certainly.

342. So that the burden borne by the country has not been so very enormous?—It is very small. I emphasise that in the course of the article. When I found out that, I did not find fault with the recruiting officers. The evidence really shows that the recruiting officers have kept a pretty satisfactory standard.

343. But what you say in the article is this: "I very soon found that an alarming proportion of these men involved the State in considerable expense, but had given no return?"—That is true; a large proportion of the men I saw for discharge had to be discharged before they had been trained. It was simply in looking after waste of public money in my own district that I first took up the question, but I soon found that it was a much more serious matter than even that. That is not "a proportion" of those offering themselves for enlistment, but of the men from the hospital. If you had been with me and seen the proportion of the men whom they were rejecting, the men who had never done anything, you would have agreed with me.

344. But the percentage is very small?—Certainly, but we are talking upon two different percentages. I am speaking of the men whom I saw they were rejecting, who were in the hospital, and you are taking it from the percentage of those originally offering themselves. The two things are quite different.

345. I do not see what grounds you have for saying that?—I said I was alarmed by it. I have emphatically said that. I soon found that I had made a mistake as to the real cause for alarm, not as to the fact that there was cause for alarm more serious than I then knew. You apparently do not distinguish between the men who come before the recruiting sergeant and the doctor. I have made no charge against them. I think they have done their duty exceedingly well; but, as a matter of fact, if any one of you had been at the rejecting of those men you would have been alarmed by the men who had cost the country so much money. I went to the Inspector General of Recruiting on those subjects, and what he told me led me in the end to investigate the question. It did distinctly alarm me.

346. (*Colonel Fox.*) Were those that had joined the Army, and had gone into hospital, men who had been soldiering—and if so—how long had they been soldiering?—From one year to two years.

347. Was the proportion quite alarming?—It alarmed me. It is not alarming in itself. It was the original thing that brought me to the question. What it did

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represent was that the standard of the medical men was necessarily the very lowest that it could be, that in passing a large number into the Army, and admittedly a few wastrels, it showed how very bad was the standard of those they rejected.

348. But in the case you mention, it must have been more than 2 per cent. or it would not have alarmed you?—Yes. I often out of forty or fifty, who were being discharged, had as many as eight or nine or ten, who had never been able to undergo enough training to become soldiers. I would take up those cases which I thought required enquiry as to why the medical officer passed them.

349. (*Colonel Onslow.*) Did they come from all parts of England?—From all parts of the world. The hospital receives men from all parts of the world, but the presumption is that nearly all those men rejected before they had been trained would come in from regiments quartered in the Woolwich district or from London. I do not remember a single case of a man enlisted in the Woolwich district. Naturally the Regiments or batteries quartered there had recruits from various recruiting stations. I quite admit that I had an impression of neglect on the part of the medical officers when I first began the enquiry which I entirely lost before I had concluded it.

350. (*Mr. Legge.*) My next question is on your allusion in that article in the *Contemporary Review* to syphilis. Now we have got figures which substantiate what you say there—that the cases are much fewer than you expected. Why did you expect to find such a large number?—Because of my knowledge of the condition of things that existed in India, and because I was extremely surprised to find that it was so comparatively small.

351. But you have seen, perhaps, a good many floating statements?—No, it was not that because I was in pretty close touch with the medical men at Netley. I think it was probably due to the fact that all the worst cases go down to Netley, because I have heard most appalling accounts of the condition of the special ward at Netley.

352. When you say that the question of child feeding has been solved in Manchester, what do you mean?—Nothing is solved in human affairs, in the sense that no failures occur. What I mean is that the method adopted at Manchester appears to have been most successful.

353. The number of mothers who receive a domiciliary visit is still only small?—I hardly think that that is true of Manchester, but as I have suggested your getting better evidence about it than mine, I would rather not speak positively. It is certainly small as regards the whole country.

354. Is it that a large proportion of the mothers receive a domiciliary visit, or have they just begun it in that way?—I think that Mr. Horsfall or Mr. Ashby would give more valuable evidence than I could about that. My impression is that as soon as a birth is reported they have the whole town so organised that a visit is almost immediately paid. But I do know that I was staggered by the small income on which the Sanitary Association altogether was living. I thought that the money flowed in Manchester for things that were wanted, but it certainly is not so now.

355. You stated just now that in your opinion the health conditions of many of the small towns in the country were just as bad as the slums of big towns. Would you go so far as to say that the villages were as bad as the small towns?—I did not speak of my own evidence at all; what I quoted was the evidence which is in that Report of the Jubilee Conference of the Association held at Manchester, given by the medical officer, the Chairman of the Medical Committee of the County Council of Chester, as to what he had observed himself in the large villages which have grown up.

356. You said the small towns?—I say both "large villages and small towns" you will find. It was a direct quotation from that report.

357. You have no opinion upon that, yourself, have you?—None.

358. Because I was going to ask you whether you thought that the conditions of health were very much better in the isolated cottages in the country than in the small towns?—So far as the evidence has come before me it very often is the case that the occupant of an old half-tumbled down cottage, even the Irishman's with a pig in it which has any quantity of holes, lives in a more healthy oxygen than in one of the most perfectly built houses where the window is never open.

359. And, of course, if it was fairly dry?—Yes.

360. You spoke, and it is a commonplace, about the influx from the country to the town, and you said just now that you thought that the class of recruits you are getting in our Army now was a different class from those we got a hundred years ago?—Yes.

361. Can you give any definite grounds for that belief? Take the Peninsular Campaigns, for instance.—Perhaps a hundred years is vague; what I was meaning was since the rush from the country places to the towns began If we were recruiting the whole country, towns and villages alike, if the 75 per cent. were in the country at the beginning of the century roughly, and it is now 75 per cent. in the towns, naturally on the whole the class that we are recruiting from is changed, because it must be in large proportion a town instead of a country population that we are recruiting from.

362. I do not think that it necessarily follows.—Why not? Surely if you have got 100 per cent. in the beginning of the century, of whom 75 per cent. were recruited from the country and 25 per cent. in the towns, then on the whole your recruiting must be from the country districts.

363. Not necessarily, because the percentage recruited is very small?—But you recruit all over the country, in towns and villages.

364. (*Mr. Struthers.*) It does not follow that the excess is in the towns or the country?—I do not say that it does; but as the whole population of the country changes, so the recruiting changes.

365. (*Mr. Legge.*) I want to know whether there is not some reason for doubt that the physique of the poor townsman is worse than the physique of the countryman?—I have given you a good many reasons in that article which you refer to, for thinking that there are qualifying factors which tend to improve the health of the towns.

366. Later on you spoke of yeomen; and over the page you speak of the country bumpkin. You draw a distinction between the yeoman and the country bumpkin—the yeoman is of a superior class. Do you think ever since we have had a standing Army we ever did enlist in the line a large proportion of yeomen?—I have not said so there; I think I have drawn a distinction between the yeomen who formed the bulk of our Army in much earlier days, and those we had for the Peninsular War, when we used very often to get them out of prison and all sorts of places.

367. You also speak of country districts losing the milk?—Yes.

368. And Mr. Lindsell followed that up. Do you think that the labourers' children in the country, in such a county as Dorset, ever got milk?—I do not know the details of particular counties, but I know wherever I have come across it the people resident in the country say that the change is enormous in the raising of the children, and that formerly the children used to be fed with porridge in England, and now the people have changed their habits and taken to the tinned food instead. It is in England not in Scotland or Ireland that I have known the people gratefully purchase skimmed milk when they were given the chance.

369. You have no idea what the figures are—like those given in relation to Manchester?—I think you could easily get it, but in Scotland you could get it specifically. I certainly, both in Manchester and Glasgow, met various people who were talking of their experience in England, and I think I could put you on to people who could give specific evidence. As to Dorset in particular I do not know.

370. I mentioned Dorset because I know an old country squire who died at the age of eighty-five, and who had gone into this very question, and he said that all his lifetime in Dorsetshire he had never known milk as an article of diet for the labourers. Porridge in a southern English county would probably mean bread and milk?—Very likely, but there is still the milk.

371. (*Mr. Struthers.*) Am I right in supposing that it is your opinion that the physique of the working classes of the country is in a somewhat perilous state?—Certainly. I do not know whether there is a deterioration or not, but the peril is enormous.

372. You have no opinion as to deterioration, really ?—I do not think that it is possible statistically to establish it. I think that there are modern tendencies, which make for deterioration, but I do not think you can establish it statistically.

373. As regards the actual state of the population, without comparing them with the past, do you rely for your opinion to any extent on these statistics of the Inspector-General of Recruiting ?—Well, I think that the extent to which the Inspector-General of Recruiting has been getting evidence from people all over the country, who for many years past have had it as their special duty to watch the recruiting area, makes the evidence on the whole exceedingly valuable and important. It is rather that than any particular statistics that has impressed me.

374. That means that the article in which you have set forth your views on the condition of things is not so much based on statistics as on personal inquiries made by yourself and what you have learned from other people who collected information ?—Yes. We have no statistics in the past which would enable us to compare with the statistics of the present.

375. As far as you are personally concerned, your opinion is based first on inquiries which you have made direct at Woolwich, and conversations which you have had with people in Glasgow and Manchester ?—Yes, and with many people from England, Scotland and Ireland, and as a result of much correspondence.

376. I suppose as to the evidence with regard to Glasgow and Manchester we must fall back upon these people ?—Yes. I think it would be better if you were to hear their evidence rather than to take mine on that.

377. You do not give me direct evidence on that ?—I do not see how any human being can deal with 40,000,000 of people and give direct evidence. What I said at the beginning of my answers was that I thought the best help I could offer you was to suggest where you could get better evidence than mine as to details.

378. When a person makes statements as to the condition of a certain class of people, one wants to know how far it is based on personal experience ?—I have made no statement in that article without being prepared to substantiate it in every line, but in every instance I have endeavoured to urge you to obtain the best evidence that the case admits of.

379. The reason for investigating a great many cases comes back to what you have been told by other people ?—It seems to me that it is tolerably close evidence when I tell you that it comes within my own immediate family, that certain cases arise in dealing with bodies that are working immediately with me or in co-operation with me, and that is as close evidence as I can get to the actual grouping over a large area.

380. That is where you made personal inquiries, being on the spot; but in Manchester and Glasgow what you have written represents purely what has been told you ?—Certainly.

381. You made no actual inquiry as to how the children are fed ?—I am giving the principle of the method by which it is done, and it seems to me that this principle is a solution—I cannot tell you how far it is successful in practice. For that I refer you to those who can give you better evidence.

382. I did not quite gather what the principle was ?—That every child is being fed that came to the school class; that when that had been done the responsibility for feeding it should be brought home to the parents who are responsible for it, and if there is any parental neglect which causes the children to go starving to school, parents were dealt with by the police.

383. That is a most admirable sentiment which nobody would disagree with; but what I want to know is, is this principle carried out in Glasgow ?—Yes.

384. By whom ?—The whole of that question was gone through between me and the Chairman. I said I would rather not go into that because I can get better evidence than my own.

385. But you cannot give evidence on the point ?—No.

386. (*Chairman.*) I asked Sir Frederick to explain the machinery ?—My reply at once was that you could get better evidence.

387. (*Mr. Struthers.*) Take the case of Manchester. You say they have solved the question of looking after the mothers ?—Yes. *Sir F. Maurice.*

388. How long has this problem been solved ?—Again, I am speaking of the principle, and you will find the description in the report of the action of the Ladies' Committee as fully detailed in the Report of the Jubilee Conference, and I refer you to that.

389. Then I think you rather took as a basis of that argument—I mean in reasoning from your own experience of what you had gathered from other people—that if people came from the country, *ipso facto* they must be better than those in the town, that the physique of the man must be better ?—I do not think I said that. I said I was not prepared to say that, but the great difficulty has arisen from the revolutionary change which has taken place during the nineteenth century, and that we have not met that by adequate organisation to deal with it. That was my answer. On the contrary I think in many ways there are certain conditions which tend to make life in the towns even more healthy than the life in the country districts. I have put that strongly in my contemporary article.

390. We must not take it that the life in the country is necessarily better than the life in the towns under the present organisation that you speak of ?—I think that is rather too wide a question for any one person to speak upon with conviction. I have not seen enough to enable me to say positively that that is the fact. On the whole there is no doubt that the open air life gives a more vigorous physique than life in the towns. Take, for instance, the magnificent policemen we have in London, whose figures as they walked beside the processions of the "unemployable" were a staggering commentary upon that fact. I know a good many police officers who tell me that these men come up from the country districts, but I am afraid that their children or grand-children will be represented by the physique of the unemployed if they remain in London.

391. Why are you afraid ?—Because I see the sort of population that comes day after day to watch the Guards parade at St. James's Palace; and it so happens that on Mafeking night I walked down from Charing Cross to Cannon Street by chance, and I went through the whole crowd and I did not see a dozen men that I could have enlisted. A great portion of the crowd were women and children no doubt, but I was watching the whole way from Charing Cross to Cannon Street to see what kind of men they were, and my impression was what I have said.

392. (*Chairman.*) The streets were well enough lit for you to see ?—Yes. You will remember what a blaze there then was.

393. (*Mr. Struthers.*) You have got some general opinions as to the remedies, and one of them, I suppose, is what they have done in Glasgow, or what they were supposed to have done in Glasgow, as to the systematic feeding of the children in the schools and the other organisations that you spoke of at Manchester ?—With the help of the municipality. You will find that the organisation is entirely independent in the first instance, but it is aided by the municipality afterwards.

394. It is for looking after mothers and infants ?—Yes.

395. These things are more possible in the town than in the country, are they not ?—I think that is an enormous advantage that the towns have over the country.

396. You mean opportunities for organisation in the towns ?—Yes.

397. You mentioned incidentally that Glasgow was probably the worst town in the Kingdom in point of physique ?—I did not quite say that. My answer was that it was probable that it may be partly on account of the bad conditions known to exist that efforts have been made in Glasgow to a greater extent than anywhere else—I won't say anywhere else, but among the greatest.

398. Then as to the statistics which we have had before us of the Inspector-General of Recruiting. The rejections in the Glasgow district are considerably less than in any other centre ?—All that I was speaking of is what I have seen. How far the efforts in Glasgow have already resulted in improvement I cannot tell. Others will give you better evidence.

399. You are assuming, so far as you have any opinion, that the people of Glasgow are of poorer physique from

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the excessive attention they receive?—I never made any statement of the kind, but I was asked: Is not Glasgow one of the worst? I have not put that forward at all, but my answer was that, at all events, what I did know as to the work that has been going on in Glasgow has caused me to think that perhaps the conditions have been very bad. But as to the comparison between one town and another, that is another question.

400. (*Chairman.*) Is not it the case that there are more single-room tenements in Glasgow than in any other town?—Yes. My impression is that that is so.

401. (*Colonel Fox.*) You rather inferred that because they paid such attention in Glasgow that things were getting desperately bad?—Undoubtedly the condition of things there was among the causes that drew people to pay attention to it.

402. I gathered that Manchester and Glasgow were getting so bad that attention was being drawn to it?—There is no doubt that people in Manchester and Glasgow have been alarmed by what they have seen and are working very vigorously. My point is that everywhere, practically I believe in the country the death rate is going up.

403. (*Mr. Struthers.*) That is the case where the organisation of the citizens is more favourably placed for carrying out such reforms?—Yes. There ought to be someone to give evidence from the East-end. The Bishop of Stepney could tell you a story which will represent one of the dangers of towns. He said recently that he knew a certain bed in Stepney which was let out three times in the twenty-four hours; not a bedroom, but a bed, and in that bed three successive sets, for eight hours, slept every twenty-four hours, six at each letting, eighteen people in the 24 hours.

404. That fact would be brought to the attention of the sanitary authorities of the district, I take it?—Of course the difficulty is that in a great number of those cases it depends very much upon the activity of a sanitary officer, who is enormously overworked, and from cases that I have known, I fancy that he is implored by the tenants not to give information of defects lest they should be at once turned out. We have very excellent laws, but they are not put into operation in all cases.

405. But I should have thought that some people, who knew of this fact, would have straightway reported it to the sanitary authority, and therefore it ought to be found in the sanitary report of the district. That is an extraordinary thing you know?—I cannot tell you about that. I am telling you that story told by the Bishop of Stepney. I think that those things ought to come under your investigation.

406. (*Mr. Struthers.*) You have mentioned the feeding of the children and looking after the children, but is there any other remedy you would suggest?—I have been much more anxious that public opinion should be educated to what the actual condition of things is. You have got a nation to save. That is the most important thing of all, and what I want is that some kind of central method should be introduced by which the knowledge and experience gained in one place is brought to the help of another place, and of the whole kingdom.

407. Would you favour enquiry being made in the schools as to the physique of the children as to weight and height at given ages, and as to their feeding?—Certainly, anything that tends to make the nation realise the situation which has alarmed all the people who have come in local contact with it, seems to me valuable.

408. You think we had better do something about that before discussing the question?—Yes. I think that the first thing is to get facts, and that is why I am rather shy about giving evidence about matters I do not positively know about.

409. (*Chairman.*) You think at the present moment there is a great readiness on the part of the public mind for a proper appreciation of facts?—I am sure there never was a time when people were so keen in wanting to face the facts.

410. And that is one of the mitigating circumstances that you mentioned in your article in dealing with the aggregation of large masses in great towns?—Certainly, and I think there are a great many mitigating circumstances, but I would rather not go into the future of the policeman's children after three generations in town. I ought to have said in my previous answer about the policemen, that the police officers will tell you, as they have told me, that those stalwart men you see in London come from the country districts.

411. (*Colonel Fox.*) Do not the police feed their children well?—Probably, but I do not know whether that will save their grandchildren. Feeding is only part of the problem.

412. (*Witness.*) This problem has come before Germany, as it comes before us, and there they have met it in a remarkable manner. They have enormously strengthened their corporations in the *personnel*, and taken care that they have got very effective people in the *personnel*. Then they anticipated this enormous expansion in the value of land, which has taken place more in Germany than here, and they therefore provided that the enhanced value should benefit the corporations. In all the towns they have reserved for the corporations, at a moderate price, whilst the land was still agricultural a whole area of land round the towns and that is under municipal control. The enormous rise in the value of land has been applied to sanitary purposes, and they have taken care that as they planted out their houses they have planted them out in a sanitary manner. That is one of the points worth examining; but the one thing we should do is to be sure about our facts.

413. (*Chairman.*) You will agree that there is a greater sense of responsibility in the higher civic organisations than in the less developed communities?—I am sure that is so, and I think that the great danger is where there is no organisation.

414. Places that have passed recently from the state of villages to towns, and comparatively large towns?—Yes.

415. (*Colonel Fox.*) In such a place as Walthamstow, which I visited yesterday, they have realised what is going on, and they have taken steps to make things right?—You are quite right. You have no fixed rule applicable to all places. In some places they let things slide, but in others a few people take the matter up. If we are going to keep the health of the people generally, something must be done to make universal what at present is done here and there by the isolated action of the zealous.

416. (*Chairman.*) Do not the Association of Municipal Corporations and the County Councils Association lend themselves to inter-communication between the organised bodies which should take cognisance of these things?—The most effective aid which the Sanitary Society of Manchester gets comes from active members of the Corporation. But I do not find in practice that one town knows what another is doing.

417. Of course there is great reluctance to tackle the housing question because it involves them in so many embarrassments as they proceed?—Certainly.

418. (*Colonel Fox.*) The St. Pancras Town Council is undertaking a crusade against underground tenements, and they wish to clear them all out, but they must go gradually?—Quite so.

419. (*Chairman.*) You are aware that the District Auditor in Battersea has surcharged the expenditure of the Borough Council on milk for the poor, and that an appeal has been made to the Local Government Board on the subject?—That shows how much it is necessary that the powers of corporations for good should be wisely and cautiously extended. I think you want to look strictly after the *personnel*. I am not quite certain that you do not want some permanent officials so that you will have people appointed who shall be carefully selected.

420. Do you not think that the imposition of more important duties upon local authorities leads to improvement in the *personnel*?—From what I have seen I feel sure it does, but I cannot speak of that with the least authority.

SECOND DAY.

Friday, 18th December, 1903.

PRESENT..

Mr. Almeric W. Fitz Roy (*in the Chair*).

Colonel G. M. Fox.	Colonel George T. Onslow.
Mr. J. G. Legge.	Mr. John Struthers.
Mr. H. M. Lindsell.	Dr. J. F. W. Tatham.

Mr. Ernest H. Pooley (*Secretary*).

Dr. Alfred Eichholz, M.D., called; and Examined.

421. (*Chairman.*) You are one of His Majesty's Inspectors of Schools?—Yes.

422. For how long?—Since 1898.

423. And before that you were in practice as a medical man?—I am a Doctor of Medicine of Cambridge University and was Fellow and Lecturer of Emmanuel College, Cambridge, and studied medicine at Cambridge and St. Bartholomew's Hospital.

424. And you are, therefore, thoroughly equipped to give evidence from a medical and educational standpoint?—I hope so.

425. And since you have been employed as an inspector you have had almost exclusively London experience, have you not?—No, I should not say that. I was district inspector for Lambeth for five years, and at the same time I undertook the inspectorial and other duties for the deaf, blind, feeble-minded and cripple schools, and lately for the epileptic schools throughout England and Wales.

426. Did you do that from the first?—For the first years I served a probationary period in order to acquaint myself with general school methods in England and in Germany.

427. And since then you have become almost exclusively charged with the defective class of schools?—Yes. I have a very small district, mainly the district of the City of London which contains very few elementary schools, three Board schools, and about twelve voluntary schools. My interest in the problems of physical degeneracy arose at first from my official connection with schools for the various types of defective children and with schools fed from slum population.

428. On the preliminary point of physical degeneracy what is your experience generally? Does it lead you to think that physical degeneracy is on the increase?—I believe it to be the reverse. I believe that it is less, decidedly.

429. But not diminishing at a rate so rapidly as we could wish or might be brought about by remedial measures?—Exactly. And I might furthermore point out at this early stage in my evidence that elementary education has contributed to the stratification of the large urban population into a distinct series of social levels. There is an upper class, well-to-do and well cared for, to whom our methods afford every chance of mental and physical improvement. They come out well, and furnish a population probably not excelled by any in this country or in any other. At the other end of the scale we find the aggregations of slum population ill nourished, poor, ignorant, badly housed, to a small extent only benefited by our methods of training. They are the degenerates for whom this enquiry is presumably instituted. Between these two is the third and largest stratum consisting of the average industrial artisan population in which the bread-winners are in regular employment. It is the aggregation of the slum population which is largely responsible for the prominent public notice called to their physical condition.

430. It is the concentration of slum population which calls attention to their condition?—Yes. I have got plenty of information which I shall be glad to submit to the Committee in due course. But this is a preliminary talk, I imagine. *Dr. Eichholz.*

431. I propose now to take up the points on which you are prepared to give evidence and go through them seriatim. You are able to tell us something about the poorest type of school to begin with?—Yes, in order to confirm my general experience, I have visited schools in London, and at the instance of one of the members of this Committee, with the assistance of the Secretary to the Board of Education, I made special visits to West Ham, Manchester, Salford and Leeds, and took information from two country schools, one in the North and the other in the South of England, the Ripon Cathedral School, and the High Wycombe Schools, as types of country schools. I have also consulted medical colleagues engaged in public work, charitable and philanthropic workers and members of educational authorities. I did this by way of saving some repetition of evidence.

432. Do you express the views of a good many people who are qualified to speak on the subject?—Yes. My statement represents, in addition to my own information, what I have been able to gather from consultation with as many as 200 people closely interested in the training of our elementary school population, including the members and officers of Education Committees of Manchester, Salford, Leeds, and many officers of the London School Board. Also I should mention Dr. Tattersall, Medical Officer of Health, Salford; Dr. Ritchie, Medical Officer, Manchester Education Committee; and Dr. Hall of Leeds who is very keen on this subject.

433. Dr. Hall is a retired surgeon, is he not?—Yes, an ex-factory surgeon with fifty years' experience. I have also interviewed the officers of the Ragged School Union, and I have held communication with secretaries of boys' and girls' clubs in Manchester and in London, and I have had interviews and communicated with the secretaries of Charitable Feeding Associations. It is only due to those who have helped me with information to express my gratitude, and to free them from every responsibility for the views which I here express, and which must be taken to represent my own opinion only. As regards my own personal effort I have adopted two methods; firstly, the inspection of schools (and in inspecting schools I have selected and enumerated the children of abnormal physique); and, secondly, have taken certain measurements of height averages; and, thirdly, I have made inquiries into the cause of retardation as regards school attainments and physique. I have inquired specially into the causes of progressive improvement in improving schools, of which I consider there are a great many instances in our large towns. I have interviewed the head teachers as regards the circumstances and signs of degeneracy, and their causes, and as to the evidence of hereditary deterioration. I have talked the question over with medical officers, managers, and lay workers, and I have had recourse to persons outside the actual schools as to the variations in physique of the adolescent, and have gone into the conditions of labour which arise in connection with the system of manual training

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at present adopted in the elementary schools. I have drawn a broad distinction between physical degeneracy and hereditary deterioration. The object of my evidence is to demonstrate the range and the depth of degeneracy among the poorer population, and to show that it is capable of great improvement—I say improvement purposely even within the areas of the towns—and to show that there is a lack of any real evidence of any hereditary taint or strain of deterioration even among the poor populations of cities. The point which I desire to emphasise is that our physical degeneracy is produced afresh by each generation, and that there is every chance under reasonable measures of amelioration of restoring our poorest population to a condition of normal physique.

434. Will you give us a summary of your conclusions?—I will do so immediately.

435. Will you give us the points now, and then summarise your conclusions subsequently?—(1) I draw a clear distinction between physical degeneracy on the one hand and inherited retrogressive deterioration on the other. (2) With regard to physical degeneracy, the children frequenting the poorer schools of London and the large towns betray a most serious condition of affairs, calling for ameliorative and arrestive measures, the most impressive features being the apathy of parents as regards the school, the lack of parental care of children, the poor physique, powers of endurance, and educational attainments of the children attending school. (3) Nevertheless, even in the poorer districts there exist schools of a type above the lowest, which show a marked upward and improving tendency, physically and educationally—though the rate of improvement would be capable of considerable acceleration under suitable measures. (4) In the better districts of the towns there exist public elementary schools frequented by children not merely equal but often superior in physique and attainments to rural children. And these schools seem to be at least as numerous as schools of the lowest type. (5) While there are, unfortunately, very abundant signs of physical defect traceable to neglect, poverty, and ignorance, it is not possible to obtain any satisfactory or conclusive evidence of hereditary physical deterioration—that is to say, deterioration of a gradual retrogressive permanent nature, affecting one generation more acutely than the previous. There is little, if anything, in fact, to justify the conclusion that neglect, poverty, and parental ignorance, serious as their results are, possess any marked hereditary effect, or that heredity plays any significant part in establishing the physical degeneracy of the poorer population. (6) In every case of alleged progressive hereditary deterioration among the children frequenting an elementary school, it is found that the neighbourhood has suffered by the migration of the better artisan class, or by the influx of worse population from elsewhere. (7) Other than the well-known specifically hereditary diseases which affect poor and well-to-do alike, there appears to be very little real evidence on the pre-natal side to account for the widespread physical degeneracy among the poorer population. There is, accordingly, every reason to anticipate RAPID amelioration of physique so soon as improvement occurs in external conditions, particularly as regards food, clothing, overcrowding, cleanliness, drunkenness, and the spread of common practical knowledge of home management. (8) In fact, all evidence points to *active, rapid improvement, bodily and mental, in the worst districts*, so soon as they are exposed to better circumstances, even the weaker children recovering at a later age from the evil effects of infant life. (9) Compulsory school attendance, the more rigorous scheduling of children of school age, and the abolition of school fees in elementary schools, have swept into the schools an annually increasing proportion of children during the last thirty years. These circumstances are largely responsible for focussing public notice on the severer cases of physical impairment—just as, at a previous stage in educational development, they established the need for special training of the more defined types of physical deficiency—the blind, the deaf, the feeble-minded, and the crippled. (10) The apparent deterioration in army recruiting material seems to be associated with the demand for youthful labour in unskilled occupations, which pay well, and absorb adolescent population more and more completely year by year. Moreover, owing to the peculiar circumstances of apprenticeship which are coming to prevail in this country, clever boys are often unable to take up skilled work on leaving school. This circumstance puts additional pressure on the field of unskilled labour, and, coupled with the high rates of wages for unskilled labour, tends to force out of competition the aimless wastrel population at the bottom of the intellectual scale, and this, unfortunately, becomes more and more the material available for army recruiting purposes. (11) Close attention seems to be needed in respect of the physical condition of young girls who take up industrial employment between the ages of fourteen and eighteen. The conditions under which they work, rest, and feed doubtless account for the rapid falling off in physique which so frequently accompanies the transition from school to work. I propose to submit evidence on the following points: (1) Description of the poorest type of school (photographs); (2) Disease and physical defect in the poorer schools; (3) Comparative height measurements in various types of schools; (4) The need for systematic medical inspection of schools; (5) The powers of endurance of school children in poorer schools; (6) Feeding of school children in poor schools; (7) Attainments of school children in poorer schools; (8) Alternating rapidity of degeneration and regeneration; (9) Notes on schools frequented by improving and well-to-do populations; (10) Evidence and impressions on progressive deterioration; (11) Compulsory attendance, scheduling, abolition of school fees as elements in the stratification of public elementary school population; (12) Agencies which make for amelioration; (13) Signs of amelioration (photographs); (14) Heredity and deterioration from the standpoints of new-born children, blindness, deafness, feeble-mindedness, and lunacy; (15) The fate of girls and boys on reaching the limit of school age. I shall conclude my evidence by suggesting certain measures which appear to be likely to promote amelioration among the population which suffers most from degenerative influences. If I may be permitted, I shall now ask you to listen to a few notes of one of the worst schools I can find. This is a school in the district of West Lambeth; it is within a seven minutes' walk of this building, just over Westminster Bridge. In this school, Johanna Street Board School, Lambeth, I have enumerated the children suffering from the taint of physical degeneracy, and I grieve to say that there are as many as 90 per cent. of the children whom I consider unable, by reason of their physical condition, to attend to the duties of school in a proper way. The school is in the centre of a non-industrial neighbourhood, and the parents are costers, cab runners, seekers after odd jobs, and there is no continuous form of labour, skilled or unskilled.

436. What you would call casuals?—It is the casual class. The only definite and continuous form of labour I could discover was the occupation of one father who whistled for cabs at Charing Cross. There is no real work. Their homes are overcrowded; and Dr. Tatham will be able to tell you whether this factor is better or worse here than in other parts of London. There are 13,000 one-room tenements in Lambeth, and, to judge from the clothing and condition of the children, the homes must be filthy; and from what one is able to gather by close inquiry at the school, as to late hours, want of sleep, bad beds, no proper clothing of any kind, one is able to form a very clear, sad estimate of the condition of the children at home. A great proportion of the parents drink to excess. This is a fairly big school, and I am told that there are not more than twelve parents out of 200 who do not fortify themselves by the irregular use of alcoholic stimulants. The women are even worse than the men. Drinking begins early in the day. Even the first meal will consist probably of a bottle of stout and bread and cheese. Then there is the laziness of the women. They do not get up to make the breakfast, and when this is the case the children come to school without it. The laziness of the women, coupled with drink, is at the root of many of the evils of degeneracy. Then as to the feeding—and the whole question practically centres around the feeding—there is the want of food; this is the first factor we have to recognise. Then there is the irregularity in the way in which they get their meals; that is the second factor. Then non-suitability of the food when they get it, is a third factor. And these three circumstances, want of food, irregularity and unsuitability of food, taken together are the determining cause of degeneracy in children. The breakfasts that these children get are nominally bread and tea, if they get it at all.

437. Is it tea without milk?—May I discuss this point in a moment. There is bread and margarine for lunch, and the dinner is normally nothing but what a copper can

purchase at the local fried fish shops, where the most inferior kinds of fish such as skate are fried in unwholesome reeking cottonseed oil. They frequently supplement this with rotten fruit, which they collect beneath barrows, when they are unable to collect it from the top, the facilities of this nature being considerable, for the whole neighbourhood of Lambeth is one coster area. One of the most important points to which I would draw attention is the absence of fresh milk. In these districts the only milk which many of the children ever know is tinned milk, which does not possess the nutritive power of fresh milk and ought therefore to be abolished from the dietary of a young growing child. As regards meat, if they get it at all it is for the most part once a week on Sundays, and then very little and of a poor sort. The absence of milk and meat is most important as determining degeneracy in these neighbourhoods. Now as to free meals at school. There are about 33 per cent. of the children in six months of the year, from October to March, who require free feeding. I am going into this question of feeding more fully presently, because up to now no real estimate seems to have been made as to what is being done and as to what is needed.

438. How is that organised ?—May I tell you that presently ? I may say that this free feeding though good as far as it goes is not sufficient to build up a child's constitution ; at the best it only arrests further degeneracy. And now as regards the lessons. The work throughout shows want of intelligence. There is a dullness of mind, an early flagging of brain power, and the children are unable to pursue their work for a length of time as compared with normal children. They find the arithmetic most difficult to learn, and their memory power is not a thing to reckon upon. There is very little memory power, and with children, who in a normal condition depend entirely upon their memory for getting hold of things and who only reason later, this is a fatal handicap for any mental progress. The want of food, the absence of any home training and self-control will account for any absent power of endurance. And a further index of their abnormal nerve condition is their exceedingly excitable neurotic condition. They are exceedingly excitable and nervous ; it is their nerves which carry them over an effort ; for instance, they make a very good start in drill or physical exercises but after a short time they become lumpy and inelastic in their movements, and there is nothing but a heavy thud in their movements. As regards games, the boys and girls enjoy noisy and rough horse-play, but are unable to fix their energy on any organised form of sport. Boys are hardly interested in games sufficiently to enjoy a game of football, and their tendency to flagging is serious enough to make any sustained game impossible. They cannot enjoy football and can only go through part of the game, for they have not the staying power to get through a match. The headmistress of the girl's school who up to six months ago was engaged in teaching in a good school at Hammersmith, tried to introduce a new school drill on taking up work here, and she found 80 per cent. of the girls could not take up the full course. She displayed her wisdom by taking up something in a minor key.

439. Is the chief degeneracy among the boys or among the girls ?—It is equal, I think. Would you like to see some photographs about this type ? These are not from the actual schools of which I am speaking, but they are from schools in similar neighbourhoods, Blackfriars and Southwark. (*Handing in the photographs.*) I should like to present now a set of height statistics with regard to this school which I am describing. In taking height measurements I have in order to economise the time at my disposal adopted the plan of measuring twenty children taken haphazard, at each year of school age. I have taken the average height of each set of twenty, and charted the results in curves, measuring heights in the vertical direction and ages in the horizontal.

I made some preliminary investigation as to the adoption of a standard and finally after comparing London and rural schools decided upon the measurements from Honeywell Road Board School, Wandsworth Common as affording me a specimen of the best type of English middle class child, exhibiting a regular uniform rate of growth of a high grade. I could not in the country schools under examination obtain anything so regular or anything showing such a well sustained rate of growth reaching up to the limit of school age.

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On each of the diagrams which I have presented, I have charted Honeywell Road as the standard and the school under investigation along with it.

The schools which I have taken as types for comparison are : (1) Slum schools, Johanna Street, Lambeth, and St. Clements Road, Notting Hill ; (2) A school in an improving neighbourhood, Virginia Road, Shoreditch ; (3) A school in an artisan neighbourhood to show the effect of physical exercises upon children who are able to benefit by them, Eltringham Street, Wandsworth ; (4) A mentally-defective school ; (5) A school frequented by children of Jewish immigrants, Gravel Lane, Houndsditch ; (6) Sets of good and poor schools in Manchester, Salford and Leeds ; (7) Curves of country schools (Wycombe and Ripon).

The height measurements seem to point to the following conclusions :—

(1.) A good London school is frequented by children who equal and occasionally surpass in stature a good class of rural children.

(2.) The poorer London schools show a marked and serious retardation of growth all through school life

(3.) The poorer provincial town schools show a similar retardation, but less acutely than in London where the worst population presents graver deflections than that of other towns.

(4.) The good types of provincial town schools present children as a rule equal in stature to those attending good London schools, but not better.

(5.) The poorer population appear to be of unusually low stature at the limit of school age in Manchester and Salford. This is in accordance with an old established anthropological fact as regards South Lancashire, and is not a new fact in the way of degeneracy. The school population in the poorer parts of Leeds appears to be of a sounder type than the poorer populations of London, Manchester, and Salford.

(6.) Feeble minded children show a very marked retardation in their rate of growth especially as they approach the limit of school age.

(7.) Schools in improving neighbourhoods show improvement in height as the limit of school age is attained.

(8.) Physical exercises consistently applied to children who are physically fit to benefit by them, result in remarkable improvement as the limit of school age is reached.

To illustrate a point for a moment : at Johanna Street we find children at four years of age, showing marked retardation in growth. At four years of age they are seven inches too small ; at five years of age they are six and a half inches too small ; and so on. They pick up a little later on, but they are three inches too small on the average, and throughout their rate of growth is jerky, interrupted, and irregular instead of being uniform. These height diagrams illustrate the point as regards the physical stratification of our school population. What I claim is this : that you get within the towns themselves the very best children at one end and the very worst at the other. Country children, though good on the whole, are less uniform in their regularity of growth. This is another school in London, St. Clement's Road School, Notting Dale—a black spot where we have the same sort of thing as in Lambeth, but in a less degree, the reason being that the children here are able to help themselves. It is a criminal neighbourhood, and the children who survive at all are those who learn to take care of themselves. The National Society for the Prevention of Cruelty to Children is a great force for good in this quarter.

440. (*Mr. Struthers.*) Is this the average of all children at a given age ?—I have taken twenty of them at each age just as they came, at random. I was anxious to have weight statistics, but one is not in a position to take them in public elementary schools at present. There are difficulties in the way, arising from the fact that one cannot weigh the children accurately owing to the variation in the amount of clothing they wear. But the school where I was able to get information as to weights, the results obtained followed those of the height statistics accurately. I shall refer to some more presently : I wish to finish my account of Johanna Street. In this school nearly 90 per cent. of the boys are anæmic. They suffer from every physical symptom of anæmia, with pale faces and lustreless eyes, and 15 per cent. have had eczema in one year. The

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filthy condition of the skin and body and head is not so bad as one might expect. It is 12 per cent. of the boys and 20 per cent. of the girls. I may attribute that fact to this, that the schools have been in the hands of school nurses recently who clean up children's heads, and secure a vast and rapid improvement in that respect. A good many children suffer from blight in the eyes and sore eyelids. The hair is badly nourished and wispy, and the skin is rough, dry, pale, and shrivelled, giving a very old look very early in life. There is a point in connection with school attainments—the massing of the children at the bottom of the school. They don't get on. Over 77 per cent. of the boys are above the standard age in the standard in which they happen to be. There are 92 per cent. above age in standard one; 85 per cent. in standard two, and 80 per cent. in standard three. I should like to point out that although dealing with one neighbourhood we probably never see the same children twice, owing to the migratoriness of the parents. The parents move about from one part to another as sooon as they are distrained for rent, and go. Of 236 boys at the beginning of the year only 120 were found at the end of the year. The attendance is good, which is not surprising, as the children would rather be in the school, and the health of the children is better in the school than in the filthy tenements which are all the home they ever know. The attendance in all these schools is really good. A very serious fact is that new comers from the country settling in the neighbourhood rapidly take on the degeneracy of their surroundings. The women begin talking, and they are taken to the nearest public house, and then the downward history begins. I do not know whether the Committee desire at this stage to hear anything more about these schools. I have other cases by me.

441. (*Chairman.*) You can put them in now?—Yes. There is another of those slum schools.

442. (*Colonel Onslow.*) Where is this school that you have been talking about?—The school is Johanna Street Board School, Lambeth. I have parallel evidence from St. Clement's Road, Notting Hill, which it is perhaps unnecessary to submit. May I now point out in this connection that the pauper statistics for London are more serious than for England generally, and that corresponding with this fact is the experience that nothing quite so bad in the way of slum schools is to be found outside London. The total number of paupers in London was higher in the third quarter of 1903 than it had been in any of the previous years since 1871. The proportion per 1,000 of the population in the last weeks of July, August, and September, viz., 22·6, 22·8, and 22·9, was somewhat higher than in the corresponding weeks of nearly all the years since 1875. In the country generally there has been a decided decrease in the proportion of paupers during the last thirty years as the following table, taken from the returns for the last week in September, will show:—

Actual total for 1903	702,990
In the same proportion to the estimated population as in 1873	1,077,504
In the same proportion to the estimated population as in 1883	858,182
In the same proportion to the estimated population as in 1893	772,031

On the other hand the numbers for London show a decided increase during the last twenty years (last week in September):—

Actual total for 1903	105,657
" " 1063	143,186
" " 1873	133,828
" " 1883	101,543
" " 1893	104,237

which indicates that in London as apart from the country as a whole, poverty has been steadily gaining the upper hand during the last twenty years. This will go far to account for the fact that I can find nothing so wretched as the London slums schools in the provincial towns which I had examined.

443. (*Chairman.*) Not in any of the big provincial towns?—No. May I say what I have done in the way of gathering these statistics. I have made a personal inspection of the children in the schools under examination. I had no difficulty in fixing on schools in London, and in the provincial towns I was always directed to what were considered the worst schools by the local education authorities.

At Johanna Street Board School, Lambeth, which is the worst school by far of any I have seen, of the elder children I consider 92 per cent. to be below normal physical condition, and of the infants as many as 94 per cent. The most grievous reflection of all is that there is practically no improvement in physique as we go up the school. Though there are many children physically as low as these in the Metropolis there are few schools which show such an aggregation of deficiencies. The population by the docks is supposed to be as low in physique as any other in London. I therefore examined the children at one of the poorest schools in that area, South Hullsville Board School, West Ham: 87 per cent. of the infants were below the normal and 70 per cent. of the elders: bad enough in all conscience, and still worse than anything in the provinces. Though a shade better than Johanna Street, in that the elder children show some slight recovery of physique. If only to a slight degree we at once perceive the influence of industries and employment. Lambeth, which is distinctly non-industrial, furnishes the most degenerate population to be found. West Ham at its worst is, on the other hand, slightly redeemed by its opportunities for employment. In Manchester Sharp Street Board School, Rochdale Road, selected as the worst school in Manchester, is situated in one of the most difficult neighbourhoods of the city. Taking the children all round 66 per cent. of them were below the normal, a decided improvement on the worst in London, The school is surrounded by mills and factories, which accounts for the worst in industrial Manchester being better than the worst in the non-industrial areas of London.

444. We have been told by the representatives of the War Office that the type of recruits is worse in Manchester than any other part of England?—One of the reasons is that the best of the population go into the factories which appear to absorb unskilled labour at good wages with even greater avidity than industries in other parts of the country. May I talk about that point more fully presently?

445. Yes.—Another wretched neighbourhood in Manchester is Ancoats. I examined the children at one of the voluntary schools in this area: St. James's the Less. In this school we found that although the improvement was not great, and the children were very bad at the bottom of the infant school, they improved at a greater rate than the death rate would account for. We get 64 per cent. of infants, 60 per cent. in the lower three standards, and 46 per cent. in the upper standards.

446. Is that below normal type?—Yes, and bad as it is it shows a very decided recovery of physique as the children travel up the school. St. John's, Deansgate, selected as a typical school of the poorer class, showed 60 per cent. of the infants, 44 per cent. in the lower three standards, and 27 per cent. in the upper standards—very gratifying, a very great improvement. Greengate, Salford is always considered to be one of the worst areas in the Manchester and Salford district. I thought it worth while, therefore, to examine the two schools there, Gravel Lane Wesleyan, and St. Peter's Roman Catholic. In the infant's school at Gravel Lane it was 62 per cent., the lower three standards was 40 per cent., and in the remaining highest classes of this school it was very much better—only 14 per cent. This was so far the most significant case of rapid recovery I had seen in a bad slum area.

447. (*Mr. Struthers.*) Can you give the corresponding figures for the typical school of Wycombe as to the percentage of physique?—It is probably a negligible quantity in the country schools. They are comparable with our good town schools, where the question of degeneracy does not arise at all. There are a few backward and mentally defective children, nothing more. To return to St. Peter's Roman Catholic Schools, Greengate, Salford, I was astounded at the excellent physical condition of these children, especially as the neighbourhood had been given to me as the very worst in Salford. Of the infants only 15 per cent. were below normal, 10 per cent. of the lower three standards and not more than 3 per cent. of the upper three standards—which shows how well cared for this Irish population is and how rapid and complete the recovery at the top of the school. In my opinion Greengate does not deserve its evil reputation. It is vastly superior to Ancoats. I found nothing in Leeds even as bad as at Manchester and Salford, and nothing approaching London. The worst in Leeds is good in comparison to what we experience in London. I examined the children at Sweet Lane, the school

selected. Three-fourths of the children appeared physically able to take the school curriculum. One-fourth were below par. As an idea of conditions in Leeds it may be stated that no provision for regular free feeding of children has been found necessary.

448. (*Chairman.*) Have you got the statistics of the Jewish schools?—I can tell you something about them. In the course of my investigations I was struck with the almost perfect drill of the girls at Gravel Lane Board School in the City division of London—a school which has in the last few months come into my area of inspection. The school came out very high in the list of London board schools at the drill display at the Royal Albert Hall in the summer of 1903. As the children are entirely Jewish and born either abroad or of foreign parentage I thought it worth while to take their height measurements. Though many of them are very poor it will be noted that in growth and in rate of growth they compare very favourably with the best children to be found. This bears out the experience of other investigators, notably that of Dr. Hall of Leeds. Of course, Jewish children are equally subject to the results of illness and poverty and ignorance with others, and cases are unfortunately not wanting where stature has been found to suffer where food has been withheld through force of circumstances. Here is the height diagram for Gravel Lane (*handing in same*).

449. It almost follows the normal line. Those children are drawn from very poor parents, are they not?—Yes—the food and clothing of the home have to be supplemented by free meal and boot funds. I should at this stage like to submit a set of three curves of weight statistics which I have been able to construct from figures kindly supplied by Dr. Hall of Leeds. I have charted a country school (Ripon) and a good and a poor school in Leeds, and the importance of the diagrams is that they bear out in every particular the evidence adduced from heights. For this reason I place increased confidence in height statistics and am less inclined to press for weights except for confirmation.

450. Do these sections represent weight in pounds?—Yes. As Jewish schools did not come specially in my purview I did not chart a diagram of weights for Jewish children, but Dr. Hall's numbers show how very excellent is the nutrition of Jewish children of foreign birth and extraction in Leeds. May I now turn to the question of the occurrence of recognisable pathological conditions in the poorer schools. I have already discussed at some length the question of undersized children and children of poor weight, the under-size and the under-weight. With regard to the signs of wasting, I have adopted three rough tests in going round the schools, very much on the plan of the American surgeons at the immigration stations, who inspect very largely by manual examination. I have felt throughout the great importance of disturbing the children as little as possible, and this principle, I consider, should weigh with all medical men employed in school investigations. They should always make it a matter of earnest thought as how best to promote investigation and to secure results of value without undue interference with the child or with the work of the school.

In the manual examination of children the covering of the shoulder blade will afford in the first instance a good clue as to the muscular tone and development and the general fatty covering of the body. A sharp, out-standing, loosely-fixed blade will not be without great significance. In the second place the coverings of the upper arm bone will tell their tale where the shoulder blade is inaccessible through excess of clothing, and thirdly if two fingers are held out for the child to grip, a notion will be obtained of the quality of the child's muscle, for thinness and poor muscle do not always go together. Not infrequently a thin child possesses an excellent grip and consequently good muscles as far as they go. A fact of this kind is worth much to those concerned with remedial measures.

Anæmia or bloodlessness I have already touched upon and need say little more now except to warn the Committee how widespread it is and to point out that though 90 per cent. of children in one school will rarely be found as at Johanna Street, yet its prevalence is a very serious factor in the circumstances of degeneracy.

It is a postnatal condition like muscular and fatty wasting and lies at the root of many other conditions physical and mental.

Associated with it are the many skin defects comprised under the heading of eczema, which are dependent upon a depressed power of tissue resistance. Less transient than eczema are the hardness, roughness of the skin and its loss of elasticity which makes for premature age among our young population. The hair and teeth suffer along with the skin. The hair loses its youthful gloss, becomes dry, thin, and short or wispy. It is a matter for note that Jewish children rarely exhibit this appearance of wispy hair, which points to the fact of good nutrition among them. The Irish Catholics in Salford also showed very little of it. *Dr. Eichholz*

451. They are looked after better, I suppose?—Yes. With regard to rickets it seems to me that children suffer from it more acutely if not more generally in the north of England than in the south.

Rickets is a condition for which an enormous amount may be done if it is taken in hand early—on the other hand if neglected there are few complaints which produce greater deformities. In the north my impression is that there is a greater proportion of children deformed from rickets than in the Metropolis.

In the examination of school children for rickets it is necessary to distinguish between disabling or deforming rickets and rickets which, though present, may be non-disabling and practically of no effect as regards deformity, which may in fact be non-apparent to any but the expert eye.

It is necessary to dwell on this circumstance in order to explain differences in view which are likely to arise between medical men and those who are not experts in diagnosis. For instance, in the case of a poor school in Leeds Dr. Hall would correctly estimate the children showing signs of rickets at 50 per cent. Of these only about 2 or 3 per cent. are apparent to the non-expert eye, and unless the explanation is forthcoming we are confronted by an uncomfortable discrepancy.

452. Does the employment of the mothers account for it?—I think to some extent, but the true cause is poor and unsuitable food. Dr. Hall finds 50 per cent. of rickets in a poor school and only 8 per cent. in a good school. In a poor Jewish school, he finds 7 per cent. Teeth is another point which should receive attention. Rickets and poor teeth go together.

453. Are bad teeth really a sign of physical degeneracy?—Well, we all have bad teeth.

454. I am not sure that one should make so much of it?—Except in association with other physical defects. There is the question of mouth breathing, a condition dependent on the existence of adenoids—soft-growths in the back of the throat and nose. They lead to narrow chests, stooping, thick speech, loss of hearing, dulness at lessons. Thus their treatment becomes a matter of great importance. No child should be allowed to remain with his mouth open so long as he can breathe in comfort with it closed. If he cannot he should be treated medically. How far adenoids are the cause or effect of mouth breathing is difficult to say, but I have the feeling that early on one can do much by firm discipline for mouth breathing. That is important, and there is a difficulty in getting the children to shut their mouths. How far this is effect and cause is not yet decided, but one notices that with one's own children we can do a great deal in the way of discipline. Then we have eye defects. Dr. Kerr has arranged to talk about these in detail. There is one point I wish to mention, and that is the amount of chronic bronchitis in certain schools. How far this is due to neglect, how far it is the after effect of infectious disease, one cannot say. Dirt, by which I mean vermin, I have referred to. It is very bad in some London schools. A great deal has been done by the school nurses who have been able in a few months to reduce the evil by one half in one of the schools under my notice. And then there is the neurotic temperament of the ill fed child with its excitability, which carries a child over its initial effort to work until the lack of stamina tells and the child flags. There are chronic conditions of deformity, physical and mental defect, notifiable and non-notifiable infections and other acute attacks into which I do not propose to enter here. Now about height measurements I should like to say a few more words in so far as they affect the question of recruits in Manchester district. The population in this district does not attain the same height as the population over the rest of England, and this is partly in accordance with what one knows of the prevalence of rickets in the north of England, which, though it may shorten the stature, may not otherwise disable, and partly with an old anthropological fact,

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and does not indicate anything new in the way of degeneracy. You will see that south-east Lancashire is, roughly speaking, three quarters of an inch in height lower than the average for England.

455. Is that due to racial causes?—There is a considerable Celtic element and a goodly Flemish element as you know—and I do not associate the lower stature with any significant local degeneracy myself. The school population in Leeds does not show this depression in height at the limit of school age to the same extent as the Manchester children. You have more tall Danish element in Yorkshire. Now, as to the feeble-minded children, they show a very marked retardation in the rate of growth. That is what I mean by educable feeble-minded children (*showing photographs*). You might like to see their rate of growth (*handing in photograph and describing it*). Though they grow in stature as they grow older their retardation increases.

456. What sort of position do those children occupy afterwards?—They are selected from among the children who are unable to learn at the normal rate in the ordinary public elementary schools. The process of selection is medical and pedagogical and under the supervision of H.M. Inspector. The children are taught in schools specially certified under the Education Act (Defective and Epileptic Children, 1899), and grants at a special rate are payable for them. Under the special instruction a certain proportion are able after an interval to return to the ordinary school. Others leave for work at fourteen, others stay on till the limit of age for these schools—sixteen—when those who are responsible for them have the great difficulty to face as to their future—for most of them are fit only for custodial treatment. There is at present very little provision after school age for this particular product of degeneracy, and public opinion in future will have to determine whether, with all their moral and mental defects, these children should be thrown in the way of workhouse asylum or prison, or whether they should be treated in suitable custodial homes conducted on humane, industrial lines. To return to the question of general degeneracy in public elementary schools, one of the greatest needs in school organisation is the institution of medical inspection in the poorer elementary schools—at the very least, if I may say so, the greatest need is for medical inspection in the poorer schools.

457. You would not say that that should be the case for all schools?—Ny, on the ground of expense. It is in the worst schools where it is most necessary.

458. Are these classified?—I have attempted to classify them in the case of West Lambeth Board Schools.

459. What sort of classification would you make?—It is, speaking roughly, in West Lambeth, seventeen. It works out at one quarter very good, and one quarter of the poorer class, and one-half of fairly normal schools. West Lambeth is an average London district, and we may assume the Metropolis on the whole would work out in this proportion. It is for this lower quarter that I should like the medical inspection, and it could be managed for £2,500 a year for London. Ten young men, who ought to be trained in questions of school hygiene, could perform the necessary duties at a salary of £250 per annum each.

460. (*Mr. Struthers.*) But the London School Board has something of the kind?—Nothing like enough. There is something done for those suffering from bad eye-sight and for the feeble-minded, and Dr. Kerr examines pupil-teachers and assistant teachers medically.

461. (*Chairman.*) His time is too much taken up already, you think?—I do, and I think that much of this work is for younger and less experienced men than he. They should work under the School Board Medical Officer's guidance.

462. (*Mr. Struthers.*) But Dr. Kerr has assistance?—He has four assistants now, and eight assistants for the eye work. The bulk of the assistants' time is taken up with feeble-minded examinations. Dr. Thomas has recently been able to give some time to bacteriological examinations in addition. That is all the assistance Dr. Kerr has got. As a first step towards amelioration of general physique and towards the establishment of an intelligent educational curriculum in the poorer schools, the health of these schools must be subjected to medical scrutiny by men specially fitted to take it up by training and experience, because anybody will not do. You require a young, plastic mind to engage in it; a man in general practice, as the local men are, will not do. It is impossible for them to get in touch with the problems of education and the school. The man must be young.

463. (*Chairman.*) You want the knowledge of teachers supplemented by medical aid?—Yes, and you want a man of an enquiring spirit and not a dogmatic spirit. The business of the school doctor is to examine children at admission when necessary, and periodically later; to make recommendations to the school authority which shall reach the parent without delay. It is for the school authority to determine how to make those recommendations effective. It is impossible that the doctor can enforce anything that he says. The way I suggest this should be done is as it is done in Frankfort and in German schools generally. They issue a slip of paper, which I suggest should be in duplicate, which says, "Your child is suffering from so-and-so, kindly exclude him until he is fit to attend." In England this would not suffice, as it would give the parent an excuse for not sending the child to school. We want the certificate in duplicate so that the school attendance officer may keep its contents before the parent. The authority would issue one to the officer and the other to the parent, and the parent in this way might be dealt with according to the measure of his culpability or his powerlessness if he did not or could not act upon it. Many cases would still need charitable aid and whatever help managers could procure. I do not anticipate that the need for punitive expedients would often arise. A few wholesome examples would effect a very rapid cure of culpable neglect.

464. You think that would bring home the sense of responsibility?—Yes. I may say that I have great confidence in the official school visitor as an influence in reducing the goodwill of the parent. We have a concrete example in the work of enforcing school attendance where practically every child who is fit comes to school. The attendance in London has risen in the past twenty years from 74 to 85 per cent. We have had very recent experience in the successful working of Mr. Robson's Act. It would be possible for the authority to provide a few specially qualified visitors in each poor area to deal with health cases. Among the further duties of the medical school inspector would be to make recommendations to the local authority on general and special points of school curriculum, length of lessons, apportionment of intervals for recreation, organisation of recreation, ventilation, lighting, artificial and natural, the use and abuse of needlework, desking for children of various ages, use of slates, towels, local variations in curriculum to meet special needs. In the poor neighbourhoods he should visit the schools sufficiently often to examine all new admissions and to re-examine old cases where necessary. I submit that systematic medical inspection of the schools would be a check on a great evil in connection with school attendance, that is, the issuing of sixpenny medical certificates by cheap doctors. One of the greatest evils is the cheap certificate, issued by practitioners in poor neighbourhoods.

465–70. They are bogus certificates, I suppose?—I should say they are too often based upon incomplete examination. To deal more closely with the question of endurance, I should like to express a hope that those who are framing new schemes of drill will bear in mind the large number of children who are physically unable to take a full course, and advise a short course which will admit of frequent interruption and frequent resumption.

471. (*Chairman.*) You need not go into that as the Special Committee has the matter in hand?—Very good. I will confine myself to impressing this point more especially as regards London children, for I cannot find the same amount of distressing loss of power among children after a short spell of exercise, outside London. The same consideration holds with regard to games. I distinguish in the lowest grade children who do not play at all, requiring the teacher's exhortation to call them to participate in any game at all. The next grade exhibit a nervous excitable desire for horseplay which soon gives out. Then out come to the children who can go through part of a game, say of football, then those who could finish a game of football, but who could not undertake the strain of a match. At the head of all we have the schools who can not only play matches but engage in the inter-school competitions. As regards lessons, I have previously instanced the desire of the children to perform what it

asked of them, their will power outstrips their physical power. With poor memory, poor capacity, poor intelligence, and the difficulty of exerting and maintaining interest, it is not surprising that but few of the poorer children reach the upper classes of the school. At Johanna Street no children reach the seventh standard, and only about 8 per cent. reach standard five. Compare this with a good school—though not higher grade—Lavender Hill School where 10 per cent. reach standard seven and 34 per cent. reach standard five, which brings me to another point, the massing of children in the lower classes of the schools, an evil which is apparently greater in London than anywhere else. The children do not get on as they should, they fail to make the normal progress year by year. We find numbers of them at ten, eleven, twelve or thirteen years of age at the lowest classes of the school in standards one and two. Let me illustrate, for purposes of comparison, the percentages of children in the three lower standards of certain schools which I have selected for the purpose. Belleville Road and Honeywell Road, both on Wandsworth Common, will serve as standards of comparison. They are both good schools. Belleville Road has 45 per cent. and Honeywell Road 51 per cent. in the lower three standards. Of the poorer schools, St. Clements Road, Notting Hill shows by comparison 74 per cent., Johanna Street, Lambeth, 72 per cent. and Bath Street, Finsbury, 69 per cent. Note the difference as between London and a provincial town. Grecian Street, Salford, a poor school, shows 47 per cent. as good as Belleville Road and slightly better than John Street, Pendleton, a good school in Salford which has 56 per cent. in the lower three standards. May I now discuss the very important question of the underfeeding of children. I hold a very firm opinion which is shared by most medical men, school managers and teachers conversant with the condition of our poor schools, that food is the point about which turns the whole problem of degeneracy. Some months ago I furnished an estimate to the Board of Education of the number of children in London physically unable to benefit by the school curriculum through circumstances connected with malnutrition, and set down the number at not less than 60,000. I have since gone into the question in considerable detail and propose to furnish a fuller estimate now.

472. Sixty thousand in London?—Yes. The London School Board said this was an exaggeration, that there were not more than 10,000; so that there must be something wrong somewhere.

473–4. What is your estimate?—The only public estimate I can get from the London School Board is the Annual Report of the Joint Committee on Underfed Children. This is a Committee worked under the aegis of the London School Board which co-ordinates the working of the feeding charities, who collect and provide the funds. The Joint Committee exists to prevent overlapping.

475. (*Witness.*) I hold a very firm opinion, which is shared by medical men, members of education committees, managers, teachers, and others conversant with the condition of school children that food is at the base of all the evils of child degeneracy; that is to say, if we can take steps to ensure the proper adequate feeding of the children, the evil will rapidly cease. Other circumstances noted in connection with degeneracy are: bad clothing, bad boots, exposure, want of fresh air, overcrowding, filth, late hours, overstrain at work, and, to a less extent, the smoking by boys. But all these causes pale beside the stress laid upon food. As to overcrowding and dirt, they are secondary circumstances compared with feeding, for many of the foreign Jewish immigrants, and the Irish contribute their full share to the difficulties of the sanitary authorities in dealing with dirt and overcrowding. Yet these two sections of population make a great point of caring for their young children, with the result that these two types very usually stand apart in the poorer neighbourhoods from the general degeneracy. The food question is obviously worse to deal with in London owing to the enormity of the problem, yet in the main the results correspond with the pauper statistics, which I have already pointed out have become worse in the last two decades. It is to be noted in regard to this question that there are three main factors. There is neglect, there is parental ignorance, and there is poverty; and it is not for me to assign what proportion these parts play, how much underfeeding is culpable, and how much is non-culpable. I wish simply for the moment to advance the fact that there is so much. We must recognise nevertheless that there are certain factors which go to swell the non-culpable element, and of these, fluctuation of labour and inconstancy of skilled and unskilled employment are the chief. Then there are seasonal trade variations. Tailors and tailoresses have a very bad time during autumn and winter and are frequently thrown out of work; dock labourers, builders labourers, all outdoor workers are likely to fall into the same plight. The circumstances of employment coupled with a week or so of hard cold weather or even a snap of frost cause an enormous strain upon those worst neighbourhoods. But over and above what is non-preventible and which must for all time remain amenable to charity there exists the large proportion of neglect due to ignorance and culpable causes. Parents do neglect to provide food at all in many cases. They do not get up in the morning and the children must shift for themselves or come to school hungry and unprovided, dependent on the chance provision of a free breakfast at school. This entry occurs in my notes: 'No breakfast, parents well off, keep a fishmonger's shop. Will not pay for medical help for son who needs it badly." Ignorance coupled with neglect account for the widespread omission of fresh meat and fresh milk from growing children's dietary. The supply of food is in consequence most unsuitable, tea and bread for breakfast, bread and margarine for lunch, the questionable materials of the cheap food shops for dinner. The temptation to steal or to eat the more easily acquired rejected rubbish from coster stalls are consequences not difficult to appreciate. *Dr. Eichholz.*

This almost systematic course of malnutrition begins before school age, in fact, too often from the moment of birth. The health of the children becomes seriously affected by the practice which obtains even among the kindest of the ignorant of feeding their children on "a bit of everything we take ourselves" and indulging them before they have cut their first teeth on such things as raw apples, crusts, plum cake, meat pies, tea, ginger beer, and not infrequently alcoholic drinks.

In the course of my own investigation in London, I have had practically to build up my estimate anew. The joint committee of the London School Board publish a Report which simply deals with Board Schools and omits to mention the very large proportion of work done outside the knowledge of the Board. It publishes the average number of children fed per week during the weeks that the feeding centres were open, which works out to 22,206, in 1902–3. Investigation shows that the number furnished as the weekly average of children fed may be taken as an index of the daily average of meals provided.

Now this figure is very fallacious as an index of the total number of children who are underfed, even as regards Board Schools, for it is a fact of common knowledge that the same children are not being fed all through the season, and that every child computed in the average of 22,206, as a rule represents a great many more children actually receiving food. In fact, as is perfectly right with the limited means at their disposal, the committees feed the children who at each moment seem most in need of succour. Stress at home does not affect all at once, but at one time some, at another time others. I have made an enumeration on this point and find that usually the centres feed about three times as many children during the season as they are feeding on any one day.

Thus a centre which can feed 50 per day on an average will feed 150 different children during the winter. This factor three fluctuates somewhat. It is sometimes lower, two or two and a half, sometimes four. It tends to become lower in districts which are very closely investigated by managers and teachers or in districts where there is plenty of money, and tends to rise in the more indiscriminate and less distressing areas, or in areas where there is little help, which must be spread widely.

The lowering of the factor is not an infallible guide to discrimination. I have seen it as low as one, *i.e.*, where all the children were always fed on the assumption that all were in need.

But it seems clear that the number fed on any day multiplied by three will roughly indicate the number dealt with through the season—in an area which is fairly well investigated. Adopting this factor for London Board Schools we get 66,000 as the rough total of underfed children attending these schools. There is Mr. G. R. Sims of the *Referee*, who collects the enormous amount of £2,895; and the London School Dinner Association collects about an

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equal amount. The Destitute Children's Society collected a good sum, and there is the Lambeth Teachers' Association, which collects a certain amount.

476. The School Board Committee are far from covering the ground, I suppose?—They do not actually cover any ground themselves in the shape of supplying funds. They co-ordinate so far as the Board Schools are concerned the work of the great charitable agencies. Of these agencies, which deal with Voluntary schools as well as Board Schools, according to the last Report the London Schools Dinner Association pays in grants £2,184, Mr. G. R. Sims' "Referee" Fund, £2,595, The Destitute Children's Dinner Society, £959, the East Lambeth Teachers' Schools Dinner Association, £312, and the Southwark Children's Free Meals Fund, £893. Adjusting these funds to allow for what they mutually contribute to each other, the amount comes to over £6,100 per annum spent over the whole of the London schools, Board and Voluntary, by a non-overlapping system.

I have ascertained from the secretary of East Lambeth Teachers' Fund that £100 spent represents 2,000 necessitous children fed per season, and here as in the rest of London one-third of that number are fed on each occasion that the centres are open.

On this estimate it follows that for London altogether, roughly speaking, 122,000 children must be receiving food during the year from charitable agencies. This works out at about 16 per cent. of the elementary school population.

I was unwilling to submit these figures to the Committee without a further test. I therefore consulted the Manchester Education Committee and their medical officer, who have made a very careful study of the feeding problem in Manchester, and they assure me that the number of underfed children is not less then 15 per cent. in Manchester, agreeing very accurately with the estimate I offer for London. The estimate of 122,000, distressing and enormous as it is, is in comparison with other towns not excessive. It is in fact parallel. I feel now that when at first I estimated 60,000 as the number unfit, physically, to take the school curriculum, I was very well within my limit.

477. And the estimate of the London School Board you consider is a very preposterous one?—I feel that, with all the necessary and useful work they are doing to prevent indiscriminate charity, they have so far not estimated the extent of problem which they have undertaken. When you compare London with other large towns it is nothing but what one might have anticipated. In the event of measures being initiated to deal with culpable neglect, an opportunity will occur for concentrating much more than at present in the cases which are necessitous through no real fault of the parents. The present method of feeding in London is entirely of the nature of a temporary stop-gap. There is but little concentrated effort at building up enfeebled constitutions, school-feeding doing little beyond arresting further degeneracy. May I now submit a note as to what is done in Manchester.

478. (*Mr. Struthers.*) I should like to hear what they do?—There is a Free Meals Committee working under the Education Committee, which dealt with forty school departments in 1902, but will now deal with eighty since the whole of the education of the municipality has come into their hands. They fed 3,000 children in 1902-3, or about 6 per cent. They will still deal with at least 6 per cent. when they have taken in all their schools. Miss Dendy, a most reliable authority, who is a member of the Education Committee and who was for years a member of the School Board, and has given constant close attention to the problem, is of opinion that not less than 15 per cent. of the children have insufficient meals as well as unsuitable ones. She does not consider that more than a very small fraction of the under-fed children lack food because the parents are unable to buy it. The circumstances of the homes are investigated by the school attendance officers. In order to arrive at an estimate of necessitous circumstances, the total family earnings is determined; they then subtract the rent from the family income, and they obtain a certain nett amount, which they divide by the total number of members of the family. If there are one or two children, and this amount comes to 4s. a head, they allow free meals to the children; if there are three or four children the limit is 3s. 6d. per head; if more than four in the family the limit is 3s. per head; so that they have a differential scale of a very practical kind. This system offers a valuable safeguard against parental laziness.

479. But the expense in one way comes out of the School Board?—No, it is all voluntary. They may not spend the rates on it.

480. (*Chairman.*) You cannot bring the culpability home to the parents of the children?—It is almost impossible, under existing circumstances.

481. (*Colonel Onslow.*) Can you get anything out of the parents?—Yes.

482. (*Chairman.*) What proportion does that contribution bear to the total?—It is a very small amount that the children's parents bear. The London School Dinner Association spend £4,682, and out of that the children's parents contribute £218. That is about 5 per cent. The children's pence in the case of the Destitute Children's Dinners Society amounts to nearly 25 per cent. of the whole amount—£374 out of £1,331.

483. Could not that be made much greater by an effort?—I consider that a good deal more could be obtained. You might get it to 10 per cent., but it would be a small proportion of the whole. I know of one case in which the amount of children's pence was quadrupled under careful visitation of homes by the managers.

484. Unless you apply penal consequences?—That is what I am anxious to discuss presently. Most of these meals consist of pea soup, which is good in its way, but which is not the best food on which to build up a child's constitution.

485. Peas are very valuable food, are they not?—Peas contain some of the chemical principles of nutrition, but not in a form in which they are most assimilable, nor do they contain certain essentials of dietary—fat—which a growing child must receive, and which soup cannot adequately supply.

486. What are the other alternatives?—Pea soup with meat. There are schools which offer a plate of meat or rice pudding with fruit or jam pudding; and in the London Cripple Schools provision is made in every case for some form of voluntary feeding, and the dinner consists of meat, food and vegetables, and sweets or pudding, which costs 2d. to the child, the dinners being partially supported by subscriptions. In Salford they have no organisation of any kind under the School Board. There is very little feeding; it is about 2 per cent. of free breakfasts. In Leeds they have no systematic feeding. Dr. Hall has furnished a good deal of information on the superior home dietary of Hebrew children in the Leeds public elementary schools, which accounts for their exceptional growth and general signs of good health. He has also instituted a feeding experiment to show how good food can produce very rapid amelioration in the physique of retarded children. Taking sixty poor seven-year-old children, at the beginning of the period they totalled 455 lbs. below normal weight with fat and with bone, and they gained in three months forty pounds, in addition to the normal increase in weight for three months; and they looked less anæmic and more cheerful at the end of the time. This is what might be expected. Now, there appears to be urgent need in London at least, which is worse than other towns, for some new educational measure in order to deal with the 25 per cent. of school children in poor districts in a state of retardation. As regards urgency for measures we have to remember two things. We have first of all to recognise that for this retarded population the present code curriculum is not going to bring the child into a condition in which his attainments will be of use in after life. The ordinary elementary school curriculum assumes that a child is fit to go to school and fit to take it. It is clear that in a great many cases he is neither fit to be at school nor fit to learn when he gets there. In the second place, in spite of distress and fluctuation in season trades, much of the neglect is due to culpable neglect and ignorance and laziness of the parent. So that there are two sets of associated circumstances, educational and domestic, which make it advisable to extend the industrial school system under Section 16 of the Education Act of 1876. I should like to extend the Act to meet cases of culpability in the parents. It might be necessary to get a short Act of Parliament to do what is badly wanted. But I may say shortly what I mean. I should like to see schools, either urban or rural, schools of industry, not punitive industrial schools, which shall recognise the uselessness of much of our present curriculum for retarded children, which shall,

in the first instance, create self-respect through cleanliness and decency, and aim at re-establishing an enfeebled constitution through suitable regular feeding. As these are secured physical education becomes possible, and the final aim comes into the foreground which is to provide a curriculum based largely on manual occupations and manual instruction, and which shall endeavour to implant in the minds of the children a respect for the dignity of work—a fact which their homes have never impressed upon them, and which the elementary schools likewise fail too often to accomplish. While I consider that the local authority might be empowered to admit at its own discretion, I should not like the power of appeal to the magistrate to be abolished—for two reasons: firstly, lest the establishment of these schools should tend to increase culpability in the parent, and, secondly, in order that the parent might be held responsible for cost of clothing and maintenance of his child. In this way the schools would act as a deterrent as well as a cure.

487. (*Mr. Lindsell.*) Would you compel the parent?—Yes. I should certainly do so in the culpable cases.

488. (*Chairman.*) And remove the child from the control of the parent?—Yes, and make the parent pay. I have sufficient confidence in the deterrent effect to consider that very few establishments would be needed to meet the case for London.

489. Would you not lay some embargo upon the parent?—I would get the payment for maintenance out of the parent.

490. But supposing the parent disappears, would you not have to put him in some industrial place?—I should like to put him in prison. I should like very much to do so.

491. That is the difficulty of bringing home responsibility to the parent?—The State has succeeded in bringing home this responsibility of sending the child to school under the Attendance Acts. When we consider the increase in the school percentage of attendance from 74 per cent. to 85 per cent. in London in twenty years, in face of all the evils connected with an apathetic anti-educationa population, it shows that we have still a great hold on the parent. We have not an ideal hold on him, but we have a great hold.

492. Getting the child to school is on a different basis from making a parent pay for proper nourishment, because you can lay hands on the child but the parent may disappear?—We have done so in the case of the blind and deaf schools, and we get the blind and deaf into residential schools when necessary, and get out of the parent whatever he can afford to pay—and many of these are poor and wretched.

493. If the parents are well-to-do that might be all very well, but supposing they are of the wastrel or casual class and won't work, what then?—They ought to be punished.

494. That is an expensive remedy, is it not?—You would not have to deal with many after once taking up the work. The knowledge of an official organisation which will track him down to the arms of the law if necessary, will bring the most casual parent to his senses. And very quickly too, for the very defects which make him lazy and unwilling to work will make him amenable to the discharge of duty under legal pressure. It is clear that when we have provided for the culpable, we should still have to call upon charity for the non-culpable cases, and I suggest that we should still have to call upon charity, and even to a greater extent than at present, in order to make the supplement of food better, more frequent, and more in quantity, and therefore altogether more effective; for it is probable that free meals at present do little beyond arresting further degeneracy without doing much in the way of building up. I should hope that in clearing up the culpable cases it would become more and more possible to focus charitable effort on the deserving cases so as to avoid indiscriminate and ineffective spreading. I should like to see the establishment of the school restaurant as a further step in reform within the four walls of the school itself.

495. Which Mr. Booth advocates?—Yes. We have them in the cripple schools already, and I should like to see the Board of Education include provision for kitchens in future building rules. The expense is very small, and the equipment too.

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496. Could not a great deal be done by contributions in the way you suggest, from those schools where cookery is taught? I understand that there is a great deal of waste, and the food is thrown away in many cases?—It is absolutely useless for the present purpose. The materials dealt with are small in amount and not designed to feed any but a small number of individuals.

497. Could not the two be so adjusted as to help one another?—No, you could not get the quantities cooked in the time, or by the inexperienced labour available.

498. As the teaching of cookery becomes more general in schools, there is such a considerable amount of material produced that it might be used, might it not?—If your teacher has to give a demonstration lesson, occupying one hour, and take her ten to eighteen pupils during the process of cooking, it is not likely that by 12 o'clock they would be able to supply 800 or 900. It would not do more than feed the teachers present.

499. Not if the teaching becomes much more general? I do not think so. Many reforms are necessary in the teaching of cookery before it will become sufficiently useful in the home. The children begin to learn it too early to retain much by the time they leave school. They do not follow the work up sufficiently at home or at school to become conversant with the process taught them. It is the exception to find a girl repeat a lesson on the cooking of meat at home. The knowledge which the child gains is too insecure to tempt the parent to run any risks with the modest domestic allowance of meat. So it comes about that the girls become great adepts at making cakes. I think the work would be all the better for being concentrated upon the last six or twelve months of school life.

500. (*Mr. Struthers.*) But still a single course for six months will make a deep impression on them?—I am a member of committee of an orphan asylum, who provide education for 300 children, boys and girls, and we do not teach the girls cookery and housewifery at all until they are from fourteen to fifteen, and then there is hardly a single girl who does not obtain a satisfactory situation at the end of her training. At the Royal Patriotic Asylum for Girls, all girls over twelve receive very full organised domestic training for one half their time. The school was until recently in my district of inspection. I recollect that a good deal of trouble was given by Lord Chelmsford and the committee in elaborating a suitable scheme.

501. That is if the girls come to school up to fifteen, but they are entitled by law to leave at thirteen, and unless you give them instruction in cookery before that age they will have none at all?—I should push the thing a year back, and have it between thirteen and fourteen in the school; that would keep them at school. They ought to have learnt reading, writing, and figuring at the age of thirteen, and the last year might well be largely spent in domestic training.

502. (*Colonel Onslow.*) You speak of a school restaurant to which the children contribute, that is a sort of canteen?—Yes, a very small kitchen will supply a large population. In some of our big institutions we have very small kitchens which provide for many children. The large school halls would provide excellent dining rooms.

503. (*Colonel Fox.*) By that means you think the better class of child would get food better than he gets at home?—The better class of child would always go home. In any case children who stayed to dine would be expected to pay what they could.

504. (*Chairman.*) Those not actually in destitution would get better food at the restaurant than at their own homes, would they not?—Yes, they would get nothing at their homes, there would be no regular dinner. To encourage the improvement of home feeding the Battersea Borough Council have recently established two depots for pure milk distribution—beginning at the right end—with the infants.

505. But the district auditors have surcharged the Borough Council?—I do not know that. In investigating the condition of children coming from destitute surroundings the Manchester Education Committee use *this* form drawn up originally by Dr. Kerr I believe for a proposed physical census of 50,000 London children, but the London School Board have declined to touch the question unfortunately.

506. (*Colonel Fox.*) They have declined it! They moved the previous question?—That means that they will not

Dr. Eichholz. do it at present. In Manchester a sample physical inquiry is now being undertaken by Dr. Ritchie. There is another I should like to urge, and that is the appointment of expert lady visitors who might do much to inculcate proper ways of living into the minds of ignorant mothers. They might well begin by discouraging the young mothers where possible from going out to work. Another very necessary step is the instruction of men and women by every possible agency in the laws of health—and women and girls especially as, how to feed, clothe and tend their children; how to cook and how to mend, as well as to do needle-work, and how to look after the house. It does not seem to be of much use to teach girls housewifery in a flat fit for a bachelor with sybaritic tastes, and expect them to benefit from it in the way of housekeeping.

507. (*Chairman.*) They are taught to make a bed, are they not?—Yes. But what I complain of is that the equipment of housewifery centres is not of a kind to encourage frugal and simple habits in the minds of the girls. We ought also in our schools to lose no chance of pointing out the dangers of alcoholism. They are doing it this way in France. I was in Paris some weeks ago, and I got a few copies of this circular on alcoholism; it is well written, and it would apply almost to the conditions in this country, except that the drinks are different in England.

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L'Alcoolisme.

Ses Dangers.

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L'alcoolisme est l'empoisonnement chronique qui résulte de l'usage habituel de l'alcool, alors même que celui-ci ne produirait pas l'ivresse.

C'est une erreur de dire que l'alcool est nécessaire aux ouvriers qui se livrent à des travaux fatigants, qu'il donne du cœur à l'ouvrage ou qu'il répare les forces: l'excitation artificielle qu'il procure fait bien vite place à la dépression nerveuse et à la faiblesse: en réalité, l'alcool n'est utile à personne; il est nuisible pour tout le monde.

L'habitude de boire des eaux-de-vie conduit rapidement à l'alcoolisme; mais les boissons dites hygiéniques contiennent aussi de l'alcool; il n'y a qu'une différence de doses: l'homme qui boit chaque jour une quantité immodérée de vin, de cidre ou de bière, devient aussi sûrement alcoolique que celui qui boit de l'eau-de-vie.

Les boissons dites apéritives (absinthe, vermouth, amers), les liqueurs aromatiques (vulnéraire, eau de mélisse ou de menthe, etc.), sont les plus pernicieuses parce qu'elles contiennent, outre l'alcool, des essences qui sont, elles aussi, des poisons violents.

L'habitude de boire entraine la désaffection de la famille, l'oubli de tous les devoirs sociaux, le dégoût du travail, la misère, le vol et le crime. Elle mène, pour le moins, à l'hôpital; car l'alcoolisme engendre les maladies les plus variées et les plus meurtrières: les paralysies, la folie, les affections de l'estomac et du foie, l'hydropisie; il est une des causes les plus fréquentes de la tuberculose.—Enfin, il complique et aggrave toutes les maladies aiguës: une fièvre typhoïde, une pneumonie, un érysipèle, qui seraient bénins chez un homme sobre, tuent rapidement le buveur alcoolique.

Les fautes d'hygiène des parents retombent sur leurs enfants; s'ils dépassent les premiers mois, ils sont menacés d'idiotie ou d'épilepsie, ou bien encore, ils sont emportés, un peu plus tard, par la méningite tuberculeuse ou par la phtisie.

Pour la santé de l'individu, pour l'existence de la famille, pour l'avenir du Pays, l'alcoolisme est un des plus terribles fléaux.

Le Directeur
de l'Administration Générale de l'Assistance Publique,
G. Mesureur.

508. (*Mr. Struthers.*) Would you post it up in the public house?—I would put it in the free libraries and post offices.

509. (*Colonel Onslow.*) You think this would discourage drink?—It is not merely that they get drunk, but the other things which follow. This is a Government document.

510. (*Mr. Legge.*) Have you seen similar things that they put up in the barrack sleeping rooms in France?—No, I have not.

511. They are put there under the authority of the French Government, and they show the notorious horrors which are a likely consequence of drink?—This is in every post office and public kiosk.

512. (*Mr. Struthers.*) But there are a great many temperance agencies at work, and there is a wakening up to the dangers of drink in this country more than in France, so that perhaps that would not do so much good here?—If we were to deal with the evils of degeneracy by the issue of public circulars this might be useful as an example. I have now completed what I have to say about degeneration, may I now submit my evidence on regeneration?

513. Have you dealt with the evidence of progressive deterioration?—I am coming to that presently. The point upon which I desire to lay great stress is the plasticity of human material, the power which it possesses of yielding rapidly in either direction either toward degeneration or regeneration. Just as the normal type falls away very rapidly in contact with bad surrounding, so, on the other hand, the degeneration if taken in hand early enough is capable of marked and rapid improvement.

514. You mean it yields to treatment?—Yes. With our child population we are dealing with a plastic condition, and not with a permanent or retrogressive condition. We get an influx into Battersea and Lambeth from better districts or from the country and are likely to note rapid degeneration under local influences which before long includes the young children. On the other hand there are many schools even in the poorest neighbourhoods which show mass regeneration as we go up the school, and it is a fact of common observation that the lowest types of children turned out of the slums into the industrial schools improve at a great rate physically as much as any other way during their sojourn in the institution. We know that the industrial schools work marvellous improvement on the children sent from the worst neighbourhoods. If you go into an ordinary day school you may mark these children sent on licence from industrial schools by their upright carriage and manly bearing and cleanliness of person. They leave the neighbourhood wretched youths, and come back absolutely improved in stature and carriage, and in the way they keep themselves.

515. They do not degenerate when they return?—They do on occasions. They are only out on license. Only a very small proportion of the industrial school children are found, after a short time, to be unable to take up the full drill courses. I have discussed that with Mr. Clark, the superintendent of physical instruction in Manchester, and he told me that not more than 2 per cent. are unable to take the full drill course after they have been in the industrial school a few weeks. He had himself been personally responsible for the physical training of not less than 1,000 industrial school boys. So that here we get a good instance of the influence of feeding and regularity of life. People seem to improve, and are seized with a desire to clear away into a better neighbourhood, so that this very rough population becomes sifted time after time. I know of no greater testimony to the good work and influence of the schools than this repeated sifting and remoulding of the poorer population generation by generation. If we are to deal effectively with child degeneration we must begin early—the earlier the better. You cannot deal with bent bones except when they are young. If we take them in hand later as we do in many orphan asylums we turn them out strong and athletic, but not big. After the age of eight or nine you cannot do so much to restore stature.

516. (*Colonel Onslow.*) You mean in height?—Yes, they fill out well—with some of them we do well. At Norwood Orphan Asylum they turned out a dragoon last year.

517. (*Mr. Struthers.*) Is that rickets?—They are Jewish children, and do not have much rickets; but their shortness is not entirely due to rickets. Now as to the rapid normal recuperative power of child degenerates. In all but the very worst London schools we find a very rapid regeneration or physical improvement of the children going up the school. Thus to refer once more to a provincial school with a bad physical reputation—Gravel Lane, Salford—of children of low physique there are in the infants 62 per cent. in the middle school 40 per cent., and in the upper school 14 per cent. Now as death has very little to

say in the matter when dealing with proportions of these magnitudes, it is clear that much of the infantile degeneracy has improved under no special ameliorative measures, and many through the influence of the school reflecting on the home. It is also evident that the large proportion of low physique in the infants is not hereditary, otherwise we should not find so marked a recovery with the progress of years. These facts will serve to indicate what I mean by the plasticity of human material during childhood. May I now submit a note on an improving school?

518. (*Chairman.*) You mean the school that gets its scholars from a poor class?—Yes.

519. But where the period of school life leads to a very considerable improvement?—Yes. Here are some of the photographs of some of the older children from some of the schools. *This* is in Lant Street, Southwark, opposite St. George's Church. You will note that the series of photographs represents children of the same age taken in one case twenty-five years ago, in another twenty-three years ago, and in a third very recently. They are all from the same school.

520. (*Dr. Tatham.*) Are those photographs a fair sample?—They are improved, and they are not so bad as that now. There is a more civilised intelligent look about the children. They are better filled out and straighter. Would you like to have a note of that school? The population feeding the school consists of 25 per cent. of parents with an average wage of 30s. per week, and the remaining 75 per cent. consists of waterside labourers, and builders' workmen, and so forth. Now as to the causes of improvement—we find that one of the great causes is the dispersal of rookeries. While we are on rookeries, I should like to say that I do not think that the new buildings that they are putting up may not be doing all the good we expect of them; they are tending to do one great harm, and that is that they are putting a limit on the size of families. Families who could live in small tenements with large families are now precluded from entering the L.C.C., and other buildings owing to the high rents necessary to secure a flat large enough to accommodate their families, so as to comply with regulations. This means, therefore, that high rents coupled with rules as to overcrowding may tend to the artificial limitation of the size of families.

521. (*Chairman.*) Is that on account of the accommodation?—The County Council and Borough Councils limit the number occupying a flat or tenement of a given size in order to prevent overcrowding. This means that the modern tenement is too expensive for a working man who may have to bring up a large family. It will avail little to erect dwellings if they are of no use to the class for whom they are intended.

522. If dwellings became general that might be so?—But they are becoming rapidly general.

523. (*Mr. Struthers.*) Have not you different sizes of rooms for large families?—The rents in the larger dwelling are prohibitive. Now the point I wish to make about an improving school of the type of Lant Street is that parents are all on the side of the school—they are all on the side of law and order. The second generation of children (the master has taught the fathers), are better behaved and more intelligent and better clothed and better set up. There are fewer rough faces. I have got a picture here of what they were in 1878 (*exhibiting same*). Their savage type has disappeared and they have become quite civilised.

524. (*Mr. Lindsell.*) But the savage type have gone somewhere?—You do not find them in London now. They have disappeared altogether. They no longer exist.

525. You say this is mainly due to clearing out the rookeries?—That is one factor in the improvement.

526. (*Mr. Legge.*) What do you mean by savage children?—Wild, unkempt, loosely built, ragged, barefoot children, who look like savages and not like human beings.

527. Is that true of the country generally?—Yes. I do not see any children like that now.

528. (*Chairman.*) But if that is true of London, it must be true of the rest of England?—Yes.

529. (*Colonel Fox.*) Do you attribute that to the civilising effect of the schools?—Yes, the schools have done this.

530. And you think that is likely to go on?—Yes. *Dr. Eichholz.*

531. (*Chairman.*) You are dealing now with a population that is not migratory?—Yes, it is a practically fixed population. They are much better knit than they used to be. Now this is a picture well known all over London (*exhibiting*). These children are from the same area, one being the picture of thirty years ago, and the other of to-day. *These* children come from Clerkenwell, and *these* are their successors.

532. (*Mr. Struthers.*) Where were those photographs taken?—I do not know.

533. There exist as we know advertisements of charitable societies, and in order to make a contrast, the children are very carefully selected. *Those* are what you call savage children, and *these*, which are nicely dressed, are supposed to be of the same class?—Yes. There have been no important migrations or industrial charges during the period. I am passing them round the Committee now. This is a school of St. John's, Deansgate, Manchester. It shows an improvement in intellectual appearance in the face as well as in physique. There is, in fact, an improvement in appearance and intellect altogether in the pupils of to-day and this applies to three-fourths of the child population in the large towns.

534. (*Mr. Struthers.*) And that is so throughout the country generally?—Yes.

535. So that the evidence is in favour of progressive improvement?—I hope I have made that clear. To continue with my account of Lant Street. As regards endurance the boys are enthusiastic for sports, and take them up eagerly, though they still come off second best with good schools when they come to a contest, and they are readier to fight an uphill game in a greater degree than formerly. They make a better finish in the sports competitions than they used to do. They drill harder and more firmly now than formerly. There is a better finish to their physical work. I am informed by the head master, who rewards good drill by promotion to a special costume class, that he needs many more special drill costumes than formerly. There is no flagging at lessons, though they still have a poor memory, and the worst type of child, of which there are some, does not rise in the school at the normal rate. Now the meat and milk question, and the general question of dietary, is still very bad there—an indication that neglect must go very far indeed to make a permanent impression on the child as regards possibility of improvement there. May I instance another school at Eltringham Street, Wandsworth—a London Board School. It is a great school for organised games, and is situated in a poor but industrial quarter, but the boys are well fed. This is an improving school. It is not so bad as the other schools, and by the time that the drill course has been completed, are found to have grown up as well as other children in London.

536. You say it is a poor school and they are well fed, and because they are well fed they are improving?—Yes. It is in Wandsworth where the big industries exist. The boys are able to improve physically and mentally, owing to the fact that they receive adequate home care.

537. It is not a poor school like Johanna school?—No. In this school class work is done without any fatigue. The school succeeds in examinations of the School Board and the Civil Service, and the boys are able to do home lessons. This is always a good sign of a better home. Now as to the games, they obtain excellent results in football; the school shows great prowess in sports, running and swimming, carrying off prizes in great numbers. So that the improving conditions of living, the pulling down of rookeries, rehousing, the signs of greater care on the part of the parents, and their new attitude on the side of law and order, drill and organised games, for children who are able to take them up, greater regularity of attendance at school—all these circumstances are telling gradually, if slowly, on the amelioration in physique. Although the labour field is subject to fluctuations, still there is less of this irregularity than there was thirty years ago or more. For instance, in the North of England, succeeding the cotton famine, a fearful state of things arose. They say they hardly dared to look back upon that time. Signs of improvement are the disappearance of the savage type in neighbourhoods which have not been subjected to much fluctuation of the population: the appearance of well-being as shown in the firm and resolute countenance, and their height measurements. The height measurements

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at an improving school and the improvement in the enumerations of weakly children confirm the other evidence. And then another educational point is the increased percentage of children in the upper standards of the schools which, in the case of eight schools from which I have returns, averages over 10 per cent., a very notable increase. The schools are in Manchester. (*Witness here gave some figures from a return of attendance of children in eight schools in Manchester.*)

538. Is not that partly due to raising the school age by bye-law, that is children are not allowed to leave so early as they used to?—It certainly means that our children are getting a fuller chance of educational and physical equipment for life. The long experienced teachers also are very certain that the older children used to lag behind in the lower classes much more even than now, certainly in provincial schools.

539. It does not mean that there is that larger number of children out of the same population who are able to go to a higher standard?—Yes. It means that a larger proportion of the whole of the children are being passed out of school at a higher stage of development than formerly.

540. I have no doubt that there is some improvement?—But there is an impression throughout the schools that there is a great deal. No account of improving agencies would be complete which omitted to mention the ameliorative agencies at work inside and outside the school. Firstly, there are the Free Dinner Associations, and the Clothing Associations, such as the Ragged School Union. There is the Invalid Children's Aid Association which looks after crippled children. The school nurses, who render splendid service in the schools themselves. The Children's Country Holiday Fund. The Lads' Clubs and the Girls' Clubs, which take on the children at a most important stage in their career when they are leaving school. I consider the Lads' and Girls' Clubs work as the most important social development in dealing with the adolescents, so as to preserve and develop the morale and physique and character during the most trying years which intervene with school life and maturity. Then there are the Boys' Brigades; the Evening Continuation Schools are doing splendid work in the same lines; and in the lower neighbourhoods the National Society for the Prevention of Cruelty to Children. In certain towns there are lady health visitors, but I am sorry to say nothing of the same kind or to the same extent in London. Probably I need not go into that question.

541. (*Chairman.*) I do not think you need say much about that. We had something about it the other day?—Very good.

542. (*Colonel Onslow.*) What is the population of Notting Dale district?—I do not know exactly, but about 20,000. There is no industry there. There used to be a pottery, but that has died out, and now it is a concentration of population of the worst criminal type. Now may I indicate to the Committee what I consider the best children in London. They are the sort I look upon as my standard. *That* photograph shows the children at Honeywell Road Board School, Wandsworth Common. (*Exhibiting photographs.*)

543. (*Mr. Struthers.*) That is a suburban school?—No, it is in the area of the London School Board.

544. (*Chairman.*) What class of children were they?—Their parents are clerks and respectable middle class people in good position, occupying houses up to £30 to £45 a year rental. They could in most cases afford to pay something in fees for education.

545. (*Colonel Fox.*) What is the school?—Honeywell Road. The educational methods and results of this type of school are not to my mind surpassed anywhere in Europe. The school has acquired a Continental reputation for breadth of curriculum. The Director of the Leipsic Institute for Manual Training has praised it highly. It has been visited by the Chief Inspector for Hanover, by Austrian and French delegates. Some time ago I accompanied a German educationalist to the school. He witnessed the girls drill, and exclaimed in admiration that they bore themselves as well as German soldiers and offered the further comment that the English might pride themselves and feel reassured as to the national physique so long as they came up to the ideal maintained at Honeywell road. What I claim, then, is that in London we are turning out as good population as anywhere in England, and population which stands exceedingly well in comparison with Continental peoples.

546. What population do the West Lambeth schools serve?—A population of nearly three quarters of a million. West Lambeth is a large London district, not exceptional in the strata of population of which it is comprised and though I have visited almost every district in London to gain information, what I say about Lambeth schools may be taken to apply all round.

547. The worst districts in London?—Are not confined to any one area.

548. There are fewer of the good schools?—No. It contains an average share.

549. That proportion might stand for the whole of London?—I think so.

550. And you confine your medical inspection to the worst class?—I have observed the children in all classes of schools.

551. Supposing you had a medical system of classification?—I should only go primarily for the worst children. They need it most and would benefit most from it. The Committee might like to hear some of the opinions of others which I have gathered in the course of my inquiry as to progressive deterioration. Dr. Tattersall, for twenty years medical officer of Salford, considers that the population is under better conditions than ever. The physique is as good, if not better, than it was; the population is less liable to sickness and death; and his impression is that girls are actually bigger than they used to be, and this is a common impression. The circumstances which cause the less fit to survive act even more favourably on the fit. This is an important point. Dr. Hall, of Leeds, tells me that he does not consider that there is anything which is not susceptible to amelioration under proper treatment; but, bad as things are, he does not consider there is hereditary degeneration, but rather increased neglect.

552. (*Chairman.*) And the conditions are to that extent worse than they were a little time ago?—Yes, but there is nothing which is not improvable. Then I have got the impression from thirty-five head teachers who have been at schools for a long time. Of the thirty-five only four speak for deterioration, and of the rest, nineteen speak for improvement, and twelve offer no opinions, but think that things are stationary. Miss Dendy, of Manchester, says that there is a decided improvement in physique among school children. Mr. Wyatt, the very experienced Secretary of the Manchester Education Committee, says the last thirty years have eliminated the neglected child, what I call the savage child. He thinks the improvement is owing to the schools, and the industrial schools, and street legislation. He says the domestic condition is improved; the children are sent better to school; and there are very many fewer bare feet. This quite bears out my own impression. I remember the matchbox and evening newspaper boy years ago, but he has quite disappeared. The provincial school board inspectors and head teachers are strongly of the view that the children are better set up, less neglected and wasted than formerly. Miss Lee, inspector of Salford, says the infants admitted now-a-days are healthier and more alert than formerly. In Leeds, I obtained the evidence of a retired master who pointed out that thirty years ago his children used not infrequently to faint from lack of food and neglect. This he never saw, though there had been no great population changes he says that older children used to remain in the lower classes more than they do now, which accounts to some extent for the apparent decrease in size in the lower classes marked by some observers. In Leeds, too, one of the old head teachers pointed out that twenty-eight years ago the percentage of visible deforming rickets had been as much as 18 per cent., but had now-a-days fallen to an insignificant proportion less than 2 per cent.—and this in a neighbourhood which had gone down in the interval. The Ragged School Union officials and workers all agree that there has been improvement. Now, then, there is some special evidence which I should like to submit as to the degrees of blindness and deafness. There is both Census evidence and London School Board Schedule evidence that there is a distinct decrease in blindness and deafness in adults and children. In the last ten years—in 1891 the blind adults numbered 3,573 (one in 1,186), and in 1901 the number was 3,556 (one in 1,275). Deaf mute adults

were 5,023 (one in 930), in 1901 ; and in 1891 they were 4,787 (one in 883). Then coming to the children of school age, in 1891 in the case of the blind it was one in 1,844 and now they are one in 2,233. In the case of the deaf, in 1891 it was one in 744, and it is now one in 866. This shows a decided and satisfactory decrease in blindness and deafness in the ten years—and we must remember that in the case of children the taking of the annual census or scheduling is much more perfect than it was. There is a point I wish to raise with regard to the lunacy census statistics. In the London census for 1901 they show an apparent increase, but the mentally-feeble are included for the first time. It is impossible to say whether that is an increase or decrease. In 1891 there was 5,771 lunatics, and in 1901, 7,058. During 1901, however, the London School Board scheduled 2,733 mentally feeble-minded, which if deducted from 7,058 would bring nett to 4,235 adult lunatics, or an apparent decrease in lunacy instead of an increase as indicated.

553. (*Dr. Tatham.*) That part of the general report of the census is now under consideration ?—Then I need say no more about it.

554. The final results are not yet ready for publication, and I should not like to say anything about it.

555. (*Mr. Legge.*) Will you express your opinion upon the point of increase or decrease of lunacy ?—I am not in a position to express an opinion.

556. (*Chairman.*) What you have said would lead people to suspend judgment ?—Yes, I could not express any opinion. Now I take the point as to the compulsory school attendance, and the increase of school attendance percentage, and the abolition of school fees as a factor in concentrating public attention on the degenerate population. The main strength of opinion in favour of progressive deterioration came from Salford. I therefore made a special point of visiting their black spot, Greengate, as I have observed, and discovered that the schools which are now free as regards fees used to charge a sixpenny fee, and drew from a good artisan population which has now gone outwards. Here, then, is one very good instance where abolition of fees have produced stratification and aggregation of the lowest population. I have some interesting numbers on increase of children scheduled and the increase of children coming into the schools in London during the last twenty years. The increase of children on the roll in the last twenty years in London is 47 per cent.—that is enormous. The increased percentage on the schedules for the same period, that is the London School Board census, is 31 per cent., which is only less enormous, showing in one case 47 per cent., and in the other 31 per cent., which means a much greater relative increase in the roll than in the children scheduled, or in other words, that the schools are touching a much larger percentage of children than formerly. More children are coming into the schools than mere increase of population will account for. The percentage of attendance has increased from 79·5 per cent. to 85·6 per cent. in the same period. This great increase of children brought into the schools (249,000) is obviously not drawn from the best classes. It represents over and above the increase of population the victory of elementary education authority over the apathetic masses and over the worst element. The accommodation in the fee-paying schools in the last ten years has decreased by about one-third ; there were 126,000 school places in 1892, and at present there are 84,000, so that there is a decrease of over 41,000, which have been replaced by free places. I have discussed the migrations of better classes from poor neighbourhoods in Salford and Leeds. We have similar processes going on all over London, better classes stratifying in the better neighbourhoods and the worst concentrating in the slums. For instance, when Lord Cadogan cleared the Chelsea slums the result was to drive the poorer people over to Battersea, and this gave for the time the appearance of local deterioration. Finally among the circumstances which throw apparent deterioration in relief is the constant raising of educational acquirements in the elementary schools—a condition with which healthy children can easily comply but which hits the lower classes very hard.

To discuss more closely the question of heredity may I in the first instance recall a medical factor of the greatest importance : the small percentage of unhealthy births among the poor—even down to the very poorest. The number of children born healthy is even in the worst districts very great. The exact number has never been the subject of investigation, owing largely to the certainty which exists on the point in the minds of medical men—but it would seem to be not less than 90 per cent. *Dr. Eichholz.*

I have sought confirmation of my view with medical colleagues in public work, e.g., public health, poor law, factory acts, education, and in private practice in poor areas, and I have also consulted large maternity charities and have always been strengthened in this view. In no single case has it ever been asserted that ill-nourished or unhealthy babies are more frequent at the time of birth among the poor than among the rich, or that hereditary diseases affect the new born of the rich and the poor unequally. The poorest and most ill-nurtured women bring forth as hale and strong looking babies as those in the very best conditions. In fact it almost appears as though the unborn child fights strenuously for its own health at the expense of the mother, and arrives in the world with a full chance of living a normal physical existence. And I should like to offer the suggestion that the committee seek the opinion of the London Obstetrical Society on this question.

The interpretation would seem to follow that Nature gives every generation a fresh start.

557. Is that apart from hereditary tendencies ?—Yes, these affect rich and poor alike.

558. There is a fresh chance of getting rid of rickets with every generation ?—Yes, rickets, malnutrition, low height, poor weight, anæmia, and all the other circumstances of neglected existence. It is from the moment of birth that the sad history begins—the large infant mortality, the systematic neglect, the impoverishment of the constitution—the resulting puny material which is handed over to the school to be educated.

559. Are still births on the increase or not ?—I have no idea. They are not registrable. Nor do they directly affect the case. We are dealing with those who live.

560. Do you think that the conditions under which still births are produced would be a point of any importance?—No. To continue. It seems clear that every generation receives its chance of living a good physical life, and when to the fact of the large proportion of healthy new births we couple the evidence of improving health and physique in children who pass up the poorer elementary schools, it seems clear that we are not dealing with a hereditary condition at all but with a systematic postnatal neglect by ignorant parents, and that heredity, if it makes for anything, makes for recuperation, and so do the other social forces which are brought into play in dealing with the poorer population. Then we have another point as to the question of recruiting: as far as I am able to speak, it seems to be largely bound up with the general labour question. There is a very large demand for boy's work in all industries, work of a semi-skilled nature which absorbs practically the whole of boy labour. In London and the large towns there is the further demand for unskilled boy labour in the shape of office boys and errand boys. A boy leaving school can get, very readily, work at 5s. to 7s. per week in London. Under the varying conditions of unskilled labour he takes up work for three years, and by the time that he has reached seventeen he has shown either self-improvement or self-deterioration. If he is self-deteriorated you may get him for a soldier, if he is self-improved he goes on with his industrial career.

561. (*Colonel Onslow.*) That is true of a certain class going into the army, but that does not affect the navy ?—The boys are drawn directly for the purpose while they are still young.

562. Seventeen is the difficulty ?—Yes. You are landed with the failures, and the lack of self-improvement which they have exhibited is largely bound up with their physical condition. At seventeen they become the street loafers—practically the only available source of recruiting for the army. Those with long experience of boys' clubs tell me that thirty years ago, where there used so be one in ten who went into the army, now they do not find one in fifty who go in. That is because the boys have better opportunities ; in fact the boys' clubs are working against army recruiting and pushing on their boys for better careers. Now there is another point, the apprenticeship system of labour is disappearing in London. We are sorry to see that that is so, and there is nothing to replace it. Fifty per cent. of the boys passing through

Dr. Eichholz. manual centres in elementary schools are fit to take skilled work. A very small percentage of those boys take up crafts when they leave school, by far too few to meet the ultimate needs of skilled trades. They have to enter skilled work later on, when much of what they have learnt at school is forgotten. These clever youths are bound to enter the field of unskilled labour and consequently put pressure upon the field of unskilled labour, which drives out the less clever youth, swelling still further the percentage of wastrels. Then the other question of the wages of unskilled labour as compared with the wages of army service. We are told that the wages of army service do not attract the boys in the same way that unskilled labour does. As regards the percentage of rejections in England we are told that the rejections in Germany are 16 per cent., and in England 62.

563. (*Colonel Ovslow.*) How about the French, they are even greater?—You cannot compare Germany with England. In Germany every man goes through the army, there is nothing very creditable to Germany that 16 per cent. of their men not fit for service, and to my mind it is a great credit to ourselves that we can complete our army numbers at all with the material available. I feel tolerably certain that a physical examination of the whole of our population on the German standard would not find us wanting.

564. (*Mr. Legge.*) How do you get your 62 per cent.?—I have it from Lord Meath's article. I have one point to submit about the physique of the girls. This question of the physique of the girls was first suggested through the official examination of medical certificates for pupil teachers and certificated teachers for my Board. So many of the girls appear to suffer from temporary anæmia, largely bound up with the circumstances of rapid growth and simultaneous hard work. The conditions which arise are so serious that I feel impelled to suggest for the consideration of the Physical Drill Committee the need for a special light drill course for girl pupil teachers.

565. (*Mr. Struthers.*) The girls are from fourteen to eighteen?—I hope that the Committee will consider the question of physical drill classes for teachers

566. The Committee that we are on is not dealing with the pupil teachers, but simply children in the elementary schools?—I hope something will be done for the pupil teachers. It means if you are not going to deal with it it will render the recognition of every anæmic girl difficult owing to the danger which is likely to arise from her undertaking the heavy courses of drill and physical exercises now so much in vogue. I have discussed the question of the physique of young girls with secretaries of girls' clubs, and they tell me that as soon as a girl leaves school she does not fall off immediately, but between fifteen and eighteen she begins to suffer. If her work is too hard she does not recover, but if her work is reasonable she becomes a normal person at twenty. Some girls succumb meanwhile from hot rooms, unhealthy surroundings at work, and so forth; bad food, late hours, excitement, and stress of work, superadded to functional anæmia, are most detrimental during these years. If these girls marry early they as likely as not get still worse, but in some cases early marriage improves a girl. Early marriages are not all equally bad. A girl who marries and has a good home is likely to improve, because married life removes her from the excess of work, so that we find that a good many early marriages act as improving influences. Poor food, unsuitable food, sweets, pastry, tea, and irregularity of meals are again responsible for much of the lowering of health in the case of growing young women. The extension of the midday restaurant to meet the needs of adolescent girls is suggested as a remedial measure; something is being done already in some cases. Miss Kirwan has established a large dining room near Bond Street, where she dines from 300 to 500 a day at 5d. per day. I was asked to discuss the question of country schools for the most degenerate class. If we can bring the Protection of Children Act of 1894 into full activity, and the industrial sections of the Act of 1876 and apply them stringently, or even if it requires some additional legislation to enlarge the powers of the Secretary of State or the school authority, we could largely meet the needs of the country by urban schools of industry, though we should probably find in accountry school a valuable adjunct for determining the rapid amelioration of the worst cases

567. You would have the country schools?—Yes, but nothing of the wholesale nature, and at first everything should be done by way of trial rather than by way of policy. The numbers are much too great. We cannot put 100,000 children out to board and maintenance from London alone. It costs £100 per head to build and £25 a year for maintenance—£10,000,000 for capital outlay and £2,500,000 for annual maintenance.

568. (*Mr. Lindsell.*) Do you think that is correct?—The country school is going to cost you £100 per head to establish and £25 a year to maintain.

569. (*Mr. Struthers.*) What do you base that upon?—Upon the knowledge of institutions with which I am officially connected.

570. (*Mr. Legge.*) The industrial school experience bears that out almost exactly.

571. (*Mr. Struthers.*) That corresponds with my own experience, too?—That is our experience. Twenty-five pounds per annum is a very low estimate of maintenance. There is the other difficulty. Certain parents will not let their children go. There are parents who though poor and perhaps indifferent as to the care of their children still desire to have them at home. Now, may I present my recommendations.

572. (*Chairman.*) Are they included in this memorandum?—Yes. There is (1) the provision of non-punitive schools of industry, rural and urban, for cases of neglect; (2) medical inspection of schools with physical censuses—concentrating first on poorer neighbourhoods; (3) the establishments of school restaurants, milk supplies, restaurants for adolescents, supported as far as possible by parents, leaving it for charity to concentrate more efficiently upon deserving cases; (4) the adaptation of school curriculum to meet local needs of poor schools, as regards three-R, education, drill, manual work, housewifery, cookery, and laundry. Then (5) education by classes, clubs, and re-unions of poorer population and all who come into contact with them in the salient practical points of domestic and personal hygiene; (6) to strengthen the hands of existing agencies by calling attention to their existence. They are the Invalid Children's Aid Association, School Nurses Association, Children's Country Holiday Fund, Ragged School Union, The National Society for the Prevention of Cruelty to Children, The School Dinner Associations, and (7) the appointment of bodies of lady School Board visitors and lady health visitors, working together in the homes for the prevention of infantile and child degeneracy; then (8) permanent homes and colonies for the mentally and morally deficient. We have a few, and only for children. We shall have to take up this problem very seriously, and determine whether it is not more humane to deal with these people in industrial colonies than in prisons, asylums, and workhouses.

573. Do you think you will get much out of them industrially?—Yes. I visited a colony in Germany for the Board of Education two years ago. It was situated in Ursberg, Bavaria. There they had 1,100 people of impaired physique and mental deficiency, adults and children; and, apart from the importation of raw material, the whole place was industrially self-supporting. It required 400 workers to run it. Then I should like to give you the further recommendation—(9) an appeal by circular to local authorities, with a view to breaking down the hard and fast line between official and voluntary workers, and to encourage by every means the enlistment of school managers, who have time and leisure to learn from close contact the actual circumstances of the schools, the scholars, and the homes, and avenues of employment for children who leave school. It seems to me that if we are going to get the best out of the Education Act of 1902, we shall have to encourage managers, not only for other purposes, but for this as much as any

574. What do you mean by the note you have at the end: "(10) A Committee on National Physique"? You have certain opinions on that, I suppose?—May I now offer my view?

575. What is your view about that?—I suggest that there be appointed a permanent official executive committee of experts—medical, educational, physical, industriable and philanthropic, acting in conjunction with the Government Departments, and charged with the duty of collecting, examining, co-ordinating, and diffusing information bearing on conditions affecting the national

physique. The labours of such a Committee would affect every period of life, and might in the first instance deal with (*a*) questions affecting infantile and child physique; (*b*) the influence of residential schools, homes and colonies; (*c*) the industrial and physical problems of adolescent life in so far as they react mutually; (*d*) the work of amelioration as performed by existing voluntary agencies. In addition to this working Committee the appointment of a non-executive advisory Committee would be of the greatest advantage in facilitating the collection of information. This consultative Committee should include prominent clerical, medical, educational, and philanthropic elements.

576. Would not this be executive work done by the professional body?—Yes, by the official Committee; but there is need for a non-executive advisory Committee to facilitate access to all the sources of information.

577. You would make that ancillary to an official bureau, which has the means of doing it?—Exactly. I do think some such committee would be of enormous advantage, certainly as regards the schools, and as regards the difficulties which confront public workers in dealing with adolescent life.

578. One other point. You do not apparently think that the conditions of school life act to any great extent, if at all, in a prejudicial direction on the health of the people?—As regards the schools, I think there is nothing which is not in the power of existing authorities to improve.

579. But, as a matter of fact, they do not, you think?—One has to do a good deal by way of educating popular opinion on important points, the seating of children, the misuse of slates, the importance of light, and especially of fresh air, the seriousness of which is always admitted in theory. As regards fresh air I suffer a good deal from what I am compelled to encounter on my visits round the schools. I constantly begin my work on a classroom by opening the windows.

580. But if it causes a draught, what then?—I consider a draught of less importance than the constant inhalation of fetid, vitiated air.

581. You do not think that the cramped position in which the children sometimes are has a prejudicial effect?—Most certainly. The inspector is there to prevent it.

582. Do you think that the time-tables of schools provide for a sufficient number of intervals?—Yes, they do. They have a quarter of an hour in the morning, and a quarter of an hour in the afternoon. There are also frequent periods for drill—in all London schools three periods of twenty minutes per week. There is no need for more recreation as a rule. If the local circumstances point to the need for more recreation the inspector has power to sanction it.

583. Dr. Kerr thinks otherwise from the evidence that he gave before the Royal Commission on Physical Training in Scotland?—I have seldom come across any evils of ventilation in a school that could not be altered in five minutes. If the windows are not open you can open them and the children can be cleared out of the room if necessary. The draught is not a real objection, but is often an excuse for tolerating irrespirable air.

584. (*Colonel Onslow.*) With reference to your recruiting question, I say nothing about the class who go into the Army, or become stokers or marines in the Navy. But with reference to the boys, they must come from well-to-do parents for the Navy, because you require certificates. As regards refusing artificers and artisans they have to pass a very stiff examination. Therefore, they cannot be the wasters, and yet there is a large percentage of rejections for artisans and boys. Everybody coming into the Navy cannot be such wasters as you suggest they are for the Army, because everyone who comes into the Navy must produce six months' character from some responsible person; everyone must have a history. An artificer must be a boiler-maker, or something of that sort, and must be able to pass a very severe examination. A blacksmith, a cooper and a carpenter have to go through a fair all-round workman's test. Notwithstanding that we have a large number of men rejected for medical reasons?—What proportion of the whole do they reject in the Navy?

585. I cannot tell you what the numbers are, but the number who are rejected amongst them is very considerable.—Is it anything like 62 per cent.?

586. Very probably they include the rejections by the recruiters as well as the medical officers. The recruiters refuse them owing to bad sight, and varicose veins, and flat feet, and so on.—Do you wish me to go into that point? *Dr. Eichholz.*

587. No. The fact of the large number of artisan rejections counteracts the wastrel idea because the bulk of the recruits of the two services we acknowledge come from the rough element.—Does your artisan come from good employment elsewhere?

588. Yes, constantly, from firms like Vickers, Maxim & Company.—Is that when they are in good work?

589. Yes.—Would you have got them in the time of the South African War? I should not like to offer an opinion until I had the chance of going into it.

590. I could show you the figures which we have worked out?—I should like to see them.

591. All those individuals come from a different class, and not from those that you are speaking of.—Do you get more rejections from those who come from the towns or the country?

592. It is about equal.—That shows that the question of urban deterioration has nothing to do with what you are now speaking of. That is the whole point.

593. It shows that there is not deterioration?—You must remember that for the Navy you are bound to select the finest material to be found. And that the physical tests are as near the ideal as can be obtained. You are already dealing with a very high type of recruiting materias when you are able to say that the percentage of rejections for town and country are not sensibly different.

594. There is another consideration between country and town. The population shifts about from the one to the other. You get rural people from the towns. But your artisan must have been tied to his trade for a considerable number of years and he has the least fluctuation of all?—With the knowledge before us that the town and country rejections for the Navy are not different, I feel that the Navy is not touching the degenerate at all, and the high medical and physical standard required for the Navy is responsible for the large number of rejections.

595. The medical examination is a very much stricter one than for the Army?—It must be a practically perfect standard for the Navy. Look at the men you see at the naval ports. They are a wonderful sight to behold.

596. (*Chairman.*) What proportion would you reject of those accepted by the Army, do you think?—

597. (*Colonel Onslow.*) That is a difficult thing to say.

598. (*Witness.*) Then I also submit in this connection that the artisan who volunteers for recruiting even in the Navy is not likely to be the best man at his craft. The private firms are not likely to let their best workers go from them.

599. (*Colonel Onslow.*) I was only speaking of the artisans, of men in work.—You probably do not get the best artisans.

600. I was only referring to the class going into the Army.—Your condition is clearly not a thing that can be remedied by a return to the land, or anything to that kind, so long as town and country are equal in the matter of rejections.

601. (*Mr. Struthers.*) Speaking about the Johanna Street School, you gave some information as to the place where the parents lived and their occupations and habits. I suppose that information was derived from the teachers?—From the head-teachers. Practically the whole of those children come under inquiry for the purposes of Joint Committee on Underfed Children, and I have among my evidence a number of picked cases from head-teachers, records, and having gone through them myself I have no reason to think that they are not trustworthy.

602. You are aware by our knowledge of schools that there is a tendency on the part of teachers, especially in poor schools, to exaggerate the difficulty of the work and the hardships?—I find the tendency is rather otherwise. My difficulty has been the opposite one, to correct their optimism. They become so accustomed to the evil circumstances of the schools that they frequently fail to recognise them. Their anxiety is to show what improvement their work has made upon the neighbourhood.

Dr. Eichholz.

603. That is, once they have started ?—Yes, and in most cases the schools are a powerful influence for good. I do not think that teachers are always able to investigate far enough.

604. But that is the source of your information ?—To a certain extent only. May I refer to that point ? It is clearly impossible and out of place for inspectors of schools to visit the homes and enquire of the parents. In the absence of school managers who can and ought to visit the homes, the school teachers who are in constant touch with the children and parents constitute the next line of defence as regards information, and it is surprising how much information the heads of schools have at their disposal, information which is accurate, full, and which bears the most complete cross-examination. It is not possible to commit such enquiries to school managers for the simple reason that managers capable of doing the work do not exist in anything like sufficient numbers. There are isolated workers who are doing most useful work in this way but as to the whole ground being covered it is simply not being done. In enquiring as to home circumstances one is compelled to go to the head teacher. I have in a few cases been able to get opinions based on experience of a very valuable kind from managers and committee members and officers, but have been obliged largely to depend on the head teacher.

605. I merely want to bring out the fact, so far as the information on that point is concerned—that is the source ? —Yes, on the point of the homes.

606. Then you gave us some statistics of the height of children in each school. Do you regard height as a better indication of physical capacity than weight ?—I find the two things go together.

607. You do not think it necessary to take weight to get a comparison ?—At the beginning of the enquiry I should have been unable to answer the question, but now I can say this, that I should be perfectly satisfied with having height statistics. They so exactly correspond with the weights and other circumstances of nutrition, that I should be content to have the heights.

608. That is very important. It is very much easier to take the height than the weight, is it not ?—Yes. Weight is difficult to obtain accurately because the clothing varies enormously.

609. In giving the statistics for those schools and several other schools, you have the number of children, the percentage of a certain age ; that is, a calculated percentage based on the selected children, I suppose ?—We have not selected the children. I have said to the teachers, " Will you take twenty or twenty-five and measure their heights ? "

610. Do you give any instruction in picking them out ?—I tell them neither to pick the least nor the biggest, but to take them as they come.

611. Do they know the object for which you want it ?— Naturally they knew my object but not my views. In certain of the schools the whole school was measured and we find no difference as regards results from the cases in which samples were taken. We get the same result.

612. It does not vary very largely from what you get in the sample measurements ?—No. In Leeds they measured the whole school and it is about the same. I should be satisfied with the sample.

613. There is the medical inspection which you spoke about later on, and the collection of statistics as to the facts of children's physique. We must not mix up those things ?—Quite so.

614. And the question as to the picking of twenty children in a school in Yorkshire you think would give an accurate basis of the whole ?—We must distinguish between samples and statistics. Statistics must cover the whole area of investigation, samples will serve only for demonstration. What I did this for was for the purpose of demonstration, this being all I could do in the time at my disposal, but as I say the sample cases agree exactly with the cases in which the whole school was measured.

615. In speaking about the medical inspection you would confine it to the poorer schools, about one-fourth of the whole ?—In the first instance.

616. I am speaking now of medical inspection. In the other half there would be always in each of those schools a certain proportion of children of weak physique or underfed ?—Just as in the poorer schools, who would not come under purview at all.

617. Would not you require medical inspections, not only of poor schools but also of the poorer children and the underfed ; that is to say, that the inspection should apply to the whole of the schools ?—I do not think that any good would come to apply it to all schools, except for statistical purposes. For remedial purposes I should tackle the slums first. There would be no difficulty for a teacher in an ordinary school enumerating the weak ones, and notifying the School Board with a view to having the children examined by the medical officer.

618. Would it not be a better system that the teacher should intimate that there are so many children that he should have examined ?—That is my meaning.

619. I thought that it should be a selected class of the school ?—I am anxious that medical inspection should burden the rates as little as possible, and that we should get the maximum good from it. I should concentrate on the poorer schools because I feel that a very large percentage would be in need of it there. For the ordinary schools I should adopt it only by special notification, very much as is done now in the case of feeble minded, deaf, and blind children, where the teacher notifies on a form of the School Board the children he desires to have examined, and they are brought to a centre for the purpose.

620. I have one or two points about the drill of the school. Do you say that a certain number of children could not stand it ?—Ten per cent. cannot stand it in many of the poorer schools.

621. It is a question of endurance and not the exercise itself ?—It is their endurance.

622. Those children might be able to do their simple exercises, repeated two or three times a day for a couple of minutes without being taken out for a drill, that is to say, a certain number of them ?—I believe they could.

623. I put the question for this reason, that in our Committee, which has been discussing this question, we are making a strong distinction between the systematic drill which lasts for twenty minutes, and that taken in the class room, which does not last for more than two minutes ?—A very good proposal, provided the class rooms were well ventilated first, for I consider nothing more harmful in drill instruction than taking it in a vitiated atmosphere.

624. My point is this : is not it probable that a certain number of children, who would be excluded from the formal drill, might join with safety in these little exercises ? —Undoubtedly.

625. You have no experience of methods of dealing with the vagrant parents of the children ?—None.

626. You have no hints as to how to deal with them ? —In this school of industry the main point, in the first instance, is the feeding and clothing of the children, the regularity of life before applying a full ordinary school curriculum.

627. But for the industrial schools what would you do ? —I should increase the time allotted to manual occupations.

628. But the essential point is the feeding ?—Yes, and the cleanliness of the clothing. I think that the physical conditions are the first things to aim at, and then the question of curriculum. To consider the curriculum first would be to waste time.

629. You seem to be under the impression that there was some disadvantage in the teaching of housewifery ?— Yes.

630. But you want them instructed in the meantime in domestic methods ?—Yes.

631. You approve of the housewifery, but the way in which it is done is what you want to improve ?—Yes.

632. (*Dr. Tatham.*) I understood you to say very clearly in your evidence, in answer to a question of the Chairman, that according to your experience at any rate, you knew of no evidence to show that there was anything like progressive physical deterioration among the population ?— Among the child population, which I have investigated, which have come under my supervision. That is perfectly so.

633. You think the evidence is in the other direction ?—Yes, I think the evidence is in the other direction, as regards heredity.

634. We had it in evidence last week that not only was drink, that is to say alcohol and beer, used very much to the detriment of the lower orders, but that that drink was very bad indeed in quality, that the spirits and the beer were badly adulterated, and for that reason very much more harm was done. Have you any experience in that ?—Of course, one hears the same thing in every country. Germany is the only country where you can guarantee that the beer is not a chemical product, and this applies only in one part of Germany, Bavaria. In every other part of Germany there is the risk that the beer is a chemical production and not a pure brewed product.

635. Coming in contact as you have done for a great many years with the class of the population which you have been talking about this morning, is it your experience that milk enters into the diet of young children to any considerable extent ?—No. That is, I think, one of the main points I wish to impress upon the Committee, the almost entire absence of milk, almost as soon as possible after the date of birth.

636. (*Chairman.*) Do the mothers nurse their children ?—The duties of maternity are becoming more and more neglected.

637. You think that is so ?—Yes.

638-643. Do you think there is direct evidence on that point ?—You want no further evidence than the high infant mortality in the large towns. In some parts of London a few years ago it was fearful, as the returns of the medical officers of health will show. I believe it is somewhat better now—certainly it is in Notting Dale, one of the worst offenders among the slum areas. The medical officers and other investigating authorities will be able to tell you how much was due to overlaying. The statistics can readily be obtained if the Committee desire to have them. One fact which Dr. Hall has adduced in Leeds is the question of the nursing of infants among Jewish mothers. They fulfil their duty as long as they can for the reason that the woman is not the bread-winner. It is the exception to find the woman the bread-winner, and she is able to perform her duties to her children during the first months; which, after all, are some of the most important of the child's life. I think the absence of milk is one of the prime factors in underfeeding, not only of mother's milk during the lactation period, but of cow's milk, later on. If these children get milk it is something out of a tin. No one knows what went into the tin. At any rate it is not the material on which to build up a growing child's frame.

644. (*Mr. Lindsell.*) You divide the time of such deterioration as may arise into three periods I think—birth, early infancy, school age ?—And a fourth, the period of adolescence.

645. Yes, and the period of adolescence ?—There are four periods.

646. With regard to the period of birth you do not attach any great importance to hereditary taint ?—That is so. What I feel is that a good many of my medical colleagues—I have consulted as many as possible—feel that the percentage of badly-born children among the poor is not sensibly greater than among the rich, and that such diseases as are hereditary, such as insanity and neurosis, in which we include alcoholism and other inherited diseases, diseases of bad living, affect one as much as the other.

647. We have had a good deal said the other day about syphilis. Do you not consider that still a very extensive thing ?—It accounts for a very small number of degenerate births. Women with active syphilis very frequently fail to complete their pregnancy, this disease being a very common cause of miscarriage. There is a tendency for public opinion to exaggerate the extent of this disease, which is not surprising with a disease capable of so many ramifications, and offering so many difficulties to the medical man himself, in the endeavour to deal with it in diagnosis.

648. (*Chairman.*) He should, when uncertain, abstain from classifying, should he not ?—That would be his obvious duty. A point worth noting is the tendency of the syphilitic taint to disappear in a very few generations.

649. (*Mr. Lindsell.*) With regard to the causes of deterioration which arise in infancy, they are mainly due to bad nutrition ?—Yes.

650. At a later stage you make certain suggestions as to providing proper food, but at that stage there will be no remedy possible except change in the habits and employment of the mothers themselves ?—At the later stages of infancy. *Dr. Eichholz.*

651. At the earlier stages ?—Between the ages of two and school age ?

652. And school age ? The remedy lies with the mothers between the time of birth and the date of school age ?—Nobody can get at the children but the mother or the visitor. I think the lady health visitor might perform very useful service. I should like to see her officially attached to the medical officer of health.

653. So that the child's nurture may be affected before it reaches the age at which you could touch it in the school ?—Yes. I am anxious we should get at the child as soon as possible after he comes into the world. I think a lady health visitor of a properly trained kind, as they have in Manchester, attached to the medical officer of health or the sanitary authority, ought to perform this duty of enlightening the mother. For mothers who are compelled to go to work, the *crèches* or day nurseries which are being established all over the large towns are doing a great service, but the total result of their effort is bound to be small at the most, though excellent as far as it goes.

654. It would require a very considerable change in the present habits of the lower class mothers, in the way of attending to the food and the preparation of food ?—Yes.

655. As well as the quality of food ?—Yes. I think it is not likely we shall effect very much improvement in the people who have already become mothers. But among the people who are about to become mothers, I have suggested a better kind of training which will include household cookery.

656. That is the school age rather ?—Yes.

657. With regard to the child at school age, you advocate a much greater extension of feeding through benevolent agencies ?—What I have suggested is that we should first discover culpable cases and deal with them by industrial methods. The non-culpable cases, cases which are due to poverty, fluctuations of employment, season trades, and so forth, and perhaps non-culpable ignorance, will all remain over for charity; I should concentrate charity on those cases. Instead of feeding a child once a week, or once a fortnight, at such a school, as we do only too often now, I should feed him as often as he needs it—as far as our sources permit. Money can always be voluntarily raised for such a purpose.

658. Is there not a great danger of decreasing the sense of parental responsibility if you do that to any great extent ?—Not if you divide the culpable off first. I think under present conditions there is a great likelihood of feeding indiscriminately.

659. How would you find out the culpability ? You would make it a criminal offence, an offence for which the parent should be brought before the Court ?—Most certainly. I should like the School Medical Officer to issue a medical certificate from his Department that the child was unfit to enter the school; I should like that certificate to go in duplicate to the parent, so that he knows, and to the school attendance officials, and if that certificate is not acted upon within a certain time, I should like the attendance officer to summon the parent before the magistrate for neglecting to send his child to school, just as he does now, when a child goes to school with a dirty disease, or filthy disease, or any other objectionable condition. The school authority has the power now, to a certain extent, but I should like to see the practice become much more widespread.

660. You would extend the powers which magistrates at present possess to make orders for children to go to those places in cases where they are known to be habitually consorting with criminals, to cases where it is proved that a parent is neglecting to give them proper food ?—Perfectly so. I should like to have one day industrial school at least for every area in London. That would show how far residential schools were necessary. I do not think residential schools are necessary in all of these cases. In fact, I think they are only necessary for a very small proportion. If we took over the schools in the centre of London which are becoming empty by the drift of population outside, and turned those into schools of industry, and employed those as schools of industry for present purposes,

Dr. Eichholz. it would not cost the ratepayers any more in sites or buildings; it is simply a question of re-organisation. I think a very few residential schools on the confines of London would prove an enormous deterrent to this culpability. Having dealt with that we should have the deserving on our hands. I should continue to devote the £6,000 spent in food grants as at present, and we could then determine how much more is necessary. I do think that what we want is to recognise what the enormity of the problem is. It will not do for the London School Board to tell us that there are 10,000 under-fed children, when they themselves in their own schools are dealing with an average attendance of 22,000 at dinners, when every child fed represents three under-fed children altogether, and when we have to rely on non-overlapping voluntary agencies which, working outside the ken of the School Board, doing work of the same kind. We have a deal more than anybody knows anything about. We would appear to have, practically, 120,000 under-fed children in London. The first stage in amelioration is recognition, the second stage is discrimination, and the third stage is effective concentration. At present we are on the verge of recognising the extent.

661. Would you supplement those special schools with means of feeding children in the other schools: you would still go in for your school restaurant?—Yes, for the non-culpable cases and for children who were able to bring the pence. I should like the Board of Education to pass no plan without a small stove in it and a small kitchen, as we pass no plan for a cripple school without a little stove in it. The expense of all this is really insignificant; it would entail practically a very small addition to the specification of a school, and it would be of enormous social value.

662. (*Chairman.*) Do you think it would be a remunerative expenditure?—The experience of the Destitute Children's Dinner Society shows that it could very largely become so. Where they are considering building rules I should like that to be considered. We have school halls, we can turn a hall into a dining-hall in five minutes, as we do in cripple schools. We simply want a stove, which would take very little cubic space and add very little to the expense. There would necessarily be a supplement from feeding charities to meet the cases of non-culpable underfeeding, who could not entirely meet the cost of the dinner.

663. (*Mr. Lindsell.*) You would extend that capability of getting food in the schools beyond the mere neglectful and wasteful class to the ordinary workmen?—Everybody who was non-culpable and who was in need of a meal. It is the common practice at secondary schools. The well-to-do child would be expected to cover the cost of his meal.

664. Do you think that could be made in any way self-supporting?—It is at present to the extent of 30 per cent., as you see in the case of the Destitute Children's Dinner Society. I think under proper methods, if we could get managers to work the schools, we could secure that 30 per cent. more frequently than at present. At present I want to point out that the School Board appoints managers to schools, and does not endow them with sufficient powers or duties to stimulate their full interest in the work of school management. Good managers are therefore very scarce; and so it comes about that there is no one between the School Board on the Thames Embankment and the school teacher in the school to look after the child. We have really no reliable first line of defence, that is to say, no one to go and visit the home and investigate the cases, because neither the teacher, nor the inspector, nor any other official can perform that duty, yet it must be performed when we have to discriminate. I know it can be performed, because I know of districts in London which are properly managed, where the children are visited home for home, and, therefore, we get the attendance there 97 per cent., and we get proper feeding. It can be done if we will only put a will to it.

665. You give me the impression that you do not think managers, as a rule, in the schools take so much personal interest in all this as they might do?—That is the point; they do not. And we have not got managers sufficiently trained and educated in the work. We have not enlisted the sympathy of people who could do the work. To secure efficient management of elementary education in all its phases, social and pedagogical, public interest must be aroused, and public interest means local managers intimately conversant with the schools, the children, their homes, and the opportunities of employment at the limit of school age. I earnestly hope they will get the right people as managers under the new legislation; I hope that the new education authorities will be able to get people with leisure and capacity.

666. (*Chairman.*) Do you think such people are to be found?—They ought to be found; they *are* found.

667. (*Mr. Lindsell.*) One of the complaints made, I now conclude, is that managers are reduced to such a dependence on authority that the little influence they possessed before is discouraged rather than increased?—There is much of that feeling about at present.

668. You have not had any experience of the work of managers yourself under the new Act?—From what I have seen of the attitude of the new authorities in the country, I have every hope that they will secure the best material for school management. I hope a great deal from the new Act. The work which has been done in the way of school management has been done very largely by the great agencies, Toynbee Hall and Oxford House, in the East End. We owe a great deal, and practically all that has been done in successful management, to such bodies—Oxford House, Balliol House, Toynbee Hall, Cambridge House in Walworth, and the Women's University Settlement, the Bermondsey Settlement, but, still, those are small instalments for covering a great problem. They are great examples, but they require a large and faithful following if their work is to reach anything like completion.

669. Do you know the Notting Hill district?—Yes.

670. Do you know the Harrow Mission?—I know of it.

671. You do not know how it is working?—I have heard of it, but have not actually come into contact with its workers. In Notting Hill, one of the most active agencies is the Society for the Prevention of Cruelty to Children. That is the one of the very few organisations which can get at parents, and they do it very well. I was at Yarmouth some time ago, and I met a member of the Board, a doctor, who is very keen on these things. He said Yarmouth was small enough for him to be able to visit the schools himself, and that when he saw a school child not in proper condition he was able to put into action the machinery of the local "Prevention" Committee, and so got on the track of a parent who was neglecting his child, and prosecuted him till the child was sent to school in a proper condition. That was an ideal condition of what could be done under proper school management.

672. With regard to milk, have you any suggestions to make as to a better supply of milk to the poor town parent?—We have this Battersea scheme. They have opened two centres at which they supply milk at rather considerable cost. It is a costly business, the humanising and sterilising of milk.

673. It was the sterilising of milk I referred to.—It is costly, and it is not likely that the poor parents will take very great advantage of it. It will be the well-to-do people who are likely to take advantage of it, who could very well get milk without the help of the bureau. At present the sterilising and the humanising of milk is going to be an expensive process. I should have thought, if they confined themselves to merely distributing the raw material and seeing that taken into the home, that itself would be useful. I have seen the milk sterilised and distributed in Mainz in Germany. I was there a few months ago. The nurses go to a certain street corner, where bottles are waiting to be distributed to them by an official, and they take them away and bring the empty bottles back.

674. You know nothing of a clergyman named Eyre, in Worcestershire?—No.

675. Do you know about the milk supply of Birmingham?—No. Birmingham contains a very rough element, but I have not discovered any conspicuous degeneration as compared with other provincial towns. I should think when we have dealt with London degeneracy the country cases will not offer great difficulties.

676. (*Mr. Legge.*) You mentioned as an item of consolation the rapid recuperative power of neglected children. Your view would be supported by experience in industrial schools and orphanages, and so on?—Yes.

677. You said that your experience at Norwood went to show that if you got a neglected child of over the usual age of admission, you could not do very much as regards height—have you had any experience to show that that very class of child continues growing to a much later age than the normal child?—I will put it to you in this

way. The Norwood old boys go out to camp every year with other Jewish boys from other schools. They have a very large summer camp at Deal. Our boys cover the age of which you are now speaking. Some of them have left school and some have not, but they include a considerable number of adolescents; our boys are always known as the "Little Nobs," the little Norwood Old Boys. There is a general impression among their colleagues that they do not pull out in height in the sense that you are suggesting.

678. You are aware that there are cases known of soldier's children growing up to the age of twenty-eight?—Yes, quite so, in exceptional cases, but one would not suggest that as a sort of general rule.

679. You have made no effort at Norwood to collect statistics on this point?—I have had the children measured in the usual way; I have gone no further than that. But what I say is, although we put on stamina, although we can apprentice our boys and they go through their apprenticeship properly, and do credit to themselves, and to everybody concerned with them, as regards their stamina, endurance, and capacity for work, yet we cannot pull them out as big as the Gravel Lane boys, and other Jewish boys, from a good school and who are not destitute. What I feel is, that although recuperation can take place to a very great extent, you cannot entirely recover the height you have lost at an early age. But even our Norwood boys we have turned into Dragoons occasionally—confirming Mr. Legge's suggestion.

680. We have heard a good deal from you about a school of industry in certain centres: I should like to get that proposal into a more ship-shape form. You propose something on the lines of a day industrial school?—Approximately.

681. Now, how would you propose that the child should be definitely directed to enter such a school?—I should, first of all, supply places in the way they were provided at Ponton Road, in Lambeth. The School Board had on their hands a school which they could not fill. They wisely turned it into a day industrial school. There are plenty of similar cases where they might extend industrial school accommodation much more than they have done heretofore.

682. But having got your building certified by the Board of Education, as a special school with a particular curriculum, you would get the children directed to attend that school?—The teacher would do what he does now as regards the mentally-defective schools. He would receive a blank form from the School Board, and on this schedule he would write down certain names of children who were in his opinion not fit to take the ordinary curriculum. The medical officer might supplement that; he might supply a supplementary list, or complete the list with the teacher, or re-adjust the list: at any rate some such list would be formed. It seems to me the Board would have to investigate those cases, either through special visitors or through its existing visitors, who would investigate the home circumstances and discover which were cases for industrial treatment and which were not. Then comes the question, and after all, it is a legal question, whether the Secretary of State has power to order the establishment of an industrial school in accordance with the circumstances of the neighbourhood under the 1876 Act.

683. But if he established a school under the Act, then the ordinary legal process would apply; you would have to go to the court and so on?—Yes.

684. I understood your suggestion was that these particular schools you are referring to should not be day industrial schools technically?—They should not be punitive in the ordinary sense.

685. They should not be under the Home Office?—I do not mind under what office they are; I think that is quite immaterial.

686. It makes a very great difference from the point of view of administration. My idea was that you thought the Board of Education might allow a certain school to have a different time-table?—Yes.

687. And very special appliances for feeding and so on?—Yes, it might be done in that way.

688. The Board of Education, I fancy, have power to do that now, but my point was——?—Whether you would like the thing to go through the magistrate or not, as a matter of fact?

689. Yes, whether your suggestion was that the child should be directed simply by the School Attendance Committee?—I feel that I would rather it went through the magistrate, and I will tell you why. Because if a boy knows that by not working, and by laziness and neglecting himself, he is likely to get himself put into a school where he need not do lessons, but will do work, he will do so, and you will get those places crowded with undeserving cases. The parents will also be encouraged to provide cases in abundance, when the feeling that neglect on their part will go unpunished. *Dr. Eichholz.*

690. Have you heard of the system in America, and also in one or two of our Colonies, of a special magistrate to deal with children's cases?—I have often wished we had it.

691. You approve of it?—I think it is a very good thing for retired school inspectors and officials to do that.

692. I will put your idea in this way. Would this be fair, that certain districts in every large town should be scheduled, and that in those districts the school authority should establish a school of industry, and that in those districts a special magistrate should be appointed to deal with the cases brought before him by a process similar to that which you have described?—That seems a very good mechanism. I do not know whether legislation is necessary for that. I would rather accomplish what is necessary without legislation, because if it means legislation it may take long, and there is a chance of the opportunity of doing a great deal of good slipping away. I cannot discuss this question from the legal aspect, but I should prefer such measures to be taken as would not involve fresh legislation, if it can be done by the Secretary of State's order.

693. (*Mr. Lindsell.*) You can get the school, but not the child. You must have power under the Act?—It must go through the magistrate at present.

694. Yes, it must go through the magistrate at present; he can only give an order when a parent habitually and without reasonable excuse does not provide education for his child, and you wish to add when he does not provide sufficient food?—Yes, food and clothing. If it requires legislation we must have it, but if it can be done without, so much the better.

695. (*Mr. Legge.*) The only exception to the committal by a magistrate is where a parent definitely agrees with the school authority to send his child to an industrial school?—Yes. New legislation might be recommended to give the magistrate authority, the option of dealing with these cases if it is decided that he does not now possess it, and secondly, to give the School Authority power to admit to schools of industry on its own initiative which it certainly does not now possess.

696. Just one other point about the day industrial school; you want, as you stated to Mr. Struthers, primarily a school to provide food?—In the first instance—not primarily. There is a difference.

697. For food, for clothing, and for regularity?—Yes.

698. Also you wanted to provide some elasticity in the curriculum, I mean for the class of children which you have shown in those photographs?—I agree.

699. Their intellects will be improved by a combination of manual occupation with manual instruction more than by giving them full time?—Yes, I said that in the course of my evidence, that the Three-R Curriculum is obviously not going to meet the needs of these children, and what we wanted was more instruction, manual instruction, special instruction, and special drills, and instruction in cooking and housewifery.

700. You miss my point. There is a difference between occupation and instruction. Now, I defy you to keep a child for three hours a day under instruction in manual training; you want occupation. You must have some plain sort of carpentry along with your manual instruction?—Well of course.

701. That is what I wished to bring out?—I do not mind if he makes a hen coop or dog kennel or a box.

702. Or a basket?—Or a basket. It need not be Sloyd exercises.

703. Are you aware of the Swedish system?—No, I have not been in Sweden.

704. Nor Denmark?—No.

Dr. Eichholz.

705. Nor Russia?—No.

706. Nor Finland?—No.

707. There is a system in vogue there of children's workshops?—With regard to children's workshops I should like to offer this observation, that you find a very considerable section of our community which is always ready to rise the moment it scents any new move with regard to manual instruction, with some observation of this kind: "You are going to make galley slaves of these children." Therefore whatever we introduce must be under a proper educational scheme. If we are going to let them make hen coops, we must be able to demonstrate the educational value of that to the people who are ready to fly down our throats with the galley slave argument. For that reason I should lay very great stress on keeping the educational notion in the curriculum all through.

708. We are endeavouring to solve that in the Jewish Industrial School at Hayes. You know what they are doing?—Yes, I always have Hayes in mind when considering this point.

709. Now, with regard to lads' clubs. You spoke of them as an agency for good?—Yes.

710. And, no doubt, in your travels about the country, you have seen, as I have, a great number of such excellent institutions?—Yes.

711. Has it ever struck you that it is a pity that all those schools should be working more or less in isolation?—Yes, I think so.

712. You think their power would be increased if they were more organised?—I continually tell those managers whom I come across that if they would only get a conference for that purpose, it would be a great advantage, if they could form a strong active federation. The Twentieth Century League is a move in this direction, and I learn that there is a Union of Girls' Clubs in London as well. I quite agree, and lay very great stress on that point.

713. Further, do you say a great advantage is likely to accrue if boys' clubs are definitely associated with particular schools, to catch up the children leaving the schools?—It would be most excellent. I should prefer the thing to be run in combination with evening continuation schools, and I should like the club to be the recreative branch, held in a different building.

714. Do you know of any other town besides Manchester which has these lady health visitors?—I do not.

715. You have spoken a good deal about the importance you attach to industrial training for girls, in view of their health, and so on?—Rather industrial occupations at school.

716. Now you will be interested to hear that your idea as to the fact that girls are in physique better than boys, in certain strata, is borne out by two physical censuses I have had among industrial schools and reformatories?—I am very glad to hear it.

717. To get this industrial training for girls, would you approve of a system whereby girls, and even boys, could leave an elementary school earlier than the school age—earlier than the legal term of the lessons—a system by which they could do so by permission from the educational authority of the district?—For what purpose?

718. That the girls should go home and work for their mother, or that they should go out to a day place. Do you not think that if the mother found that there was a really decent home ready for her, and she could get her girl out a year earlier to help in the domestic occupations of the home, that would be an enormous incentive to those on the border line, between the lowest of the classes and that class who wish to improve their homes?—I do not think this would be a good move. I think that that class of girl would probably help somebody else for half a crown a week, ruin her own health for a pittance;

719. Do you think that would be bad for the girl?—I think it would. I am anxious to keep these girls away from ugly circumstances of overstrain of their homes as long as ever I can.

720. But they go home every night—I am speaking of girls in ordinary schools. Why not give the manageress of an ordinary elementary day school the same powers of licensing girls as are enjoyed by the managers of a day industrial school?—Because in my experience I have seen a great many girls whose health and constitution have been ruined by the excess of work piled on them at home by their own wretched parents, or the people they worked for for a pittance.

721. But the licence would not be granted except after very careful investigation by the school authority?—That would not suffice. You would want inspection to see it was done.

722. The licence could be revoked?—Then you would have to have all the mechanism of the school authority to bring the child to school again. It is quite bad enough now to get a child of thirteen into school nowadays, whose parent wishes to keep him or her away. I should offer no facility to parents more than they have now. If they want to do so now they can do it by a child of thirteen passing the labour certificate examination. I should afford the parents no further facilities.

723. But as the tendency of modern legislation goes, the age may be increased to fourteen. Do you think it is a wise provision that, if the age of compulsory school attendance were increased, some such proviso as the power of licensing should be given?—I should be in a position to answer that when the age has reached fourteen.

724. (*Mr. Struthers.*) Perhaps Mr. Legge will say at what age he contemplates the girls leaving.

725. (*Mr. Legge.*) I should say from twelve years six months?—You have seen from my height statistics that some of those children at thirteen are no bigger than normal children of nine.

726. I am not speaking necessarily of the poorest class of girl?—You are talking of some of the children I measured up for you here. A child thirteen years of age who is only of the size of a nine-years-old child is certainly not one that you would encourage to leave school a day earlier than necessary. I should be very sorry to advise it.

727. I am not talking of her leaving school earlier; I am talking of her leaving school for half-time?—I thought you meant for entire exclusion.

728. No?—You are speaking of the restitution of half-time.

729. Under carefully guarded circumstances and for domestic employment?—I have had so much experience of the slavery of young girls in the homes of the poorer neighbourhood that I do not hesitate to condemn any attempt to slacken the fetters of the elementary school authority over these children. Any instruction in domestic employment must come through the school authority until the present legal limit of school age is attained. I feel that it is the least deserving parents, in the majority of cases, who would press for the exclusion of their children. As for really deserving cases, the school authority has at present all the necessary power, in that it need not prosecute a parent whose circumstances are such as to merit consideration This power is constantly being increased.

730. I have only one more question to ask you, and that is with regard to the collection of statistical facts. Perhaps you could tell me roughly what is the total number of children attending school in London?—I will tell you in a moment.

731. Is it a quarter of a million?—It is many more—three quarters of a million. It is something like 763,000 as a matter of fact.

732. If you only wanted to get physical information for those children for statistical purposes do you think 50,000 would be enough?—They would, for the purposes of information, but not for the purposes of complete statistics. You would get a great deal of information which would be of enormous value by these simple enquiries.

733. But you do not think that would be enough for statistical purposes?—I could not say till we had taken the statistics, but I guarantee to say you would get exceedingly useful information by examining even 20,000. I should be inclined to encourage the examination of as many as the ratepayers would permit us to examine. I should prefer to examine a much greater number, but I think we could get very valuable information from 50,000.

734. One final question. Do you think that we would get better results by calling for information, say of about 50,000 out of a total number of three quarters of a million, taken at random, or by selecting two ages or even one age, and continually hammering away at that one age and

getting all of that age, and comparing the results from period to period?—I should do neither. I should put the thing into the hands of the most competent man I could find, and tell him to use his discretion and take out 50,000 which would best illustrate the points which he had before his mind—which would best bring out the information he was seeking.

735. But suppose that information was simply height?—You could find out a good deal by height measurements of 50,000 children, but you might employ the opportunity by gaining as much more information as possible.

736. Height comes into my mind as a good single test?—With regard to height, I cannot advise you to do better than I have done myself. I will tell you what I have done. I went to Johanna Street, which is the worst school; I went to Notting Hill, St. Clements Road School, which turned out to be a little better than I thought; then I went to an alien immigrants' school, then to a school improving under the influence of the London County Council buildings, then to one where drill has been allowed full play under fairly good local influence, and then the very best schools: and I was able to get a very good sample of what was going on in the metropolis at the time at my disposal. The height measurements represent something like 10,000 children—twenty here and twenty there. I had not time to do more. *Dr. Eichholz.*

737–8. (*Chairman.*) We are very much obliged to you for your exhaustive and illuminating evidence?—I am glad to have been of any service.

Dr. JAMES KERR, M.D., called; and Examined.

739. (*Chairman.*) You have been for some time medical officer to the London School Board, and before that you acted in a similar capacity to the Bradford School Board?—Yes.

740. How many years have you been with the London School Board?—Nearly two years now, and I was nine years at Bradford.

741. You have given a great deal of evidence before the Royal Commission on Physical Instruction in Scotland?—Yes, I gave evidence before them.

742. In which you went into what you deem to be the causes prejudicial to physical development in school life?—Yes, I took that up as the thing I thought would be useful.

743. Upon that point the witness who has just withdrawn is rather inclined to join issue with you?—I did not know that.

744. He does not think that there are any causes of deterioration to be found in school life which are not at any rate, very easily remediable. Turning to the *précis* of your evidence, you consider that there are no existing statistics generally applicable to the problem that we are asked to attempt to solve?—All the statistics I have examined break down when you begin to look into them.

745. When you press them——?—They are unreliable.

746. For anything definite, and for correct opinions, you think we must look to the collection of data in the future?—You must collect your data with a view to that.

747. You advocate the examination of a large number of children, selected from London, for the purpose of giving such data?—Yes. I thought that having regard to causes and errors of experiment and things like that, 50,000 children would be just as good as a census of the whole lot, provided you did not select your 50,000 in any specific way.

748. Provided they were fairly representative of the whole?—Yes.

749. And this card which you have been good enough to furnish us with, if filled in, would provide the material for that?—That was a card which I suggested recently to the School Board, but they have postponed the matter.

750. What reason had they for neglecting your suggestion? Because they are in a moribund condition?—There are some doubts about their legal powers, and it is partly owing to the fact that they are in a moribund condition, as you say. There was considerable opposition on the part of certain members, who said it was not the function of the Board to investigate this matter; they had to do with education.

751. The past history of the School Board has not shown them to be very particular about legal powers, has it?—In this case they were.

752. The condition precedent to the establishment of a system of this kind would be a medical inspection of schools, would it not?—Of course this could be done without having medical inspection of schools. This practically means the medical inspection of scholars.

753. Of this class?—Yes, a superficial medical inspection.

754. Are you in favour of the general medical inspection of schools?—I think there should be some medical control and oversight of schools and school work.

755. Dr. Eichholz was advocating a similar plan. Do you think that if the worst type of schools, said to be one-fourth of the whole, were made subject to such an examination, that would be sufficient for all practical purposes?—Well, I daresay that would be useful. *Dr. Kerr.*

756. You would like to make it more general?—There is a great deal in the school quite apart from actual ill-health of children that wants medical supervision, and there ought to be some medical inspection of every school really. Every school should have some medical approval.

757. I suppose it would be sufficient to place upon the teacher the obligation to report to the medical staff of the school authority any abnormal cases, or any cases which seemed to indicate physical weakness?—The majority have not a medical staff.

758. But it should be made incumbent upon every school authority to have such?—Yes.

759. You think that is the first step towards any improvement?—Yes. The teachers will not see anything wrong unless it is pointed out.

760. Their own knowledge is very deficient to begin with, is it not?—Yes.

761. That might be improved by the Board of Education insisting upon a knowledge of school hygiene entering very prominently into the qualifications for teachership?—Yes; that is very important.

762. Will you explain how you think this card inquiry should be carried out?—Probably records from 50,000 children would, in London, give as useful results as a census of all the children, at one-twelfth the cost. I recently suggested that such an examination should be carried out, but it was deemed expedient under existing circumstances to postpone it, and probably the results will be more valuable when we can take the children in all elementary schools instead of only those in the board schools. The method suggested for carrying out this work was by recording the facts about each child on a card. The record on each card gives the means of noting the child's (*a*) educational position; (*b*) physical condition; (*c*) social status. The relation of the various factors could have been deduced from the answers. The great difficulty of assessing the various points inquired about was got over by using a system of marks from one to five for any particular quality. The average mark, 3, represented a normal condition; 2 was distinctly below, as 4 was distinctly better than normal; 5 represents a most excellent condition; and 1 represents a condition so bad that immediate remedy, if possible, is required. The data for obtaining the child's educational position is given by the teacher, who is directed to fill in the child's name and address on the card, and then, using no words, only Arabic numbers, to mark answers to the following—I may say that the girls' cards are white, and the boys' cards blue.

763. Is it the case that the Salford School Board are undertaking a census based upon such lines? We have heard so?—They have examined a few children, but I do not think it is on such lines exactly.

764. The cards appear to be exactly the same as yours?—These are the questions on the cards, which are returned by the child's teacher:—

Child's name.
Child's address.
Age (in years and months).

Dr. Kerr.

Date of birth.
Standard in school (not class or division of standard).
Mental condition (as estimated by the child's own teacher).
Visual acuity (as entered in Register).
Hearing (teacher's estimate).

The social status is obtained by the School Attendance Department, the officer's record using x for "Yes," o for "No," and ? for "Not ascertained."

Is the father living at home?
Is the mother living at home?
Is either parent foreign born?
Does the mother chiefly work away from home?
How many others (including the child) are in the family?
How many rooms does the family occupy?

The physical condition is gone into by a medical examiner, who notes:—

Condition of clothing—(*a*) sufficiency; (*b*) superficial cleanliness; (*c*) footgear.
Height without shoes, to nearest centimetre.
Weight without shoes to nearest tenth of kilogram.

He also fills up spaces as to the condition of (*a*) hair; (*b*) cervical lymphatic glands; (*c*) teeth; (*d*) throat and nose; (*e*) ears; (*f*) general nutrition; (*g*) vaccination marks.

In this scheme the enquiries have been reduced to the lowest number possible, and yet nothing of importance is omitted. Some questions suggested, such as the father's earnings, it is perfectly futile to attempt to obtain, and any inquiry directed to the parents' habits would be resented. The only question here of which the answer might be unreliable is the "number of rooms" occupied by the family (including lodgers, etc.), but it is of such usefulness in relation to other points that it is worth attempting to obtain. The School Attendance Officers can probably here get as accurate answers as anyone. The cost of such an inquiry, extending over six months and embracing 50,000 children, I estimated as from £600 to £700. It should be carried out decennially. From this inspection the data to guide and correct our impressions could be derived, and also suggestions of value to the sanitarian as well as the educationalist. It is probable that the data from such an inquiry will materially alter schooling below Standard II.

765. You say these particulars should be reduced to the lowest possible number?—Yes.

766. You think none of these particulars could be obtained without a medical investigation?—You could omit all the medical inquiry, and make the teachers measure the height and weight, but the results to be obtained from such an investigation would be very trivial compared with what are required.

767. What do you say with regard to chest measurement?—I have left that out.

768. You do not think it is of any value?—It is of value, but it would take so much trouble to get accurate results from it that I think it would be better left out here. It would increase the cost of the inquiry enormously having to do that.

769. You would propose that an inquiry of this sort should be carried out decennially with a view to the results being compared from time to time?—Yes, that gives you a means of comparing children in different districts.

770. You do not think that as a supplement to this, if not as a substitute for it, it would be a good thing to record certain anthropometric facts about every child when he or she enters school and leaves school, or even at every year of school life, with a view to testing development in individual cases?—Who would record these facts?

771. Would it not be possible that school registers should have columns inserted in them in which the barest minimum of what is required could be collected and reported from year to year?—One's experience of that kind of thing is that teachers do not do it well.

772. Of course they are not properly equipped for the task at present?—The teachers cannot do it, that is the point.

773. Could not they be easily made to do it?—It could be part of their training, and if in each school we had a teacher who was practically a sanitarian in an elementary way we could do a great deal more.

774. That is not an ideal which is impossible to attain, is it?—No, that is one of the things which I think is most necessary.

775. That would give us automatically, and without any special machinery, all that we want, continuously preserved?—Yes, it is a record which could be kept.

776. You hold—and this is, of course, confirmatory of what Dr. Eichholz has told us—that a large number of children are permanently damaged before school age?—Yes. Then as to what is noticed during school visits, there are a considerable number of children for whom the present school provision does not seem the best possible. In the first place, a number, whose proportion it is impossible to estimate, come into school between three and five already permanently damaged; of these a small proportion have congenital defects, some are the offspring of apparently quite healthy people, many are from parents who ought never to have had children. We frequently see feeble-minded mothers coming to school about their defective children, or mothers who tell of feeble-minded husbands loafing at home. Where a perfectly definite cause can be assigned, which is infrequent, syphilis is the most evident.

777. We heard from Dr. Eichholz that syphilis was as a rule attributed where no definite cause could be assigned. You heard him say that, I think?—I heard him say that. I do not agree with him. I think if one has had considerable clinical experience of medical cases and medical treatment one is able to assign syphilis definitely. Where a perfectly definite cause can be assigned, syphilis becomes most evident about the middle of school life, and defects of brain, eye, or ear are not rarely associated with other signs held to be characteristic of this taint. A certain small number become nearly blind, nearly stone-deaf, and frequently feeble-minded during school life from the development of the inherited disease. The majority of cases of inherited disease of that sort pass unnoticed in school, not much harmed, but there is no doubt in my own mind that inherited syphilis is responsible for a much larger amount of gross defects and permanent ill-nutrition among children than can be definitely assigned to it. The disease should be properly controlled.

778. What share do you attribute to alcohol?—Other causes are more indefinite and difficult to assign. Alcohol, which overshadows all other injurious things except ignorance, in the child's environment, is also commonly stated in family histories, especially in connection with feeble-mindedness and epilepsy, but it is impossible to definitely assign its position as a cause of hereditary defects.

779. It is not easily detected?—No. So many people are alcoholic, and so many people talk about alcohol, that you cannot estimate the value of their history. That is really what it comes to. In cases not apparently of congenital origin, bad feeding (I use the term bad feeding instead of insufficient feeding), and general neglect, seem common, probably from inability to assign other reasons in one's mind. You see that a child is badly fed, but you do not know why the child is as it is very often. In early school life a large place must be assigned to debility and ill-nutrition after contagious diseases. The abolition of Article 101* of the Code will, I am afraid, still further enlarge this group.

780. (*Mr. Struthers.*) We have still that Article. We have not sufficient evidence of fraud to abolish it.

781. (*Mr. Lindsell.*) We do not prevent the closing of a school on medical authority. It was only that we found there was so much abuse of it.

782. (*Chairman.*) It kept a child away without detriment to the school?—It helped to keep a child out of school during illness and for some time after, and the teachers did not squeeze the child into school. Measles and whooping cough for young children are often as depressing and sometimes more lasting in after effects than influenza on their elders. For some time after these diseases, and so too after mumps, children seem liable to all kinds of ill and infections, probably from depressed vitality. Some nervously disposed children of fine texture seem to fall into the condition of low vitality almost as a permanency. It takes all their time for such children to merely maintain growth, and they are unequal to school work under present conditions. They are not merely insufficiently fed, but other causes are at work. They form a considerable proportion of a group of children, who are of most frequent occurrence amongst school attendance cases; children who do not go to sleep easily, in the morning can scarcely be wakened, have little or no desire

for breakfast, often are sick before going or on getting to school, and suffer much from headache, some in the morning, some in the afternoon.

783. You think school attendance in such cases is distinctly injurious ?—The condition is much aggravated by school attendance and ameliorated by exemption. The name of "infantile neurasthenia" has been applied, but the symptoms are chiefly of school origin, and partly due to badly ventilated classrooms, and partly to the irrational amount and kind of work demanded from infant scholars. A child of five will learn to ride the bicycle in a day, but will take a year to write. Education in the growing child depends on giving plenty of work to the proper parts of the brain; 96 per cent. or 97 per cent. of the total weight of the brain is gained by the age of seven; before that age growth is its chief duty, function afterwards.

784. You would suggest a particular class of school for those children ?—The conditions of debility and ill-nutrition in school life predispose to consumption later. This is a disease whose incidence and fatality falls after the period of active vegetative growth, and consequently it is quite a rarity among elementary school children, although the soil for its later growth may be preparing there. Quite apart from the class of feeble-minded are children whose backwardness is due to prolonged absence through illness or frequent disorders of various kinds. Many children with long-lasting or permanent defects in vision, not amounting to blindness, or with hardness of hearing, and some with slowly acting brains, or brains only capable of simpler actions than most, can never manage the complete curriculum of the ordinary school, but would all suffer materially, or might even be unjustly treated if put into special classes. For this class of backward and debilitated child, which must run up to about 10 per cent. of the ordinary school population, a simpler type of school is required.

785. Do you mean 10 per cent all over the country, or in those areas where the physical conditions are most depressed ?—I should say 10 per cent. of the ordinary school population all over the country, at any rate in the first half of school life, require some consideration on account of debility and backwardness from various causes—some simpler education than the ordinary Board School attempts to give them. A simpler type of school is required, with a modified curriculum, having more elementary and concrete teaching in few subjects, much manual and graphic work with frequent changes, and as little sitting in desks as possible. Classes should be half the size of those in the ordinary school, and there should be a minimum floor space and cubic content of at least half as much again per head as in the ordinary school.

786. Those schools would be distinctly more expensive ?—Yes, considerably more costly. At the same time they would diminish the strain on the ordinary schools somewhat, and possibly improve their efficiency.

787. Do you think that that improvement would be at all commensurate with the cost ?—Such schools would do great good to the population by giving the weakly a chance to pull up, and would help at a comparatively early age to a classification on a basis of physical and mental capacities without any possibility of injustice, for a child who went into this simpler intermediate school and gained ground, could return to the ordinary school, whilst one who was suited here would do better by the end of school life than from skulking neglected in the ordinary school; one who could not keep up here would soon be certified for one of the Special Day or Residential Schools under the various Education Acts.

788. Are we to understand by this class of school what Dr. Eichholz calls a school of industry ?—I have no doubt that Dr. Eichholz had a somewhat similar idea in his head, only his method of selection was totally different. The method of selection for a school like this would depend on the school inspectors, and these schools would be under much more careful medical supervision than the others.

789. That would avoid the legal difficuty ?—This is simpler.

790. (*Mr. Lindsell.*) This is simply classifying the existing schools ?—The point is to suit the curriculum to the child instead of the child to the curriculum.

791. (*Chairman.*) What do you say as to the feeding ?—That could come in here.

792. You would like to adjust the school to the physical and mental condition of the child ?—Yes, to suit 10 per cent. of the weaker children. In addition to these children are another group of semi-invalids of long duration, some in London in the ordinary schools, some in cripple schools, some at home excluded and neglected more or less, some in hospitals. These children include: (1) Exceedingly debilitated, anæmic, and underfed or improperly fed children, who have often come through infectious diseases badly. In the poorer districts of London children seem to get four or five diseases one after the other, which is a much greater tax on their vitality than on the vitality of children of better class people. Then these children also include: (2) Many sufferers from chronic bone and joint (spine, hip, etc.) diseases, from various tubercular diseases of glands, and other troubles of similar nature; (3) A few cases of very troublesome eye, throat, or nose troubles, often frequently recurrent, and generally associated with catarrhal diseases due to bad hygienic conditions; (4) Some offensive cases, especially ozoena (nasal) and otitis, where daily or more frequent syringing and treatment is necessary, but at present never obtained; (5) A few rheumatic cases, with chorea and other disturbances; (6) Some chronic skin cases; (7) Some children who require treatment and education to establish cleanly habits. I have seen cases of practically every one of these this week which we have had trouble with in the schools. These are all cases frequently met, where the ordinary school attendance will retard recovery or do harm, and where exemption means a continuance of home conditions, ensuing months or years of ill-health. *Dr. Kerr.*

793. You think a combination of a country hospital and school would be desirable in certain cases ?—Yes, something of the sort. A combination of hospital and school is required where care, feeding, medical attendance and the requisite nursing and cleanliness, along with educational control and discipline in good country or seaside air, could be got for periods of three to six months, or longer if necessary. Such an establishment should mean the stopping of a very considerable leakage into invalidism, which the ordinary hospitals cannot deal with.

794. Do you think that many such establishments would be required ?—Possibly five or six near London would be required to start the thing. Of course it would be rather costly.

795. Do you share the opinion of Dr. Eichholz that the condition of London is no doubt worse than anywhere else, and that if the evils in London are dealt with systematically and successfully the rest of the country does not present a problem of remarkable difficulty ?—The matter is presented in a more massive way here than anywhere else.

796. He appeared to think that the conditions are more acute in London ?—I do not think they are in individual cases; I do not think you find individuals here worse than those in other places; but you find more of them.

797. You do not think the type is worse ?—The type is not worse, but you get more in one school in one district.

798. Dr. Eichholz thought the type was worse ?—I do not agree with him. They impress one more here, of course, because you go to a school and see half-a-dozen hunch backed boys at once. That is the way it impresses one so much, I think. Lastly, I think that for a place like London we want a central residential establishment, a kind of laboratory, for observation and study of strange and abnormal cases, where complete examinations, not only of physical conditions but of nervous reactions and physiological peculiarities could be followed out.

799. Do you think that should be established by the school authority, or do you think the State should do it ?—It does not matter who establishes it in London.

800. The question is, which will work it most efficiently ?—I think the school authority would be most efficient for London. The scientific study of details of educational methods in relation to children's health and development can only be managed in an institution of such a kind. Such provision is what is wanted for the complete handling of the mass of children to be seen in London.

801. Then you give a list of the other detrimental conditions you think exist in elementary schools ?—Yes. I have said nothing of the infectious disease or dirt contagions which are so abundant in London, as we have

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machinery for dealing with them, if people wanted to be clean, or of the possibility of providing rapid free diagnosis for cases of infectious disease. The ordinary harmful school conditions may just be mentioned, so that they can be taken up if required. The method of the usual infant teaching is much too fine in hand and eye adjustments required, and leads to nervous strain as a routine part of education at this age, and to permanent habits of close eye work with stoop and contracted chest. The work expected from young children is also of too accurate a nature.

802. On several of those points Dr. Eichholz took a view which is not altogether in harmony with yours. He appeared to think that the defects as to ventilation were merely due to the ignorance of teachers, or their reluctance to make use of such opportunities of ventilation as the school enjoyed ?—I know about all that.

803. Are you inclined to say that a great many schools are defective structurally in point of ventilation ?—Practically all schools are defective in point of ventilation.

808. Even those of the newest type ?—I would exclude from that statement a few schools scattered here and there which have been erected in the last few years.

809. You advocate mechanical ventilation ?—Yes, it is necessary. You can keep a school naturally ventilated if you take great care ; by investigating and working in it yourself you can improve the results ; but the teachers will never get such results.

810. They have neither the time nor the inclination to do it ?—That is so. The ventilation of practically all schools—I do not mean every one—is defective. No "natural" methods are sufficient, and schoolrooms should be required to be ventilated so that the carbonic acid present should never exceed a total of ten volumes per 10,000. This is a condition perfectly capable of fulfilment if required.

811. By mechanical means ?—Yes, by mechanical means.

812. You think children are kept too long at their desks ? Upon that point Dr. Eichholz is inclined to join issue with you ?—I think there is too much continuous desk work ; and bad attitudes, the relic of habits necessarily acquired in the infant school, are invariable. Frequent short daily exercises to remove fatigue products are required. I would also say that there is no general provision for the testing of visual acuity. 95 per cent. of over a thousand infants between the ages of six and six and a-half manage to get normal visual acuity in London, whilst in the standards 10 per cent. are found with vision not exceeding one-third normal. Mouth breathing and all its evils remains common and uncorrected. That is a serious condition predisposing to disease and materially affecting the prospects of life.

813. Do you think there are many instances of children's eyesight being forced to a fatal extent ?—The conditions which exist in infant schools are fatal to the eyesight. The majority of children go through them without much damage, but any children who have the tendency to weak sight are sure to succumb. The conditions are bad for infants' eyesight in every way ; the work is too fine.

814. No amount of knowledge on the part of the teacher could correct that ?—Oh, yes. If the teacher refused to set infants to do fine work, but let them go to the blackboard and do coarse work, that would correct it. We measured those children to whom I have referred with very great care, and with tremendous trouble, three times over, and 95 per cent. of them, as I have said, between the ages of six and six and a-half, managed to get normal visual acuity, that is only 5 per cent. of young infants at that age were defective. But in the standards, in the ordinary school children beyond the infant department, we found that 10 per cent. had exceedingly defective vision.

815. That is owing to undue pressure upon infants ?—I cannot say it is due entirely to that.

816. You think it is largely due to that ?—It is partly due to that. The only place where I think there is any real tax on the eyesight is the infant school. I do not consider that there is any real tax in the upper schools.

817. (*Colonel Onslow.*) Those conditions refer to book work ?—Book work, sewing, and some of the kindergarten work.

818. That is common to both boys and girls ?—Practically. They do a lot of drawing in little books.

819. (*Chairman.*) Then how do you sum up ?—First I should say that the teachers as a body are comparatively ignorant of hygienic principles. The sum of the matter is that these conditions in the schools, as also the conditions of ignorance and neglect in the homes, can only be met by increased knowledge. The permeating influence of education must begin in the schools. Hygienic knowledge is necessary for both teachers and inspectors, and a premium should be put on its possession. It should be a necessity for the teacher's qualification, because no one is fit to take care of a school without it. Hygienic conditions in the daily conduct of the school should be a condition if grant is to be given, but most of the inspectors have had no training in these matters. I believe the development of a "sanitary conscience" is a more important affair to the State than any educational topic which has been discussed for a generation, but the first steps towards this have scarcely been taken. The three points I suggest are :—(1) Increased care by separation and treatment, both educationally and hygienically, of the already damaged ; (2) The necessity of hygienic knowledge for teachers and inspectors ; and (3) The "sanitary conscience" as a school ideal.

820. (*Chairman.*) That is rather an abstract question.

821. (*Colonel Onslow.*) In your card you make provision for the taking of weight ?—Yes.

822. I infer from that that you take the weight with clothes on, as you say "with shoes removed" ?—Yes.

823. Is not taking the weight with clothes on very unreliable ?—It is always done in that way practically for these particulars. In most cases they weigh them with shoes as well. I simply omit them because they take them off for their height, but in the British Association weight measuring they had their shoes on as well.

824. (*Mr. Legge.*) I think in the British Association they had their boots off ?—For weight, no. I looked up the point on purpose and found they kept them on.

825. (*Colonel Fox.*) Are not most cases of deficient eyesight or blindness attributable to neglect of children on the part of the mothers—the parents, the mother especially—shortly after birth ?—Half the cases of blind children in the blind schools are due to ophthalmia caused by infection at birth.

826. (*Chairman.*) That is due to the midwife ?—Yes.

827. (*Colonel Fox.*) It is due to not washing their eyes ?—Yes.

828. If it does not make them blind it affects their sight ?—The majority escape without becoming blind ; but half the cases of blind children——

829. Are attributable to neglect of the mothers after birth ?—Yes. It is something a little short of half, to be accurate.

830. May I ask whether you agree with the statement that as a general rule the offspring of unhealthy or tainted parents, syphilitic parents, are born sound, and that they have a fair start in life really, as a rule ?—I do not know enough about it to say that.

831. That is what we have heard just now ?—A good many children are born apparently healthy.

832. You do not think the fact that parents are tainted, or are weakly at the time of their children's birth, necessarily affects their offspring ?—It does not do so necessarily. It affects them.

833. And you attribute the cause of their decline in health to unhealthy surroundings or bad nourishment ?—In the majority of cases due to congenital syphilis, the children are born apparently in perfect health, but in some cases they develop all sorts of things, waste away, and become like old men. Others go on till they are seven or eight years of age, and I have known them to go on till twenty-eight before they show any signs.

834. If they were properly nourished, and their surroundings were healthy, do you think that they would deteriorate in that way ?—The syphilitic ones would probably develop syphilis in any circumstances.

835. Is not there a natural tendency to recuperate ?—Yes.

836. Provided they have good nourishment and healthy surroundings?—Yes; those things have a great deal to do with it. But there are certain children who become unhealthy whether they are well-nourished or not. I am speaking of good class children whom nothing will nourish. They seem to be born ill-nourished and to continue so all through life. They are quite few, however.

837. (*Dr. Tatham.*) You spoke just now in your evidence of the mischief done among school children by the effect of the common infectious diseases?—Yes.

838. Do you think it is possible at all, through the instrumentality of the School Board, to establish something like a register of diseases as they affect school life?—It is very difficult to follow that out. It would require a great deal of machinery. But at present we are attempting to do that for some things in small localities. For instance, we are doing that with measles at present in Woolwich as far as we can; every child is being watched all through its school life, and the facts are recorded on cards. We are doing that in some schools in relation to diphtheria. On Tuesday last my assistant went to a school where we heard there were two cases of diphtheria. About half the children in one class seemed to be so ill that he examined all their throats, and he found several cases which were ill and sick, and must have had the disease, and yet they were still going to school. They would go on showing signs of ill-nutrition for a considerable time afterwards.

839. Having regard to the enormous value of an approximately complete register of the commoner diseases, do you not think that it is possible to establish that system through the instrumentality of the School Board?—It is possible to do it, and it could be made useful. At present of course we do keep a register of these cases simply for schools, not in relation to individuals.

840. Such a register does not exist at present, I think?—We keep a register of every case occurring in a school. I have a huge book, kept by clerks, of every case notified each morning, but now Article 101* has been abolished all that may go overboard.

841. Things are worse now than they were before?—They are very much worse now owing to that clause having been removed.

842. (*Chairman.*) Disease is less traceable?—The teachers do not take so much trouble about it now. It is of no importance to them. It was of importance before.

843. (*Dr. Tatham.*) You have spoken of the conditions of debility and ill-nutrition in school life predisposing to consumption later; what do you mean by consumption?—Tuberculosis of the lungs.

844. Pulmonary tuberculosis specially, or general tuberculosis?—Pulmonary tuberculosis is what I mean especially by consumption.

845. With regard to tuberculosis, is it your judgment based on personal experience that tuberculosis is on the increase among children of school age?—I should say if anything it was on the decrease. One does not see anything like the number of children now with ulcers and bone disease that one used to do. Here in London, if you have a cripple centre one sees a tremendous number, but they are drawn from a big population. That is where mere impressions are so apt to mislead.

846. You have spoken of the effects of over-pressure?—Did I use the expression, "over-pressure"?

847. You did not use the term, but I take what you said as equivalent to that. You said that "For this class of backward and debilitated child, which must run up to about 10 per cent. of the ordinary school population, a simpler type of school is required, with a modified curriculum:" do you think that 10 per cent. is the extent of it?—I do not say it is the extent; I say it runs up to that. In Sweden, for instance, twenty years ago Axel Guy examined a lot of children, and found 17 per cent. were unfit for the ordinary school education. I was reading it last night.

848. When you mention 10 per cent. you do not fix that as the limit?—In some districts it would be quite 20 per cent. I daresay; for instance, in the East End of London; but there are other districts where it would not reach 5 per cent.

849. You take 10 per cent. as the average?—That is a rough, general estimate. I would not like schools to be built on that estimate of 10 per cent., but I think that is the minimum. I believe that if schools are established for the benefit of that class of children you would very soon have 10 per cent., of the school population in them.

850. When you speak of the effect of syphilis, you refer to congenital syphilis, of course?—Entirely so.

851. Do you think that is increasing?—I have no means of judging that. Here in London I see all these blind and deaf children, and of course it is the great element in congenital blindness and deafness, and in the cases that go blind and deaf—children who have gone to the age of ten or eleven gradually getting blind and deaf.

852. Do you think those cases are mainly due to syphilis?—I should say that those combined cases were practically all due to syphilis; they present the other characteristics of syphilis—interstitial iritis and internal ear deafness, and they have generally the brain deterioration that goes with it.

853. (*Mr. Lindsell.*) What sort of medical staff have you in the London School Board, have you many assistants?—I have one assistant who gives his whole time to the work, and I have two others who give half their time entirely to examining the defective children; then we have about six going about the school testing vision—oculists as we call them—and we have now half a dozen nurses who are concerned with dirty heads and things like that.

854. There is a very considerable medical inspection of schools?—In London we have twenty sessions a week given to eye-work, twelve sessions a week given to mentally defective and cripples and so on, and myself and my assistants full time. But that is over an immense area.

855. Now if you made that medical examination still more complete as has been advocated here, would it require a very large augmentation of the existing staff?—It all depends on the ideal that you seek to attain. If you get your teachers with some hygienic ideas, a comparatively small staff will manage it; if you are going to have doctors in each school every morning, of course, you would want half the doctors in London.

856. But to have a general medical register of all the children who come under the scheme, or under the local authority, that could be done without very great increase of your existing staff, provided that the teachers in the school are capable and intelligent enough to give you what assistance you require?—I think so.

857. It need not necessarily involve a very large additional outlay?—No. When I was in Bradford they had thirty-three schools there, I think. I was able to completely manage all these by giving four half-days a week in the schools.

858. You knew their condition?—I practically knew all the schools.

859. You knew the physical condition of all the schools? Yes, all the children who were bad I knew. Infectious diseases were of course left entirely in the hands of the sanitary authorities there. The work here is done through the School Board.

860. You propose a method by which the country might obtain in future more regular statistics from time to time as to the physical condition of the school population?—Yes.

861. Of course it would be still better done even than by your plan if there were a Government bureau for that purpose?—I do not think it is necessary to be done everywhere for every child; but it should be done at intervals.

862. The more complete we could have it the better—say decennial periods?—Yes.

863. In future that would enable people to form a much more definite judgment on the question of deterioration or non-deterioration than they possess at present?—Yes. Of course if the Board of Education had a medical staff they could do that themselves regularly, continually applying themselves to it.

864. But you would require a special department?—Yes you would, just as you assess their other qualities.

865. You attach much more importance to hereditary taint as a cause of physical deterioration than Dr. Eichholz?—No, I do not attach very great importance to it, but there are cases where it is very marked indeed.

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I have no doubt at all that if I say a child has got congenital syphilis he has got it. There is no doubt in my own mind. There are definite signs of that. But the numbers who are affected in that way are not great.

866. (*Chairman.*) Dr. Eichholz appeared to think that the fact that 90 per cent. of the children were born healthy was of much more importance than you do.

867-8. (*Mr. Lindsell.*) Dr. Eichholz used the words "as a rule children are born healthy or not at all." I think those were the actual words?—If he said "apparently healthy" I would agree. There are things developed after birth which were inherited from one's ancestors.

869-70. You agree with Dr. Eichholz that one of the things which is really needed is a new type of school. We have got the ordinary public elementary school, and we have a school for the defective and afflicted, but there is a class between those two?—Yes, a sort of intermediate class.

871. To whom no school is now properly adapted?—Yes, you may call it a Lower Grade School just as you have a Higher Grade School.

872. And that would take the shape of a sort of hospital as well as a school?—Oh, no. With regard to a few children who I think at present do nothing for a year or two sometimes, I think it would do great good if you could take them away for a few months.

873. You are not referring to what you speak of a the combination of schools?—No, there are Lower Grade Schools for about 10 per cent of the children, and then this hospital school arrangement would be for possibly 1 or less per cent.—a temporary thing for each child admitted.

874. You think these schools would be filled by the ordinary pressure until the children would be selected to go to them?—Yes.

875. You would leave the classification to the teachers?—To the teacher and the school inspector.

876. Or whoever it might be?—Yes, that would be quite sufficient.

877. You would not advocate what Dr. Eichholz called a legal compulsory power, forcing a child into that particular class of school?—You will have trouble with the parents until you have power to send children anywhere. Parents will not send children there if they think it implies any sort of stigma upon them. I should tell the parent that the child was not strong enough, and, until he got better, it would be better to give him simpler education. But you would have to back that up by some compulsion if necessary.

878. You think some further legislation is needed?—You might try that without legislation. I hope to see that tried in London without legislation.

879. It might be done with a little persuasion, without the necessisty of any magisterial or Police Court proceedings?—Yes. Even now under the Acts we do not get them into the special schools although we can compel them. As a rule they go to Voluntary Schools where they differ with us.

880. (*Colonel Fox.*) You can call them convalescent schools?—Yes. A good many people would want them to go there.

881. (*Mr. Lindsell.*) You think the present sanitary condition of schools is not exactly what it might be, even in those of the latest type; the ventilation is a matter which has been neglected?—There is room for great improvements in the schools. I have just put down the chief points in my evidence there.

882. And you would say that there is a great want of hygienic knowledge among the teachers?—Yes.

883. Knowledge of hygiene is one of the subjects which teachers require to know?—Yes, but they do not carry it out in practice afterwards. It is not a thing which is in the Code as a necessity, and so you do not get it.

884. But it is one of the conditions that the school is healthy, well ventilated, well lighted, and so on?—They generally are not either healthy, well-ventilated, or well-lighted. At present there is nothing like hygienic inspection of schools by the Board of Education.

885. But, I suppose, as medical inspector and an officer of he London School Board, you would feel if your duty to call attention to any defects in a school which you might visit?—One cannot do too much in that way, because if it satisfies the Board of Education, you may be looked upon as hypercritical.

886. I think the idea now is that they should get the highest standard which the local authority may attain without giving up the Code standard?—The minimum of the Code is the maximum of most authorities, I think.

887. (*Mr. Lindsell.*) The idea is that that will not be so under the new Act.

888. (*Mr. Legge.*) When you are talking about this special school for 10 per cent. for backward, though not really defective children, you are, no doubt, acquainted with the London School Board's Industrial Schools?—Yes.

889. Do you contemplate for this special school some sort of curriculum, such as you find in Drury Lane?—Not exactly that. The whole curriculum of these would simply be this: I would have a simplified Board school education. Instead of teaching children to write in books I would get them to write with chalk on a blackboard; I would make them do a great deal more hand work and a good deal less learning.

890. You mean simply the manual occupations?—Yes. I would simplify the curriculum—reduce the number of subjects.

891. Would you introduce such things as basket-making and carpentry?—That would have to come on later on in the upper part of the school.

892. Would you further allow them to devote more time to physical training?—Yes.

893. Would you allow such a school to start such a thing as a band?—There is no reason why it should not—those that were musical.

894. Do you not see that by these means a school of this sort might be exceedingly attractive?—Yes.

895. And children would be only too glad to attend?—Yes.

896. You know, no doubt, that the percentage of attendance at the Brunswick Road Day Industrial School has attracted over 99 per cent. and has done for a long time?—I did not know it was as much as that.

897. You may possibly get a result almost greater than that if you make the school attractive enough?—Yes.

898. Do you see any objection, for that special class you have got in mind, to make it as attractive as you possibly can?—Of course not. The point is that you want to reduce the toil of the children. You want so make school life easier to them, because it is a difficult thing.

899. You want to have a shorter time in the class-room?—Yes, and change the lessons often.

900. And then have a little interlude of work and a brisk interlude at drill, and so on?—Yes, and crowd the school less, and let each teacher have less children.

901. A school would naturally be less crowded if the class-rooms were turned into workshops—Yes, that is the increased space I suggest here. Then there should be more individual attention from the teachers—they should have a class of thirty instead of a class of sixty.

902. I gathered from one of your remarks relating to the special school, that you see considerable danger, and, indeed, positive cruelty, in the too great tendency to stuff children into special defective schools?—A child, who is mentally somewhat backward, sticks where it is, as it were. If it is put in one grade it stays there; if it is put into a higher grade it will get on better, and so on. I think a great many of the children who are put into the special schools lose very much. They may not get on as they would do elsewhere.

903. You think if there is to be more medical inspection of schools, the medical inepector must be very careful before he certifies a child—before he takes a child out of its normal surroundings and put it into a special class?—Yes. I always feel a child should have a chance if possible. At present you have to put them into a special class or condemn them to do nothing in an ordinary school.

904. Then with regard to the census I should like to take up a point about which Mr. Lindsell asked you a question. He referred to the central governing body?—Yes.

905. To collect statistics in a similar way to the Geological Survey or the Ordnance Survey. Would you see any objection to that central governing body working through you?—None whatever.

906. Do you not see the advantages in a system of co-operation by which they might collect information derived from you, in the same form as they derived it from Bradford or Manchester?—Of course all that information is useful, and they could turn it to more account than merely local works.

907. Now about your 50,000 children. I agree that is a substantial number. Do you see any advantage in getting that 50,000, not by taking the mass of the school children, but by making your 50,000 observations upon children, say of two ages, getting 25,000 at the age of seven, and 25,000 at the age of 12? Then if you repeated that at five years you would have practically the facts for the same children at the age of twelve for whom you have already the facts at the age of seven?—Yes, but still there are objections to that I think. You cannot trace out how things vary if you only check them at two ages. Of course two ages is the popular way on the Continent at present. They take them on admission, and they take them either at discharge or somewhere thereabouts. But for scientific purposes it would be infinitely better to have a graduated series of observations at different ages. For instance children grow very differently between seven and eight, to what they do between ten and eleven. They increase in weight about 10 per cent. between ten and eleven, but they do not increase anything like 10 per cent. between seven and eight.

908. You were, I believe, at Bradford before you came to London?—Yes.

909. Where were you before Bradford may I ask?—I was not in practice anywhere. I had simply been resident in hospitals before I went there.

910. Have you formed any opinion as to the difference in physique between London and Bradford school children?—One cannot give a general impression at all.

911. You had, in Bradford, figures which you have been able to compare since with London figures?—Oh, yes, I have had this system put in practice in Bradford. I did it myself experimentally.

912. Were you the gentleman who carried out that inquiry between the different classes of schools in Bradford.—Yes.

913. We have those figures?—I expect those are my figures, if you got any from the Bradford School Board.

914. You are not prepared to express an opinion as to the comparative physique?—It is quite impossible. In the suburban districts of London you cannot get a better description of children if you go up north or if you go down south.

915. We have had downright evidence from Dr. Eichholz, that you reach a lower physical level in London than in Manchester or Leeds, and some other towns he mentioned?—I think there is a very good reason for that. You get a mass of the very poor miserable people aggregated in districts in London sufficient to fill a whole school with their children. You do not get that mass in other towns.

916. Dr. Eichholz says he went to Manchester, to schools selected by Mr. Wyatt and Miss Dendy, as the schools possibly containing the very lowest from the physical point of view of the population?—I should think he ought to have got as bad in Manchester as in London.

917. He says they are better than the similar schools in London. But you could not say?—No, it is a more immense population in London. In a place like that they come and go.

918. (*Chairman.*) I just want to ask this, in regard to this particular class of school, the new type of school, the creation of which you advocate, is it within your intention that the children who enter into such a type of school should remain in it throughout their school life?—Some of them.

919-20. You would draft those who were sufficiently improved?—Back into the ordinary school. Suppose a child has had some severe illness, say at the age of seven and has been retarded in growth; he has been in a particular school possibly eighteen months. If he goes into one of those schools for a twelvemonth, he will catch up at a far greater rate with simple treatment like that, than he would in an ordinary school.

921. And you would use your discretion as to how soon he should be sent back to the ordinary school?—Yes. I think a few would like to go through the ordinary school life.

922. (*Mr. Struthers.*) With regard to the special schools, I am not sure how you get over the difficulty of classifying the children without compulsion. If you mark these schools off as special schools, in any way, parents would be unwilling to send their children to them without compulsion?—Some of them would. Some would rather they go there than to an ordinary school.

923. But the majority would object?—If we said they were of simple character, where regard was paid to the children not being so strong, I think we should get over it.

924. What would be the essential features in the curriculum of these schools different to those in the ordinary three R school? You have mentioned writing on blackboards instead of in copy books—you mean in the junior standards?—Yes.

925. The infants principally?—Yes.

926. The greater abundance of hand work?—Yes.

927. Was there anything else?—One would teach them things like arithmetic in a much simpler way. They would learn by easier methods than giving them long problems.

928. Dr. Eichholz spoke of a similar class of schools except that I gathered in his view the important thing about the special school was that first of all they should feed the children?—I did not think of the feeding, but that, of course, would be a very useful thing. But the majority of these children are not those who specially want feeding. Some are poor children who cannot get on in the ordinary schools, and some are a bit deaf or have bad eyesight.

929. That would not be one of the main features of this special school with you, the systematic provision for feeding?—That would not be one of the main features, but it would be a useful auxiliary to it. But my idea about these schools is that you should do what you can to reduce the pressure on children at school. There are a few children in school who cannot keep up to the ordinary level.

930. I should like to ask you this question then: these are points of difference that you mentioned between this special type of school and the ordinary school such as we have nowadays, and I should have said that the difference you favoured is an improvement in the ordinary school curriculum, even for the ordinary children. Would it not be a better solution of the whole question to have a curriculum for all the schools, more of the nature you have mentioned for these special schools?—On the other hand, you would get less work done, I am afraid. There would be smaller classes.

931. (*Chairman.*) It would be much more expensive?—It would be very much more expensive, but at the same time, you would increase the efficiency of the ordinary school, because the children there would be capable of working more quickly. Instead of being kept going at the rate of the dullest they would be a better class.

Dr. Kerr.

932. *(Mr. Struthers.)* That is very often done in the ordinary school at present, at least it is in Scotland?—Yes, they separate them into classes.

933. They put those who are approximately at the same stage of education into two divisions, one of which progresses more rapidly than the other?—Yes.

934. And it seems to me that provided the curriculum of the school for both divisions is reasonably broad, and has sufficient of those elements you have mentioned, if you make that division in the school, there is scarcely any necessity for a separate school?—I would reduce the whole ideal of the school, which is not to attain anything like the ordinary level. You do not expect the children in it to be anything more than mere labourers, and you do not attempt to put the same education into them that you do in the ordinary school.

935. If you had these two divisions in the ordinary school—I am assuming it is a fairly large school—you could allow those children who are bright and intelligent, and whose parents wished to push them on to a profession to progress at one rate?—Yes.

936. And those who are dull, either from defective feeding or from whatever cause, could move through the school at a more leisurely rate?—Yes.

937. By the time they both leave school, say at fourteen, the one will have got into secondary education, and the other may have just that knowledge of the three R's which you insist on every one getting, if possible?—Yes, that is grading the school practically into two of these schools.

938. It is in a way.—Only if you separate the schools distinctly in that way, I think in the lower grade schools you would get the thing done in a much simpler way, and the whole idea of the school being different, the children would be looked after, physically, better, and their physique would be developed rather than their mental qualities.

939. The only point in favour of the sub-division which I have spoken of, in the same school, seems to be that the average parent is not aware that there is anything special being done in the classification of his child?—That is so.

940. He is attending the same school as those of a better class, who are more intelligent and so on?—Yes.

941. He is not sent to a school where he is specially labelled as being a special child?—That is so.

942. Do you think there is a need for school restaurants in connection with an ordinary school, or that it would be a great advantage to have them?—I am very doubtful about it. I do not feel as strongly on the point of nutrition or rather want of nutrition as most people.

943. That is what I gathered from your evidence. You do not quite lay the same stress on bad feeding or insufficient feeding which we have had from others?—No. I have not considered it as fully as Dr. Eichholz.

944. On present consideration you do not think it is the one outstanding cause?—No I do not think it is the great cause.

945. You do not think it is the great cause of bad physique in schools?—No. It is bad feeding at an early age which I think is the most important point—when they are infants.

946. Then you consider that the average school could be much better ventilated than is it at present?—Yes. That of course depends on the teachers. The average school, as it is at present, would be very much improved if the teachers only used the means at their disposal, but they do not do so.

947. Do you consider that a mechanical means of ventilation is necessary for good ventilation?—You cannot move the air sufficiently without it in a school.

948. I do not know anything about the subject. I am asking for information. I was going to ask you this: supposing you have a small school, taking a country school—because, after all, bad ventilation occurs in country schools as much as in town schools?—Yes.

949. If you had a small country school of sixty or a hundred children, is it possible to have that place mechanically ventilated except at disproportionate expense?—You could ventilate that place by an arrangement of stove—what they call the Pilot stove to draw air in.

950. It is not specially expensive?—No, it is not specially expensive, but you could also ventilate a room like that with windows, if the teachers used them.

951. Then, alluding to another point, do you think that the teachers need a knowledge of hygiene?—That is the gist of the whole thing.

952. It is the fact in England—at any rate it is in Scotland—that a certain amount of instruction in the laws of health, hygiene and physiology, as a fundamental science, is part of the training college course; but I think you said that they do not pay any attention to what they have learnt after they leave the training college?—No, I think it is a very secondary part of the work of the training college.

953. It may be so. We could lay more stress on it, but it appears that the knowledge acquired there is not made use of when they go into the schools. Do you see any way to avoid that?—If they got better knowledge—they get very little knowledge there—and if there was a kind of sanitary oversight in the schools, and an insistence upon the necessity of keeping the schools in good condition, the teachers would very soon modify their practice. It is their practice that is so bad.

954. It is really the practice of the teachers rather than their absolute want of knowledge that is in question?—Yes.

955. And the remedy would be an effective inspection?—Knowledge on the teachers' part, and inspection. They open the windows when they see me coming into the school, those that know me; but the windows wanted opening before that.

956. I gathered you would like to use the teachers as, so to speak, the first judges of determining whether children require special treatment or not?—I think that selection ought to depend to a great extent on the teacher's history. In three out of four cases it is the history given by the teacher that decides whether a child goes into the special class or not.

957. Then you do not want a somewhat elaborate staff of medical officers to look after all the children in your schools, but a comparatively small staff would suffice for the purpose, provided the teachers came into the business by selecting those children who obviously required medical examination?—Yes. My own idea is that an efficient way of doing this is with a small sanitary staff of teachers who have knowledge. The cost of a sufficient medical staff to do the whole work would be enormous.

958. Taking the teachers' present knowledge of hygiene, and turning to the card which you propose for obtaining the physical census of the children, the only thing which the teacher needs have special knowledge to do—and that very little—are those data for physical conditions?—Those were to be done by medical inspectors in my work. The only thing there which the teachers could do——

959. Is there anything there which the teachers could not do?—Yes, they could not fill up the spaces about the conditions, about the throat, ears, nose, nutrition, vaccination and those things.

960. Could not they get the particulars with regard to the condition of clothing, and the height without shoes?—I would not like to rely upon any teacher's height or weight measurements. Even the visual measurements they do are often very untrustworthy.

961. Surely any intelligent person, with a little direction and experience, could take the height accurately?—They could but they do not. If you could rely upon them it would be all right, but they would do the thing hurriedly and they easily make mistakes. They would get through far more than you would in the time.

962. Do you think that persons specially going round may not make hurried observations occasionally?—Of course they may. But unless teachers are specially trained to this as an important thing, they think it is a mere fad,

and they take no trouble about it. They sometimes hardly take the trouble to write down the results.

963. The teachers might be trained?—Oh, distinctly so.

964. And the doing of it looked after to some extent?—Yes.

965. If that were done, do you not think it would be possible in every school, just as you take a boy's and girl's age when they enter, to take his or her height and weight, and have that done again every year?—Yes, that would be a very useful thing. *Dr. Kerr*

966. You could have a person, under the direction of medical officers to go round and see this was properly done?—Yes, that would be a useful thing.

967. And that, by and by, would give us very considerable data for fairly accurate information to make inferences from?—Yes.

968. (*Chairman.*) We thank you for your evidence.

THIRD DAY.

Monday, 18th January, 1904.

PRESENT:

Mr. ALMERIC W. FITZ ROY (*in the Chair.*)

Colonel G. M. FOX.	Colonel GEORGE T. ONSLOW.
Mr. J. G. LEGGE.	Mr. JOHN STRUTHERS.
Mr. H. M. LINDSELL.	Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary*)

The Rt. Hon. CHARLES BOOTH, F.R.S., called; and Examined.

969. (*Chairman.*) You are the author of "Life and Labour in London" are you not?—I am. *Mr. Booth.*

970. Did your investigations produce the impression that conditions unfavourable to the health of the community were growing in intensity?—I think I should not use the word "intensity." They are growing in amount in connection with the increase of the urban conditions of life. I could not say that the conditions have been more intense, but they are more widespread.

971. Owing to that fact?—Mainly owing to that fact modern conditions of life are unfavourable.

972. And you are satisfied that overcrowding and defective nutrition—or perhaps by defective nutrition you wish to be understood improper rather than insufficient—are the principal causes of such physical deterioration as is to be found?—Yes.

973. Would it be an exaggeration to say that every evil prejudicial to physical development flows from overcrowding, as the preparation of suitable food becomes impossible in the conditions under which numbers are forced to exist?—I should prefer to say that every evil prejudicial to physical development is aggravated by overcrowding, and I should not be prepared to say that the preparation of suitable food is impossible under the conditions, but it is more difficult, and there are many more reasons that make it not done—the food is not properly prepared.

974. You mean reasons owing to the carelessness and indifference of parents to their responsibilities?—Yes, and to the facilities of getting ready-cooked food.

975. From outside?—Yes, and also to the increase of the demand for female labour, for instance.

976. Which withdraws the mother from the house, I suppose?—Yes.

977. And forces her to neglect her domestic duties?—The domestic duties tend to be neglected from a great number of causes.

978. Owing to the demand for female labour?—That is one cause, and that may be said to be partly due to the bad demand for male labour. The household is more supported from the female side, owing again to a great many industrial causes. It is a very complicated argument.

979. You mean that it is due to economic causes, the desire to get cheaper labour?—Causes such as the introduction of machinery in some cases it may be.

980. Is it at all due to the growing unwillingness on the part of the male householder to take his part?—I should not like to say that, but perhaps loafing becomes more prevalent if it becomes more easy. In all these cases the causes act and re-act in a way which makes it very difficult to trace where you begin and where you end. But there is an evil state of things industrially.

981. Touching the subject of overcrowding, you consider, do you not, that improvements are apt to cause a local accentuation of the mischief very often, owing to the lowest class being always the most reluctant to move, or the most incapable of moving?—I should not use the word "accentuation" so much, as that repeats itself. If there is improvement in one place the evil starts again in another. I do not know that it has accentuated it very often. I think that an improvement which has wiped out one black spot may produce others, but I doubt whether the new black spots are any worse or so bad.

982. In your opinion, the disposal of these people is a standing obstacle to the exercise by the local authority of the powers with which they are entrusted?—Undoubtedly.

983. You have stated emphatically that it is the competition of the very poor that exercises the most de-

Mr. Booth.

pressing influence on the class immediately above them who, if the very poor were eliminated, might maintain a more equal struggle for existence?—I think that is true. It was an impression that I gained early in my inquiry, and I stated it then, and I believe it to be true. I have seen nothing to alter my opinion.

984. Fuller experience confirms the impression you first got?—Yes.

985. This undesirable class, which you describe as a dead loss to the State, is composed of the wastrels and ineffectives of society, those who, from whatever cause, have drifted into its dunghills and dustheaps?—Yes.

986. And you advocate interference by "administrative action and penalties at each point at which life falls below a minimum accepted standard while offering every opportunity for improvement," or, as you elsewhere put it, "the community will be obliged for its own sake to take charge of the lives of those who from whatever cause are incapable of independent existence up to the required standard"?—I believe that to be true.

987. Could you favour the Committee by telling them briefly how you think that might be done?—It would be difficult to do it, because so many influences would have to converge to obviate the widespread evils under which we suffer. Many influences may be brought to bear, and I do not think that any one panacea, any one influence, which you might propose, could be picked out as such. Every influence that tends to the improvement of the standard of life—for instance, to the improvement of the conditions of the class above—tends to drag up the condition of the class below, just as the elimination of the lowest class would tend to the improvement of the class above it.

988. Would you aim at a complete segregation of this class from the rest of the community, and their employment on farms, or in labour establishments, upon suitable work?—I am afraid that is rather too ideal a proposal. That proposal I made at an early stage, and I have thought of it at each portion of my work, and I have been watching and considering it, and during the period there have been some very interesting experiments tried by the Church Army and the Salvation Army which have shown clearly that it has great limitations, but yet the experiments have not been so completely tried out but that I think further experiments ought yet to be made. The object is desirable.

989. You do not despair of considerable effects?—No. Very considerable effects may be brought about provided it is worked together with administrative pressure and moral improvement. It would only be one item, I take it, in a policy of improvement.

990. Part of a general scheme which might, taking advantage of those circumstances and causes which are making for improvement, militate against those influences and causes that are making for the opposite. If any such scheme was carried out, it would be necessary to provide for the children in industrial homes or public nurseries?—I have not thought of it. It might be to some extent, but it is desirable to avoid that as far as possible, I think.

991. You would not break up the domestic life if it could be retained?—The experiment has been tried, on the individual to a great extent, by these two great organisations, the Church Army and the Salvation Army, but the experiment has not been tried of dealing by families, and that experiment might still be tried.

992. Do you think, having regard to the interest the community have in the preservation of the young from contaminating and depressing influences, it would be possible to apply similar treatment to the children of all parents who have proved unfit to discharge their obligations to the children they bring into the world?—It would be very difficult, and I think could not be applied except in extreme cases. In extreme cases, I think it could in the form of an industrial school aimed, not at a criminal class, but at a neglected class.

993. A culpably neglected class?—Yes, where the negligence rests with the parents it might do; the child might be put in some form of feeding school where it would be fed and boarded, and the cost, or a portion of the cost, charged upon the parents from whom it could be collected.

994. With a view to the enforcement of parental responsibility, do you think it practicable to make the parent the debtor to society on account of the child, and to empower the local authority to charge the parent with the cost of a suitable maintenance, with the further liability in case of default of being placed in a labour establishment under State supervision until the debt is worked off?—It could be only practical to go so far as that in extreme cases.

995. And you think such cases would be so rare that it would be hardly worth while to introduce any such system?—No, because it would be part of a system in which, in some cases, parents would be made financially responsible, and in some cases criminally responsible.

996. As a further step?—As a further step, and in other cases various degrees of responsibility might be enforced, and in some cases it might be a mere charitable assistance.

997. Do you think it possible to lay down a minimum of soundness and sanitary convenience in houses, below which it shall be the duty of the local authority to prohibit their occupation?—That is done already, but it often is not enforced. There is a rule in most cases.

998. A bye-law?—Yes, a regulation with regard to the number of sanitary conveniences. On all points of sanitation we have regulations and laws, but they often are not enforced, and they are difficult to enforce.

999. Do they go to the point of laying down that every habitable house should subscribe and conform to those regulations?—Yes, I think so.

1000. You think that variations from the standard as local circumstances suggest should be permitted?—Oh, yes, perhaps more than is now done.

1001. More latitude you think?—At any rate the authority should not be bound down to hard and fast rules. The difference between town and country labour should be taken into consideration.

1002. Would you go so far as to prescribe the maximum number of inhabitants any house or area should accommodate, particularly in the case of children?—It is done already.

1003. But generally?—It is done in London. I think that it is done generally under urban conditions.

1004. How is it that there is so much overcrowding?—I am not sure about the authority that decides it. There would be extreme difficulty in enforcing the rule.

1005. Those bye-laws and regulations have come to a deadlock in fact?—I suppose they have some influence; constant pressure being exerted.

1006. But is the pressure constant?—There is a pressure being constantly exerted. I should not say that the pressure is constant but it is constantly being exerted, and might be much more exerted if there was more chance of allowing expansion; if the people could more easily find other homes. The authorities cannot enforce the law, when there is no other place for the people to go to.

1007. And you would agree that overcrowding is particularly disastrous, especially where the young children suffer from it?—Yes.

1008. There is a point I have seen referred to in Mr. Well's book, "Mankind in the Making." Having regard to the risks to infant life from suffocation and fire, would you make separate cots and fireguards obligatory?—I do not think I should. I had not thought of it. Fireguards might be; but I think not cots.

1009. You know that there is an enormous number of deaths from overlaying, is that not so?—Yes.

1010. Infant mortality due to that?—It would be exceedingly difficult to do it, I think.

1011. The risks to a child who has to sleep with grown people is surely very great?—Very great indeed.

1012. And I presume it must be very easy for parents

who wish to get rid of their children to overlay them accidentally ?—One cannot deny the evils, but I hesitate to say that that would be so.

1013. But in looking into this question you think that there is a very great want of sufficient care, on the part of the State, of young children, and that idea seems to be borne out by the fact that during the last ten or twenty years, which you are aware of, there has been no diminution of the rate of deaths so far as children under one year of age are concerned ?—Yes.

1014. But it appears to me that that requires the attention of the Legislature and every administrative authority; you think so, do you not ?—I suppose that the reasons for infant mortality are more in defective nourishment than any question of this kind.

1015. No doubt, but the number of cases are considerable ?—I really do not know that they are considerable in the sense of a large proportion—I suppose not. If you add them up, they add up to a considerable number, but I should not have thought that they would be a large proportion.

1016. Have you ever thought of the effect of infant insurance on the lives of the young ?—Yes, I am inclined to think less of it than is sometimes said. I am not an authority on it. I have merely thought of it, as everybody else has done.

1017. Do you not think that it is highly probable that it is one of the causes, I will not say one of the principal causes, of the carelessness of parents in regard to infant life ?—It must be connected with it.

1018. But from your knowledge of human nature, particularly of that class, should you not say that it was very reasonable to think it was so ?—I find it very difficult to say. I do not think that they would do it in order to get the money; but, on the other hand, the fact that they are insured would make them more careless.

1019. Are you not giving away the position when you say that ?—I think I am. One has no knowledge at all. It is merely what you say, what knowledge one can imagine one has of human nature, and that is very difficult, when you are judging of another class and another set of people who are not your own associates.

1020. Take another point, with a view of checking the unfavourable conditions in which those who work on small premises are often condemned to labour, you advocate a double system of licence by which both the owner of the premises and the employer of labour may be held responsible to each other and the State ?—I do.

1021. How far in your opinion do the provisions of Part VI of the Factory and Workshops Act, 1901, go to provide a remedy for the evils you describe ?—They do not touch it at all. They are aimed entirely at the home industries, not what I am trying to deal with, that is, the small workshops. I do not venture to say that you could make the landlord responsible at all for premises which are occupied simply domestically as a home, because some work was done in the home. It did not seem to me to be possible to define or meet that difficulty, but I did think that it was possible to define a workshop in some simple way, so that the landlord would know that he had a workshop on his premises, and that he would be jointly responsible with the occupier of the workshop for certain conditions with regard to health and so on; but I left on one side the home work, not because I thought it was a thing which ought not to be dealt with as soon as possible, but I did not see my way. Existing legislation, I should think, does enable the authorities to deal with the home worker to some extent, and it is perfectly good as far as it goes; but it covers another point.

1022. The Act renders the district council chargeable with the duty of bringing neglect home to the employer, does it not ?—Yes, the employer has to have a list of those who work for him in their homes, and he becomes to a certain extent responsible for the conditions, mainly, I think, with regard to contagious diseases. But I should not say that the landlord ought to be made responsible in the least for that.

1023. Do you think that the recent legislation goes anyway to meet the evils of what is called sweating ?—I do not know to what extent it can be enforced, but certainly it goes in that direction. The provision is certainly good, and ought to go in that direction. I think it would tend to arouse a sense of responsibility in the mind of the employer.

Mr. Booth.

1024. In regard to your suggestions as to an amendment of the law of rating in order to encourage what you call expansion, though basing them upon the recommendations of the Minority Report of the Royal Commission on Local Taxation, you go considerably beyond them, do you not ?—Yes.

1025. The signatories of that Report mentioned a moderate rate with a maximum fixed by Parliament, to be levied for improvement purposes only, did they not ?—Yes.

1026. Would not that be tantamount to the adoption of a plan for adding to the existing rates a fresh imposition on site values, which you strongly deprecate ?—Yes.

1027. Is the difference between the two so great as would appear ?—It might not be in operation, but it is in principle. It is a step from the point of view of increasing taxation instead of the point of view of incidence of the burden.

1028. From the point of view of re-distribution ?—Yes.

1029. That is the ground of your objection ?—Yes.

1030. Would the plan, as proposed by the Committee, be adequate for the purpose you have in view of compelling factory owners occupying valuable sites in central positions to clear out ?—No.

1031. Because it would not have affected site value to the extent that is required to bring about that ?—It depends upon how far it was carried out. If carried out very onerously, if in addition to what may be called existing rates, a very heavy rate was laid also on the site value, so that the total amount of rates raised was very great, it would have an effect on industry and perhaps of driving industries out of certain parts of the town, but it would not have the effect that I desire—that of, on the one hand, passing them out of one district, and, on the other hand, of opening another district to them.

1032. Of course the Commission's proposal for levying a tax upon site value implies the payment of that tax by the occupier of the site, not the owner, does it not ? It would not be a tax upon owners ?—I do not know, but I think it was to be on the owners.

1033. I do not think that was so ?—I do not think they intended to forbid contracting out and I am not sure how they have dealt with existing contracts, but I thought it was distinctly intended to impose the additional rate as soon as possible on the owner, if not at once.

1034. It would go back upon the owner ?—That is the theory, that ultimately it all falls upon the owner, and I believe it does, but I think their point in putting a very small amount was that it might be levied at once. I am almost sure they suggested that the owners should not have the power of contracting out of it, though I am not quite sure how they dealt with existing contracts.

1035. I do not think they would have disturbed them. In reading what they say upon the subject I certainly gather that the intention was to levy the rate upon the occupier, although, of course, it would fall upon the owner on the theory that all such burdens fall upon the owner in the last resort, at any rate in any new lease ?—Ultimately the value of the improvement goes to the owner and the burden of the tax upon the owner.

1036. That is so. In order to try your scheme effectually do you not think that the area, say, of the county of London, contains great enough extremes of site value to give the scheme a fair trial ?—Yes.

1037. You think it does ?—Yes.

1038. I have heard it suggested that it does not—that a scheme of that sort should be tried over an area where there are larger portions of unoccupied land than would be found in the county of London ?—Yes, it would be better no doubt. It might be necessary in certain sites of London to go beyond—I think it would be necessary.

1039. If you took the metropolitan police area, what then ?—You would have then plenty.

1040. To give the scheme a fair trial ?—Yes, you need more than the county area.

1041. You would make it part of your plan that it should be gradually introduced and should cover a saving

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of present and future contracts?—Yes, I would certainly say decidedly that contracts should be preserved and be free to be made, and as to the gradual introduction the more gradual it is done the better. Every consideration that is possible should be paid to vested interests.

1042. Your scheme by tenths might be extended to bring it in by twentieths might it not?—Yes.

1043. It might cover twenty instead of ten?—But it would be probably found that the total number of people who were not seriously affected would be greater than the number of those who were seriously affected.

1044. Supposing all those conditions were observed, a good many of the objections to a gradual transfer of the whole burden from buildings to site values would disappear. —Yes, and the reasons in favour are so important that finally private interests must give way.

1045. Have you formed any opinion of the value of the Garden City Association towards the promotion of what you call expansion, having regard to the lines on which it is being worked and the methods pursued by the organisers?—It is a most interesting experiment, but I have not gone into it myself. I have not been down to the site of their new city, and I have not been to their meetings, but I have read of the experiment and it is most interesting, and I hope they may succeed.

1046. Do they intend to keep the middle men out and deal directly themselves with every person who takes land within the area that they propose to administer?—I do not know.

1047. May we take it in the result of your survey, as a whole, that you think ameliorative tendencies are gradually assuming the upper hand in the struggle against the social evils which threaten national prosperity?—Yes, I think so. I am sure they could. I might say that it is not beyond us to do it, and I think on the whole they are. It is a balance of course—some things improving and some things not But I have no reason to take a hopeless view.

1048. I presume you think that the creation of a public conscience in the matter is of the greatest possible value? —It is of immense value.

1049. And the bringing up of municipalities to a proper sense of their responsibility and their duties?—Yes.

1050. And you think that you would be inclined to say that such a sense of responsibility is on the increase?—Yes.

1051. Do you see any direction by which it could be stimulated by legislative action?—I feel sure that there is a want of more direct powers of administration.

1052. Locally or centrally, do you think?—Locally in rather larger areas. I do not know whether you would call that legislative, but it appears to me that there are certain common interests which require a large area to be dealt with. And in that way you need to have not exactly delegated powers, but an authority responsible to Parliament, whose word should go far in deciding the action of Parliament in giving powers for this or that object. In connection, for instance, with the water supply, with drainage, with locomotion, just as we may say also with education.

1053. You think that some consultative committee that represents local interests on a wide scale, something of that sort, would do?—Yes. Such an authority as is now being proposed with regard to the difficult question of locomotion in London. A paid body, whose business it is to hear and investigate and report, on which the locality should have a member, but the work of which would be that of paid officials.

1054. But it would be advisory and not directory?—Yes, its business would be to report, to assist, to take the place that is occasionally taken by Parliamentary Committees, and it would have this advantage over Parliamentary Committees that it would be permanent and paid.

1055. You think that would be of very great value in dealing with the problems of overcrowding?—Yes.

1056. And the care of the young?—Yes.

1057. And the possible development of the people generally?—Yes. I think that the Poor Law ought to be administered only over large areas.

1058. And you think that the central Department in London should be invested with stronger powers of interference, and should be made to enforce the law with greater vigour than perhaps it does at present?—What authority do you speak of?

1059. I suppose the Local Government Board is the authority for bringing pressure to bear on most questions of this kind upon local authorities?—I do not think I do quite follow your questions.

1060. For instance, there is one point. The local authority may have a very energetic and enthusiastic medical officer who may report to them that there are nuisances which ought to be removed, and congested areas that should be cleared, and all the rest of it. And they may be supine, and they may get rid of this man and appoint somebody who will acquiesce in their indolence. Now the Local Government Board under the existing law have no veto, I believe, upon the dismissal of that medical officer. Don't you think it desirable that they should?—No.

1061. You do not?—No. I should be afraid of trenching so much upon local government. I think that the local authorities have been given huge powers and that they ought to be free to use them.

1062. You think that the local authorities should be free rather than energetic?—I would have them free whatever else they are.

1063. Do you think that the Local Government Board should exercise all the powers of pressure?—No. A suggestion has been made that by comparison of one district with another it might be clearly shown that some were behind in the race, and then there might be some powers brought to bear to say, "Now, you must step up." But it is not my own suggestion. I think that it is the suggestion of Mr. Sidney Webb.

1064. But you would not despair of the exercise of such powers by the local authorities?—Having given these powers, which are quite recent, we must let it run. Happily the authorities, the men appointed as medical officers of health, and so on, do naturally take up an exceedingly active and vigorous part, many of them, and I do not think that is at all likely that a vigorous man would be checked. On the contrary, I think that his initiative would be supported.

1065. (*Mr. Struthers.*) The Local Government Board, I think, have a veto upon the medical officer.

1066. (*Chairman.*) Do you speak from your Scotch experience?

1067. (*Mr. Struthers.*) Yes.

1068. (*Dr. Tatham*) (*to the Witness.*) May I ask whether it is fair to gather from what you said that you do not think there is any progressive physical deterioration amongst the lower classes such as has been stated to exist?—I have no knowledge. I have no means of testing that. We are more conscious of it, and I think there is a larger proporton affected by these causes.

1069. (*Mr. Lindsell.*) When you say a larger proportion are affected by these causes you will admit at the same time that there is a countervailing cause going on, on the other side, in improved sanitary and other conditions?—Certainly. We are fighting the evil and to some extent mitigating its intensity, but that does not alter the fact that the broad changes of industrial conditions increase the volume of the evil.

1070. The evil exists over a wider area, you think?—Yes, but we are fighting it to a certain extent successfully.

1071. Is the evil specially confined to what you describe as the wastrel, the unemployable class?—Oh no.

1072. Would it go on equally among the steady workers who are in good employment?—Not equally, but it depends upon conditions of life which are quite beyond the mere questions of success and failure. I mean that a labourer whose work is of an outdoor, healthy character may be an irregular liver and have irregular work, but at the same time be a strong hardy fellow; another man who is employed on a confined and unhealthy business—his development may be very bad; and the children in the same way may get a bad start by having a bad mother, seeing the classes they belong to. I am afraid that it is very widely spread.

1073. Of course you know our Inquiry was originally initiated owing to the extremely unsatisfactory condition of the recruits?—Exactly.

1074. Would you say that those recruits were probably mainly derived from the failures, from the class that are below the steady workers?—I think, on the whole, the Army is recruited from a lower class than the average, but not by any means only or exceptionally from the lowest class.

1075. The two ruling conditions which would affect the health of the lower classes, mainly, would be bad sanitary conditions and bad food, would it not?—Yes, including largely in bad sanitary conditions, insufficient fresh air, insufficient opportunity of getting out of town into the country.

1076. Now you think, on the whole, sanitary conditions are admittedly improving?—Clearly.

1077. In spite of the increase of urban population there is an increased improvement in the sanitary conditions?—Yes.

1078. Would you say the same of the modern conditions of food, especially in child life?—I think that they are bad.

1079. Worse than they used to be?—I have not made the inquiry. My inquiry has not compared the past with the present, and therefore it is only an opinion. I think so; I think that the conditions as to food are worse.

1080. Owing to the greater facilities of getting bad unwholesome food, such as tinned food?—There is less home cookery, I should think, just as there is less home dress-making. It is the same thing. Things are done more cheaply in a wholesale way, and no one makes their own clothes, and the poor hardly mend them, and fewer people cook their own food.

1081. Any remedies for improving the food conditions of the lower classes concern not merely the supply of food, but the proper preparation of it when they have got it?—I think the cookery centres of the educational bodies are very useful in teaching to cook, but by far the most important cause would be if there was less woman labour.

1082. Especially, I suppose, immediately before and immediately after child-bearing?—That has not to do with the preparation of the food, but it has to do with the health of the women and the vigour of their children.

1083. In those two great agencies, the Salvation Army and the Church Army, do you know what does become of the families of the people who go to their Homes?—They have not got them. They are people who have left their families, or never had them. They pose as single men and probably in many cases are so.

1084. Are you in favour of similar efforts being made by direct State interference beyond those two voluntary agencies?—I have certainly thought that some Poor Law action should be taken in that direction.

1085. It would be very difficult, would it not?—It would be very difficult.

1086. It would be direct interference with the liberty of the subject to a certain extent, and it would be so difficult to draw a line when the State had the right to interfere with a man's personal liberty and when it had not?—It is extremely difficult. There are very interesting attempts made, as you know, in Germany, the experience of which might be used, but I entirely agree it is exceedingly difficult to do.

1087. (*Mr. Legge.*) With regard to this question of female labour and its deleterious effect on domestic life, have you formed any judgment as to whether the disinclination to attend to one's home is growing among the poorer classes, the women of the poorer classes?—I think they do tend to neglect their homes more.

1088. Do you think that is because nowadays girls are sent to school so early and kept at school so long, and see so little of their homes?—No; I should not think that.

1089. Would you see any objection, from the social point of view, of the movement in favour of keeping girls of all classes full time at school until they reach the age of fourteen?—A year more than now?

1090. Yes?—I should not desire it.

1091. At full time?—I should not think it desirable to extend the time.

1092. The present age?—No.

1093. You would think it still more wrong to extend the age to sixteen for girls?—I should not suggest it.

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1094. Would you be in favour of girls being allowed greater relaxation than boys in the way of half-time provided their employment were domestic?—I have not studied the way in which the half-time is worked. You mean factory half-time, of course?

1095. No. I meant allowing only half-time attendance at school, provided they went home for the rest of the day to work with their mothers at domestic work?—That would be, on the whole, very desirable, I think.

1096. There has been a recent tendency in London, as indeed in most big towns in England, to build large tenements for the housing of the poorer classes, improved Peabody buildings. Do you think that the conditions of life in them are better than in the one-storey or two-storey little tenements, of which you get acres upon acres in the East End?—In some cases they are and in some cases they are not. In themselves the extra height and absence of space around are certainly evils; on the other hand there are excellently arranged blocks, infinitely better than the ill-arranged cottages.

1097. The advantages compensate for the disadvantages?—I think in the more recent and improved buildings probably that is so. There were some of the earlier ones that are atrocious.

1098. Now, with regard to State interference, especially connected with Mr. Lindsell's last two questions. I rather gather from what you said that you prefer municipal action to State action?—Each has its own *rôle* to play.

1099. Yes. It is one of your points that you want considerable powers vested in the hands of municipalities or county councils?—Yes. I do not think we know exactly what will be best to do, or are at all prepared for a centralised uniform system. The experimental influence of local bodies who are trying to feel their way is, I think, more important, as I do not think we really know what is the best course to pursue.

1100. You think that having large powers of central government a department, such as the Home Office or the Local Government Board, regulating any particular detail of administration, should be very shy of checking local authorities in trying experiments?—It is very difficult to say exactly what limit there should be to their action. It could be in some cases an advantage and in some cases they stimulate, but I should wish that freedom were given as much as possible to the local authority.

1101. At the same time I rather gather from the reference to the Salvation Army and the Church Army, that you would like those municipal authorities in their turn to allow as free a hand as possible to such reasonable and well-conducted voluntary associations?—I do not think they do interfere at all.

1102. Have you seen the correspondence with regard to the London County Council's action in reference to the shelters of the Salvation Army, forcing them, for instance, to substitute bedsteads for bunks?—I do not think that because work of that sort is done from charitable motives it ought to rest upon any other regulations than would be enforced if it were done for profit. I do not think that there is any reason for allowing a shelter to be carried on, because it is a charity, in a different way from what you would if it was being done as a commercial undertaking—you should enforce the law exactly the same.

1103. That is supposing nobody was carrying on a particular enterprise in a commercial way, would you allow any relaxation then? As a matter of fact nobody is providing beds for the wastrels at less than 3d. a night. Supposing the Salvation Army were doing it at 1d. or 2d., would you force the Salvation Army to provide such conditions in their shelters as to preclude them from receiving anybody who did not pay 3d. a night?—Yes, if that was the result.

1104. You would be in favour of the County Council applying the same sort of regulations to a voluntary institution as to their own, to keep the minimum requirements of the law?—All I suggest is that they should enforce their regulations as to what is the law. The minimum requirements I suppose are all that you can enforce.

1105. Might one expect the County Council to be very careful in raising their requirements?—Why?

1106. Well, to make sure that you are not raising them too high to help the lowest class, the wastrels of society. You

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would agree probably with what the chairman of the Central Committee of the County Council said in his letter in the defence of the County Council action in regard to the Salvation Army Homes, that the County Council were providing homes for people at 6d. a night, and that before those, they should provide houses for the poorest class of all. I think that the pressure, whatever pressure is brought to bear, must be exerted gradually and slowly; you must not act violently. A certain institution has been allowed to come into existence and it must not be dealt with in a revolutionary way, and the pressure ought to be gradual.

1107. Then with regard to the question of the disposal of the children and females, all those who might conceivably under some future dispensation be placed in labour colonies, you are aware no doubt that under the existing Industrial Schools Acts, children can be sent to industrial schools with no criminal taint whatever, who were simply the children of parents who neglect them and who have been very unfortunate?—I thought there were special schools for those children and that they were only sent to those schools in special cases. I did not know that the people who are not criminal could not be sent to those schools. I thought in some towns there were schools that had been adopted, and that they gave them another name, but I was not aware that it was the case that children who have committed no fault can be sent to the schools to which the young criminals go.

1108. Yes, but "criminals" is a hard term to apply to a child under ten?—But are children under ten sent?

1109. A certain number are?—But they have committed theft or something—they have been convicted.

1110. No. No child is supposed to have been convicted who is sent to an industrial school. They have been charged and they have been ordered to go to an industrial school, but it does not rank technically as a conviction. However, I need not press that point. With regard to Part VI. of the Factory Act, you said very truly that it contains stringent regulations prohibiting home work in places where there is infectious disease, but you will no doubt recall also Section 108 of the Act. That provides that where an outworker is working in unwholesome premises, after due notice and after investigation by a court, the occupier of any factory or workshop may render himself liable to suffer penalties if he sends in more outwork to be done in those premises?—Yes, but it is work in the homes.

1111. As you point out, that does not extend to ordinary home work; it must be home work which is done in connection with the factory or workshop?—It is done for a centre.

1112. Exactly. So that it is limited in its extent, so far as it applies to homes at all.

1113. And, furthermore, it has no direct reference to, or effect upon, the occupier or the tenant or the landlord of the house in which the work is being done?—It acts directly upon the employer. It would stimulate him to see the way in which sanitary conditions were not observed.

1114. Yes, but you wish to secure somehow some extension of that sort of influence?—It is not an extension, it is an entirely different point, the object being to make it possible to apply the law with regard to factory work sufficiently to cover the small workshop—which is otherwise apt to escape and be under very bad conditions. It was on that account that it suggested itself to me that the proper engine for pressure was the landlord. But it covers an entirely different point. Those who are outworkers, working entirely in their own premises, not employing others, probably female workers who are given their work from some industrial centre, either a workshop or factory, or a giver-out of work—they are the classes that are covered here, are they not?

1115. Now, with regard to the Garden City movement. You are aware, no doubt, that a large new city is going to spring up on the Firth of Forth shortly, which is the creation of the War Office?—Yes, I have heard of that.

1116. Do you not think that the opportunity, if the opportunity were taken, by the War Office, in connection with the scheme, to see that this new city was properly laid out, would be good?—Probably, but I have no knowledge of the conditions. When you mention it, I remember I have seen something about it, but I have no knowledge of it.

1117. You would be in favour of the experiment; you do not see why the Government should not try the experiment as well as a local authority or a voluntary association?—It has been done with considerable success by some private employers, and I do not see any reason why the Government should not do it also.

1118. The last point is that question of statistics. You yourself have been conducting a tremendous inquiry for the last seventeen years or so. Do you not think it would be a good thing if there were some central authority whose business it should be not to allow such a piece of work as yours to lapse, either collecting itself or directing through various agencies the collection of similar information to the mass you have got together?—I think a great deal more might be done from the Government centres to put together valuable statistics. But their powers and their line of inquiry would be very different from such as an individual is able or thinks it desirable to carry out. I do not think that an inquiry like mine would be at all desirable to prolong or go on with.

1119. But it has brought out certain facts which might be tested from time to time?—And especially tested in other ways.

1120. No doubt, when I speak of the Government collecting information, the Government in many cases might work through bodies such as Educational Committees, certifying surgeons, &c., all over the country, and so on?—Yes.

1121. You would be in favour of some method of co-ordinating all this work as well as keeping it alive?—Oh, certainly; but I do not know what shape the Government would desire it to take. It is difficult to say what part should be best played by the central authority or by the local authority or by philanthropic authorities. I could not say how it would be best. I have a great belief in the value of statistics.

1122. (*Colonel Onslow.*) Do you consider that the existing laws of sanitation, over-crowding, inspection of food, and all those matters, both natural food, say meat and milk and anything else like that, and also the made-up foods, are sufficiently strong, if the local authorities or other authorities put them into force, to counteract evils which have been brought to light by your investigations and by Mr. Rowntree's investigations?—I should say that they are stronger than can be at present enforced, and if they could be enforced they probably would be altered in various ways because the actual information would be got. We cannot enforce them, and therefore it is very hard to judge whether they might be made stronger.

1123. Why could not you enforce them?—The circumstances are so difficult in dealing with home life.

1124. Surely with sanitary inspection, for instance, the provision of proper sanitary arrangements in the houses, it should not be possible as it is in York for one midden privy to be at the disposal of some fourteen houses—surely that could be altered?—Yes, I think so.

1125. Have the local authorities sufficient power to enforce landlords to build better?—They undoubtedly have. They can get those powers. I do not know what the powers are in York. But Parliament would give those powers and does give them. One difficulty lies in the fact that people are poor and need to get very cheap accommodation, the result being that they aggregate to the worst accommodation, and then if you try to deal with a centre you have a mass of wretchedly poor people whose habits are exceedingly bad. If you give them good appliances they destroy them, so that you have an evil that is very difficult to deal with, and I think can only be dealt with by many means and slowly.

1126. Still as a matter of fact, the law is strong enough really to counteract all those things?—The law is as strong as it can be used at present.

1127. As regards the inspection of those made-up foods, the patent foods for children. Do you think it is strong enough?—I do not know enough about that to say.

1128. Then again, regarding the children, it is granted that many parents are bound to go out early—they have

no time or the opportunity to prepare proper food or to look after the children before going to school—would it be possible to give meals at all Board Schools, etc., for children, making the parents pay where they are able?—I should like to see it done.

1129. Would you like to make it universal?—Yes, as far as I can see. I am in favour of every Board School being also a restaurant or having a restaurant in connection with it where suitable food such as children like, but at the same time is also good for them, is sold at the minimum price—not with any intention of giving it away.

1130. Not to pauperise them?—Quite so. The parents now of that class who have money give their children quantities of pennies to spend on sweets and so on; and if they could be induced instead of doing that to give their children tickets that would not be available anywhere except for their midday meal, they might be better fed and have better cookery, and it would have an excellent effect. If a system of that sort were established it would be the easiest way of providing for those children who do need the charity, and although I do recognise the objection of encouraging the parents to trust to such a thing, yet I believe the advantages would counterbalance any disadvantages.

1131. It would be an advantage to those who are not able, either from poverty or stress of work, to look after their children?—Yes.

1132. (*Chairman.*) But the provision of the mid-day meal would not touch the case of a great number of school children who have to go out in the early morning with an empty stomach?—I suppose not. But that might be got over by giving them oatmeal, which none of them would be eager to take. I think a ration of oatmeal might be given as a breakfast with sugar or something. I think that they might have that given them. They much prefer to have their parents' food. The commonest plan in London is for the father to go away before breakfast, to take something with him, and come home to his one nice meal after his work at six o'clock, or some time like that, and the children enjoy the share they can get at that time. And the mother does not cook for herself, and the children get bread, or bread and dripping, or bread and butter, or bread and tea, in the middle of the day. A school restaurant would, I believe, not decrease the amount of cooking in the houses, and would give the children better food.

1133. (*Mr. Struthers.*) You think that would be the tendency. At present the mother very often prepares a meal in the morning or in the middle of the day for the sake of the children. They come home to have it, and she gets it with them. But if the children get it at a restaurant, she might herself become underfed?—Oh, certainly, that is so. I fully recognise that possible view—that it might do more to undermine the habits of the mother in cooking a mid-day meal. I would chance it.

1134. Speaking on that question of cookery, you said that you attached some value to the instruction given in the cookery classes of the Board and other schools?—Yes.

1135. Of course these lessons used to be given at a fairly early age, from eleven to thirteen, and now the age is raised to twelve. But taking the attendance of a girl from twelve to fourteen, perhaps six weeks in one year, do you think that that would have much permanent effect?—I cannot tell. I should think she would learn far more by helping her mother after school.

1136. Do you think, in the nature of things, that if it could be arranged that these girls came to cookery classes at sixteen to eighteen, rather than twelve to fourteen, the practical benefit would be greater?—Possibly.

1137. I mean they would know more what is really needed, and at a time of life when they would be able to apply their knowledge to practical work?—I have no opinion of my own upon this subject, but many of the women who have given their time to School Board work, I know, do value that very highly, and I have taken my opinion from them; and I should have said if you have a cooking mother, I suppose from that mother you would learn, but if you have a mother that does not and will not cook, what can be done?

1138. Did any of your informants give evidence, or do they believe that the teaching of cookery was really having an effect in producing a mother who would cook?—That is their hope. I do not know whether they attain it, or not, but they believe it to be an excellent system.

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1139. Perhaps you will not mind my asking you a question which has been asked already. But I want to be perfectly clear as to what is your opinion as to the physical state in a given area like Southwark—as to whether it is worse to-day than it was twenty or thirty years ago?—No, I do not think it would be correct to say that. But if you take the whole population of England, you will find a larger urban population, and, therefore, an extension of the evils which I trace to urban conditions.

1140. But taking a given urban district which was fully populated twenty or thirty years ago, and that same district now, is the condition of the children worse than it was?—I should not expect it.

1141. You are not aware of any statistics to prove that?—No.

1142. And your view is that, though there is a larger proportion of urban population to the whole population of the country, there is a chance of greater improvement?—Yes.

1143. Although there are a larger proportion living under urban conditions?—Yes.

1144. You do not happen to have made enquiries as to the condition of life in the country at any time?—No, I live in the country a considerable part of my time. I see the people, but that is all.

1145. Of course, as has been already said the sanitation has distinctly improved from what it was.—Yes.

1146. So that it is only a question of food and fresh air that makes the difference between the country and the town at all in the matter of physique?—Food and fresh air and habits generally.

1147. But chiefly those two things?—Yes, I suppose it is chiefly those two things.

1148. It would be rather important to have some direct evidence as to what the physique of the inhabitants of the country village is, as compared with the town population.—Yes.

1149. One assumes that the country population should be healthier and better physically than in the towns, but I do not think that there is much in the way of evidence as to that?—I think not.

1150. Not beyond the general impression. But one finds, and I have known myself distinct cases where one's impression of the physique of the inhabitants of the country village was unfavourable, that on the whole it was not better than that of a pretty populous urban district?—Yes.

1151. So you think it would be rather good to get a little evidence as to what is the physique and what are the conditions of life of a population in certain country districts?—It would. The evidence that I have in the matter is the far greater physical force of those who come into the city from the country. The country, whatever those who are left may be, does send the finest men to the towns, and from that one assumes that the country conditions, which produce these men, are better than the conditions of the towns, which cannot produce them.

1152. I think in the town you say from 18s. to 21s. is what is necessary to support life decently in the case of a man with a wife and three children?—I rather arbitrarily fixed that as a line. I had to make a line on which you might call the people in poverty, and below which they were tending to extreme poverty, and above which you reach the ordinary comfortable condition of the working classes. But it is an arbitrary line, and cannot be definitely drawn.

1153. But your impression was that 18s. to 21s. was necessary to support life decently?—Yes, for a man and his wife and a couple of children.

1154. What proportion of that 18s. to 21s. would be paid in rent?—It would vary in the district they were living in and how they were housed.

1155. Would it be a very wide range?—The range would be from 3s. to 6s.—I am speaking rather off-hand.

1156. But you think that 7s. would be quite a high figure for a family with an income of 21s. to pay in rent? It would be rather a high figure, would it not?—Yes, certainly.

1157. So that that would leave them 14s. for food and other things?—Yes.

Mr. Booth.

1158. I do not know whether you have seen the returns that have been collected, I think it would be by the Board of Trade, of the wages of agricultural labourers in various parts of the country?—I have not.

1159. But there I find that in many counties the total wage of the labourer in full employment, taking it all the year round, of course, is 13s.; 14s. is about the average; and there are very few counties which go much beyond that. So that they do not seem to have nearly so much to spend on food as your urban family, which seems to be well above the poverty line?—Country conditions are very different, both as to the way in which they try to live and as to the extra chances they have in garden produce, and so on. I am not able to give you a comparison.

1160. (*Colonel Fox.*) Do you consider that the poverty amongst the lower classes is attributable very much to drink?—Yes.

1161. Have you noticed those cabby shelters in London? Since those have been instituted the cabby does not drink as much as he did, because he gets his food there and has drink, too. And it has had a great effect upon the cabby?—Yes.

1162. Do you think this organisation of Lord Grey, the Public House Trust, by which, instead of having a purely beer house, they are trying to introduce restaurants where good beer can be bought and eatables—ought not that to have a very great effect upon the working classes?—It may be hoped that it will prove to be a very valuable movement.

1163. Do you think that a man would drink less if he had good things—food at a low price—do you think that he would be less inclined to drink or "booze," or to spend the whole of the time in a "boozing" place?—Yes.

1164. Would not that have a great effect upon the families also, and very likely the children would be better fed if most of the money was not used in drink?—Yes.

1165. Well, then, we are told that the Jewish children, both boys and girls, of the age of twelve are much taller, considerably taller and considerably heavier, than the Christian children—you are aware of that?—I was not aware of that.

1166. We have been told that, and we have had statistics about it. To what do you attribute that?—To the fact that the Jewish mothers do not work.

1167. Why is it that the Jewish children should be heavier and taller than the Christian children?—Because the mothers do not work.

1168. Is it attributable to the better food the Jewish children get, or what?—It is due to the more complete home life; they are undoubtedly better fed.

1169. (*Chairman.*) Is it due to the general character of the Jewish people?—To the domestic character. A Jewish woman is expected to take care of her home. In the poorest classes the married man does not expect his wife to assist in earning.

1170. (*Colonel Fox.*) It is principally owing to having better food and nourishment, you think?—I cannot express it in terms of nourishment. The food is better done, and there is a better home life. The things they eat, perhaps would not suit the Christian children.

1171. I am told everywhere that the Jews have not only the knowledge to choose better food but also the knowledge to cook it better than the Christians?—It is quite possible, but I really do not know it.

1172. But then, on the other hand, don't you find that the Jewish people are closer packed in their houses and in their rooms than the Christians?—Yes; that does not seem to matter to them.

1173. But notwithstanding that they have bigger children; they have better grown children notwithstanding the fact that they pack their houses closer, and they take in lodgers. They are very thrifty and try to pick up money in every direction, and therefore they take over houses in the East End not only where there is not enough room for themselves but they take in lodgers, so that it points to the fact, I think, that they get better food?—I think it does. On that point I have been told that the Jewish religious regulations with regard to meat tend also to their having wholesome meat. Every family has meat prepared in the proper way; the healthy condition of every beast is certified from religious motives by the authority.

1174. The butcher and the priest are one?—Yes, they are one.

1175. (*Chairman.*) There are one or two points which have arisen I should like to ask you a few questions upon. With regard to this drink question, have you ever considered the evil effects of tea are perhaps worse than those of gin?—I do not think that they would be worse.

1176. Is it not the case that a great many children are both anæmic and neurotic, solely from the abuse of the consumption of tea?—It is quite possible.

1177. Should not you say from the chemical constituents of tea that it would be deleterious?—I have really no knowledge on the subject, but I think the way that they keep it constantly going cannot be good for them. What I doubt is whether children take very much of it.

1178. I am told they do. Don't you think if we contemplated a new Tariff that a large relief to the taxation on tea might therefore have a very deleterious effect on the health of the nation?—I see—like a decreased tax on gin.

1179. Don't you think that to remove the imposts on tea—I am putting this question seriously—might have a very deleterious effect?—I never have thought that the freeing of the tax on tea was any particular benefit, or what is called a free breakfast table.

1180. Don't you think that it might have an effect that is positively deleterious. Tea is now taken by children instead of milk. Here is an extract from a letter from a lady to the *Times* of to-day:—"There need be a crusade against tea, at least against the excessive use of it. It does as much harm in the long run as the drink, and has increased so much since the total abstinence movement was started," and so on. And then she says: "They (children) are reared, Heaven help them, on tea whilst sucking-babes—they are taught to drink tea instead of milk as soon as they can drink at all—they are dragged up on tea till they go to school, and then their mid-day meal, whether at home or at school, is tea, hot or cold," and so on?—Yes.

1181. I was a little surprised in the course of your evidence to hear you speak so tolerantly of local inaction in dealing with the evils which we are considering. Of course I admit in regard to over-crowding the difficulty of disposing of the evil is a very great one?—It rather is a question from what impulse or authority the action is to spring, and it ought to spring indigenously in the district, and not be rammed down its throat by any outside authority.

1182. Take the Public Health Act of 1875, which has been nearly thirty years in operation. Amongst the duties cast upon the local authorities is the obligation to inspect nuisances, and a nuisance is defined as "Any house or part of a house so over-crowded as to be dangerous or injurious to the health of the inmates, whether or not members of the same family." And then again another provision of the Act is the power to apply in certain cases, that is to say, after two convictions, to a Court of Summary Jurisdiction, for the closing of the house for such period as the court may deem necessary. Should you say that anything like a proper proportion of cases have arisen under which these provisions have been applied by local authorities, having regard to the extent of the evil?—What I have seen in London, an increasing activity in that direction, is immediately traceable to the more democratic of the local bodies. There is a distinctly greater activity; I think in many cases there has been a fresh and strong effort to deal with these evils.

1183. Of course that Public Health Act was anterior to the Local Government Acts, and it is since that time that these powers have been to a much greater extent made use of, in your opinion?—In London it is so, I think.

1184. Do you think in local areas generally in the country that has been so?—Yes, I should think so.

1185. Touching that point, with regard to the condition in the country, here is a letter also in the *Times* of to-day, also from a lady, who signs herself "A Woman," in which she describes the condition of two or three cottages in the country, and she says here "Man, wife and large family

of young children. No water fit to drink anywhere. Woman boils and skims pond water. While drinking it children constantly require medicine, have no appetite, skin becomes yellow, and suffer in other ways. Whenever possible, rain water is kept in wooden tubs, and when children drink this, they (with the exception of the eldest boy, who is never well) recover their normal health. House built many years after the passing of the Public Health (Water) Act, 1878." Then she describes another—"Man, wife, and four young children. Cottage (one of a row of three) on ground floor, no damp course, brick floors always saturated with damp. Said to be a drain under cottage, and tiles supposed to be broken. Most offensive sanitary conveniences opposite front door. No back doors. Children suffer from chronic bronchitis and headaches, sometimes from diarrhœa, and are very pale, feeble, and unhealthy when infants." And so on. I presume that there are ample powers to deal with conditions such as are described there?—I do not know what the powers of the rural authority are. They are very shy of using their authority I know.

1186. But in cases such as that some pressure from headquarters would be desirable, would it not?—From somewhere, certainly.

1187. You think in reference to what Mr. Legge was asking you, that a bureau of national information on all subjects relating to public health and physical development would be a good thing to create in some form or another?—Yes, I think so.

1188. To act as an advisory and consultative body upon all questions touching the administration of the laws of health?—Yes. I am inclined to think so.

1189. And that might be supplemented do you think, with any use, by the periodical taking of measurements of a certain proportion of the people with a view to actually collecting facts as to what the condition of the physique was, so far as it can be ascertained by chest measurement and height and weight in proportion to age at different periods?—I think the statistical basis would be most important, and then it could be from time to time checked and compared. *Mr. Booth.*

1190. Do you suggest some permanent body which should be charged with collecting these facts and tabulating them, for the purpose of comparison from time to time over certain periods?—Yes, but the first thing is to make the original inquiry, where you would have to find out as you went on what were the salient and important facts which it was worth while afterwards repeating. The first inquiry would be the much wider one. Therefore it would be not necessarily made by the same body.

1191. No, not necessarily the same body. Experiments have been made in that direction by the British Association for the Advancement of Science?—The subject would have to be looked at in the first instance from a great many sides without any foregone conclusion of what was going to prove the results or the important points.

1192. The thing should be entered upon from a thoroughly scientific standpoint?—If a fair basis were found, I do not see any reason why then the study should not be continued regularly on certain lines by a Government Department.

1193. (*Mr. Struthers.*) Continuous?—Yes.

1194. (*Chairman.*) Or by a Joint Committee representative of several Government Departments?—Yes.

1195. You think then that the scheme upon which the investigation should be based should be drawn up upon scientific authority?—Yes, and it would have to be a converging enquiry—enquiries from a great many sides converging on the point.

Mrs. Watt Smyth, called; and Examined.

1196. (*Chairman.*) You are the author, I understand, of this pamphlet on the subject of Milk Supply in Large Towns?—Yes. *Mrs. Smyth.*

1197. It appeared in the "British Medical Journal" of March and May, 1903?—Yes.

1198. I presume your evidence is largely based upon the material which you have utilised in uniting those articles?—Yes, I saw a great deal of the subject while I was working at it, and after that they asked me to write a series of articles on the National Physique, which are now appearing in the "Journal."

1199. You are also the author of these articles which are now appearing in the "Journal"?—Yes.

1200. I have had them sent me?—I wish to give this evidence because from everything I have seen I have come to the conclusion that the first years of childhood are the most important—I mean the whole thing according to my idea is that the child should be cared for for the first two or three years.

1201. No doubt that is the case?—A child neglected then will never pick up what it has lost, and a child properly fed may have a good chance.

1202. Even those that survive probably issue from the struggle permanently damaged?—Yes.

1203. There is the fact to which our attention has been called, that the mortality in the first year of infant life is excessive, and the causes of that you would attribute—?—To improper feeding.

1204. To diseases of the digestive organs?—Yes, caused by improper feeding.

1205. You describe here the effects of an acute disorder of the digestive system, do you not?—Yes, an acute disorder of the digestive system leaves the infant in a debilitated state, and unless the child is subsequently fed and clothed intelligently such an attack is followed by chronic digestive disorders which seriously interfere with nutrition and development, so that the child falls below the normal in weight and height, and the ground thus lost may never be made up.

1206. And further ill effects from failure of nutrition?—Yes. It also renders the child less capable of resisting the zymotic diseases, such as measles and whooping-cough, thus producing indirectly a mortality which is not included in the returns of deaths due to digestive disorders nor confined to the first year of life.

1207. The advantage of good feeding is shown in the rapidity with which a child grows, is it not?—Yes. It is important to feed a child, because its weight should be doubled in about five months and trebled in twelve or fifteen months. Warmth, sunlight, and fresh air accelerate the rate of growth, so that, other things being equal, an infant will grow more rapidly during the summer than during the winter months.

1208. How far does the question of teeth enter into the matter?—It does not seem to have been recognised that the teeth of the child depend on its early feeding.

1209. Is that so? Is it not somewhat in dispute?—I do not think so. I have very high authorities like Mr. Tomes, who is at the very head of his profession, who states that one tooth is already in process of formation when the child is born, and that six months after it is born there are twelve teeth, three on each side of the upper and three of the lower jaw, which are partly calcified.

1210. But is it not the case that teeth which have got a normal quantity of lime in them are just as liable to decay as those which have not?—No, I believe not, because the ossification is better. I believe the salts in milk are necessary for the proper formation of teeth—for their proper strong formation. Of course, the digestive system acts on the teeth, and, like proper feeding for bone, teeth require certain things in their conformation just as bone does. If they do not get that, they do not form properly.

1211. Is it not the case that the investigation of the chemical constituents of teeth which have suffered from caries shows that it is very often the case, or generally the case, that a decayed tooth has as much lime in it as a sound tooth—so I understand from authority?—I believe it does.

1212. So that there must be something else besides the mere providing of teeth with the proper complement of lime, or whatever it may be?—I think they attribute bad teeth, all bad teeth, to the fact that the children have had bad milk and are fed on farinaceous food, containing starch and such things, instead of on milk,

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which contains the right properties for the formation of teeth. That is the way I understand it.

1213. You do not think that food which causes a certain amount of friction on the teeth is good?—Do you mean for infants?

1214. No, elder children?—I am talking of infants. I mean in the formation of teeth just as in the formation of bone. I should imagine it would affect teeth very much as they begin so early. I do not think it used to be imagined that the second teeth began to grow until the first one dropped out, but they are growing all the time.

1215. That shows the importance of proper sustenance?—I should think so.

1216. You believe in the case of older children want of cleanliness has a great deal to do with it?—I should say so. The food in the teeth causes decay and the old teeth affect the new ones which are appearing, and then when the new ones appear they are neglected. I do not think that poor children use tooth brushes. I should doubt it; but at any rate very few.

1217. Very few indeed, I should think?—Yes, at the Duke of York School in Chelsea they have them in the room; each boy has his own little box with his tooth powder and tooth brush.

1218. Do they use them?—I believe they use them; they may use them under supervision. No child will use a tooth brush without supervision.

1219. You attribute ricketts here to hand feeding?—Yes.

1220. Rather than being fed in the maternal way?—Yes.

1221. Do you believe the reluctance of mothers to suckle their children is growing in this country?—It is growing, not perhaps from their own wish but because they go out to work.

1222. It is the amount of female employment which is the cause of it?—Yes, they cannot do it. A woman going out to work cannot possibly nurse her infant in the same way as women who have nothing to do, who are at home.

1223. Do you think the inclination to shirk responsibilities has something to do with it or not?—Yes, I should think it had.

1224. You know the recent Factory Act makes it penal on the part of any employer to employ a woman for a month after her confinement?—Yes.

1225. That is not long enough to encourage a woman to suckle her child?—No, it should be three months.

1226. You think that should be so?—Yes, because it is probable the woman might begin and take an interest in the child and think that it was worth while, whereas if she feels she must go back to work in a month it may not seem worth while.

1227. You know there are certain members of your sex who say that such a provision would be an attack upon the chartered freedom of a woman to use her time as she likes?—I daresay they do. I daresay they talk nonsense.

1228. You give some statistics here with regard to an institution of Paris?—Yes.

1229. Showing the death-rate was much lower amongst breast-fed infants than amongst those artificially fed?—Yes, it was much lower amongst those breast-fed, and I think that is recognised.

1230. Do you know if any statistics have been collected in this country upon any considerable scale?—Not, I think, on a considerable scale, but I think they have been collected. For instance, Dr. Hope, of Liverpool, and Mrs. Greenwood have done so, but I do not think it is very satisfactory, because they do not give the numbers which they judged from—it does not seem to me that they are very good.

1231. Mrs. Greenwood gave some statistics covering a considerable number of children?—Yes; for every twenty-five women who nursed their children 200 fed them artificially with the bottle and gave them often every kind of food.

1232. That means what they are eating themselves?—Yes, everything they eat they give their children, as a rule.

1233. And the large mortality from diarrhœa is due to that?—Yes.

1234. And they issue from it with permanently impaired digestions if they survive?—Yes. That is from ignorance. They mean very kindly, but it is ignorance.

1235. You have no figures to show the proportion of infants fed artificially all over England—no general figures?—No, I have not; and I do not know that they exist. That is a thing which would be useful.

1236. You attribute the number of infants fed artificially to two causes?—Yes; one the physical debility of the mother, and, secondly, that she wishes or is compelled to go out to work.

1237. Upon the first point, what have you to say—the physical debility of the mother?—Some mothers cannot nurse their children.

1238. Is that a prevalent cause, you think?—I should think very often they cannot be bothered doing it.

1239. Is it due to poverty, to inherited feebleness?—I should think it is due to the fact that they do not wish to do it. Of course, some women are weak, and it would be very bad for them to feed their infants. If they have tendencies to consumption or any disease I should think it would be very unwise.

1240. I understand in the rural districts it is not the case; there they do nurse their children to a large extent?—To a large extent. Probably they are healthier women than town women.

1241. That may be one of the causes of the superior health of the children in the country?—Yes. Mr. Rowntree points out that many women are very badly fed during that time—insufficiently fed. A couple marry; they are comparatively well off until the children arrive; then they stint themselves in food and probably they are not fit to nurse their infants.

1242. Do you think early marriages have anything to do with it?—I do not think there are anything like so many early marriages as there used to be. I think it is chiefly the increase of work—women doing more work.

1243. You have classified the causes of digestive disorders, I think?—Yes. The first is overcrowding, imperfect ventilation and insanitary conditions in and about the houses—dust bins, middens, etc.; secondly, contaminated or unsuitable food; and, thirdly, unsuitable clothing.

1244. That first point is, of course, the question that we were discussing with Mr. Booth when you were in the room?—It is useless to preach cleanliness to a woman if she sees that her yard is left neglected by the sanitary authority.

1245. Or the street?—Yes. The children are very badly clothed, probably covered with heavy clothing and not, perhaps, a scrap of flannel.

1246. Nothing round the loins?—That is so. It ought to be very light clothing but very warm.

1247. Turning to the subject of food, in which we are specially interested, what have you to say?—It is a fact that the milk when it arrives in large towns has been proved to be putrescent. I mean it goes through so many stages, from the country farm to the towns, that it is badly contaminated. But that is not the worst of it. The farms are in such a filthy condition that the milk when it leaves the farm is already poisonous. I have been over many farms, and the conclusion one must come to is that at the bottom of the whole question is the filth of the farms.

1248. And is the source of the milk liable to inspection?—That is where the thing fails now. There is a medical officer of health who has over him the sanitary authority, a Committee of farmers and others.

1249. You are speaking of the rural districts?—Yes, that is where the farms are. If the Medical Officers of Health complain to the Committee about a farm, they have told me over and over again that they are simply asked to draw their pay and keep quiet. These sanitary authorities have the power to oblige the farmers to be clean, but the County Council have no power; they should be given power to oblige the

local sanitary authority to compel the farmers to have clean farms.

1250. The Local Government Board should intervene if they do not exercise that power?—I think some very strong measures should be taken, because it is not one farm, but almost every farm.

1251. You have examined these farms yourself?—Yes.

1252. In many parts of the country?—In many parts of the country; all over England, more or less.

1253. Are these farms supplying milk to a great many towns in the neighbourhood?—Yes. The milk goes to a big dealer, who again supplies retailers, and it cannot really be traced; there should be some means of keeping a farm under constant inspection, to oblige that it shall be kept clean. It is quite possible to do it, and it is quite possible to do it without any extra expense and to make the thing pay. I went over a farm at York the other day managed by a Dane, Mr. Sorensen. His farm is on the most simple methods—Danish methods. He has made a large profit in the two years he has been there, so much so that he has had to raise the price of his milk twice in order to keep away the press of customers. It is most splendid and fit to drink pure from the farm without sterilising. Mr. Rowntree had it for his depôt, until really this farmer could not afford to supply him any longer.

1254. Very little of that milk gets to the poorer class I suppose?—None. It would if our farms were managed in the same manner. We are not asking for anything unreasonable, because I have proved it can be done quite as cheaply as a farm kept in a filthy manner.

1255. Then you want some urban organisation to bring it into effect?—You want the County Council to have the power to oblige the sanitary authority to make the farmers keep their farms clean.

1256. Granted that you can get pure and good milk from the farm you want some organisation in the town which would facilitate the poorer classes in those towns obtaining the supply that they want?—You know at present the country children get no milk practically; it is all sent straight off to town.

1257. But even the town children do not get it, at least the poorer class?—No. They get what is called milk.

1258. Is it not the case that tinned milk is to a much larger extent used in the homes of the poor in big towns?—Yes. That is done because it is cheaper.

1259. Do you think that is deleterious?—I do, because I think it is very often made of skim milk.

1260. Some brands are good, I suppose?—Yes, some are, but it is difficult to rely upon it. These women have no education, and they cannot be expected to understand what is good and what is bad.

1261. What do you think are the causes of unsuitability of cow's milk supplied by ordinary milk dealers when it reaches the infants?—The dirty farms. The dealer waters it, or lowers the proportion of fat by diluting it with separated milk.

1262. That is an offence against the adulteration law?—Yes, but of course it is done.

1263. Is it not brought home to those who do it very often?—Not very often—nothing like what it ought to be.

1264. Yours is an impeachment of general neglect?—Certainly.

1265. The mother herself is, I suppose, very often responsible?—She does it, because she thinks she is watering pure milk. She probably thinks the baby ought to have half milk and half water, and she adds half water to the already watered milk. She does not probably do it because she wishes to starve her child. I think they are very kind often.

1266. She has no security that the milk is what it is represented to be?—No.

1267. And she treats it as better than it is. You quote the opinion of Professor Thorpe?—Yes. He says that it is putrescent, that is, it is on the verge of decomposition. Dr. Priestly, medical officer of health for Lambeth, has stated that much of the milk consumed in the poorer quarters is three or four days old, and probably Lambeth is not the only district in which this state of affairs exists. The milk has passed through the hands of three of four dealers by each of whom a dose of some preservative has been added in order to prevent the actual onset of decomposition. The mischief is caused by the many hands through which it passes. If there were some system of collecting milk in the country and sending it straight to milk depots it would be better. *Mrs. Smyth.*

1268. I suppose such things are capable of organisation?—They are. There is one we are in the act of organising at Shadwell in connection with the Shadwell Hospital for children.

1269. You think some good might be done by taking steps to inform parents as to the management in rearing infants?—Certainly, I think that is very important.

1270. Of course, papers are given away in hospitals now?—Yes; they should be given away everywhere.

1271. By the sanitary authority chiefly?—Yes.

1272. The most important agency for improvement in these respects is the personal advice given by the lady visitors in the homes you think?—I think that quantities of papers ought to be in the registry office to be handed to every mother who registers the birth of her baby.

1273. And to supplement that, there should be advice.—Yes, by lady visitors. They have been employed in Manchester and in other towns, and they have done much good. The help of the clergy should be enlisted to induce all district visitors to pass the examination of the National Health Society or Sanitary Institute, in the elements of domestic hygiene. That would be very useful, because people go about talking to these women who actually know nothing of what they are talking.

1274. Do you know about the operation of that Manchester system?—Yes.

1275. (*Dr. Tatham.*) It is the Manchester and Salford sanitary association is it not?—Yes. I believe ladies go about and visit the homes, and talk to the mothers—women who are really capable of doing it.

1276. (*Chairman.*) I will read you this extract from a speech that Dr. James Niven made at Manchester some-time ago in which he says, "I am disposed to believe that the milk derives much of its fatal power from its origin, though it receives additional infection in the city, that further it is owing to ignorance and neglect in the preparation of the food of the child, that the contaminated milk is able to do the mischief which it does." You quite concur with that?—Yes, I do.

1277. Do you think that a system of giving girls during the last period of their school life systematic instruction in these subjects, to the exclusion of the ordinary subjects of school curricula, would be a valuable training?—I think it would be very valuable indeed. I think that if they neglected all their other lessons it would be necessary to do that.

1278. For the last few months of their school life, the attention of the school course should be concentrated upon subjects such as these?—Yes, but at the same time I think they should be gradually learning from the time they are able to understand anything about it.

1279. But increasing the amount of knowledge of these subjects as the girl's school life continues?—Certainly. In regard to the teaching of cooking and domestic subjects, I do not think any child is too young before it leaves the school to understand these thoroughly. I think that is much more important than between sixteen and eighteen, because then they are probably working, and have no time to bother about it.

1280. But there is some value in their learning these things *pari passu* with practical experience of its value in their own homes?—It is very good indeed if they can spare time, but you have to induce them to do it. But at school they are obliged to.

1281. They might have to attend a continuation school afterwards?—Yes. I should think it would be very useful indeed, but those children in London at twelve or thirteen are as intelligent as grown up women of our class.

1282. (*Colonel Fox.*) They marry about eighteen so that there is only a lapse of four years?—Yes. And they work in their own homes for their mothers. I do not think you can do anything now with the present generation of fathers and mothers; I think the whole thing depends upon the education of the children.

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1283. Do not you think they are teaching them rather fancy cooking at present, with French names?—Yes, it is ridiculous. I think they should be only taught things which they can eat in their own homes, and that it is essential to lay the greatest stress upon the value of the properties of food.

1284. (*Chairman.*) You give some suggestions as to systematic instruction?—Yes. A more hopeful suggestion is to give systematic instruction in elementary hygiene in schools. The mothers of to-day would not be reached in that way, but many of the elder girls now at school will be mothers in four or five years. The school Board in London already gives practical instruction to some girls in domestic economy and cooking, but all girls should be taught, and more attention might be directed to the feeding of infants and young children. Cooking is taught also in Manchester, Liverpool, Bradford, Birmingham, Newcastle, and other towns. But all do not learn. They have not room. Kitchens and so on in the schools, should be made compulsory.

1285. They are now in most of the schools?—I do not know that they are in most.

1286. Most schools in large towns?—I mean in London.

1287. (*Chairman.*) There are central classes where they can be taught.

1288. (*Colonel Fox.*) It is proposed that there should be restaurants in schools to provide a midday meal?—Yes, I propose that, and the elder children should cook the food for the younger ones.

1289. (*Chairman.*) Then the question arises with regard to the provision of milk for the needs of the population, and that you think has not been sufficiently well considered yet?—Before we come to that I should like to refer to the fact that lessons on the elementary chemistry of food should be given showing the children what the food contains, the carbo-hydrates, the fats, and the proteids.

1290. Do you not think there is a risk of the children being confused by the jargon of scientific terminology?—No, I think they would be taught in simple language. I think they should be taught those properties of food, because a woman may spend a heap of money on unsuitable food.

1291. (*Colonel Fox.*) You mean to show that the yolk of the egg is the buttery part, and the white of the egg the albuminous part?—I should say, "If you buy half a lb. of meat it will be much better for you than ten lbs of"—something else. I would explain that to them.

1292. (*Chairman.*) That is what you explained in the *Journal* the other day?—Yes.

1293. You put peas very high?—Yes.

1294. We had medical evidence here the other day. The witness quite admitted the ideally high value of peas as a food, but he said it was not half as assimilable as many foods which were of less value and therefore for that reason it did not occupy so high a position as you attribute to it?—It was not my own idea, because I am not a doctor. I quoted my authority, Noel Paton's report.

1295. I think it was; you gave a sort of summary of that book?—Yes. I think he is an authority.

1296. You think his opinion is just as good as that of the gentleman who was here a little while ago. I am not an authority on the point?—Yes, I daresay it is.

1297. That is one of the difficulties on the question—that doctors differ?—They differ about the question of oatmeal. Some people say it is poisonous and others say it is excellent.

1298. Can you tell us what has been done to provide depôts in certain places?—They have provided them in St. Helens, Liverpool, Leith, Battersea and probably in other places; they are municipal depôts. The milk comes from an uninspected source; they get it from a local dealer.

1299. They make no inspection of it?—No, they know nothing about it. Then they sterilise that milk to make that safe. It is like purifying sewage to make it into clean water. It is not right. Then they sell this milk and if a woman likes to buy it for a certain length of time she can; and if she does not appear again no question is asked. They have no statistics to show the good or the bad which the milk does except in the death rate. The death rate is less, and therefore they say that it must be doing good. The way they are managed in Paris is that statistics are kept of every child that is looked after. They can lay their hands on that child and say "This is the child—he has increased so much." They weigh them and examine them.

1300. That is only done in connection with the hospitals?—It is done with most of the organisations. Dr. Henri de Rothschild has a system of milk depôts pretty nearly all over Paris; they go to his head place and are weighed.

1301. Do you tell me that a large proportion of the population come under observation in that way?—Of course some do not; but in Paris a large proportion do because there are so many depôts.

1302. Has the municipality anything to say to this organisation in Paris?—They have not anything to say to Dr. Rothschild's organisation and in connection with his numerous depôts. He has a hospital of his own and all the milk supplied to the hospital depôt and all the branch depôts, which are really little shops, comes from his farm in the country.

1303. Surely that cannot be done on a scale touching any great amount of the evil?—It is done on a large scale.

1304. Then you say there are other institutions?—Yes, there are municipal institutions.

1305. (*Colonel Fox.*) Not philanthropic?—No.

1306. What I want to get at is whether the municipality in Paris concerns itself to do this sort of work?—There are the institutions maintained by the Assistance Publique, the department which administers the hospitals.

1307. (*Mr. Struthers.*) That is a public body?—Yes. That supplies funds for the institutions for the Surveillance de Nourrissons maintained by the Conseil General de la Seine and administered by the Assistance Publique of Paris. Many of the infants treated are only brought after they become ill. That would be naturally public money.

1308. That is the form in which the poor law is administered in France?—Yes. Then there are several depôts in connection with the hospitals.

1309. (*Chairman.*) That I can understand. It would be easy to establish a system of that kind in connection with the children born in hospitals and with whose future life for a few years the hospital could concern itself; but that only touches a small proportion of the population?—Yes.

1310. What I wanted to get from you is how any general scheme which would be of use could be worked in this country?—I think they could be worked by the municipality. They are worked all over France, and I think they are worked there by the municipality.

1311. What do you hold to be the distinguishing feature of these establishments?—That they are all under medical supervision and they all weigh their babies. The distinguishing feature of all these institutions is systematic medical supervision. The first indications of failing nutrition are quickly recognised and traced to their source, in the errors of the mother, the unsuitability of the milk or milk mixture and the digestive powers of the particular infant, or the onset of some disease. If the children are seen once a week they can see if they are sickening for anything; they can see if they are increasing in weight or doing well on the milk.

1312. You think no resistance would be offered to an invitation to come every week? You think the parents would not object to bringing their children?—They seem to bring them most willingly. I have seen them bringing them myself.

1313. In Paris?—Yes. I believe the system has worked splendidly. Dr. Rothschild's scheme, which is a very large one, is done on a commercial basis. He objects to encouraging anything in the form of charity; he says that his system pays well, and the money which he gets from it he uses to establish other depôts.

1314. Extending the operations of the Society?—Yes.

And he spends something on giving free tickets for milk, but he gives them as a present—not as charity.

1315. You mean occasionally—in special cases?—Yes.

1316. What are your general conclusions?—I am convinced that, were all children judiciously fed until the age of three or four, they would stand every chance of growing into robust men and women. I am equally convinced than no amount of care will make up for neglect during those first years of life. Public attention has been aroused as to the importance of proper feeding of children during school life, when they are doing brain work and are being trained physically by drill and gymnastics, but I submit that feeding during infancy and up to school age has not received the consideration to which its importance entitles it. During this period the weight of a healthy child ought to increase from about half a stone to about three stones—a six-fold increase. The rate of growth after this age is much less rapid.

1317. What I wished to ask you was with reference to Mr. Booth's statement. Has it come in your experience at all that tea is very deleterious in its effects on young children?—I have no personal experience, but people have told me, in the course of this inquiry, that every child almost is fed on tea—he gets it at every meal. It is made, probably, in the morning. What makes it so dangerous is that the tea is made and let stand. Probably the tea made in the morning is watered up for dinner, and watered still more for tea. The tannin in it makes it dangerous.

1318. Is the tea of that character likely to produce anæmic and neurotic children?—I should say certainly neurotic. I do not know about anæmic. I should think it was very bad.

1319. (*Mr. Struthers.*) Do you think it is at all palatable—that children would be likely to take it?—I cannot imagine it. They seem to drink it. I have questioned children and they say they like it.

1320. (*Colonel Onslow.*) Would it not have a bad effect on older people?—I should think it is excessively bad? For the nerves it is the very worst thing.

1321. And it would affect the children through the mother?—Yes it would affect their constitution through the mother in the same way as drink affects the constitution through the mother.

1322. (*Chairman.*) You say your experience has been pretty general in this country. Can you specify any particular parts of England from which it has been drawn? Do you speak of London, or the provinces, or rural districts?—Chiefly London.

1323. Where are the farms?—I have visited farms in Sussex and in Essex.

1324. In the home counties generally?—In Yorkshire and Somersetshire—in different counties; not every county but pretty generally.

1325. Not confined to any one particular place?—No, it is not a narrow conclusion; it is from a general view.

1326. It is based upon a wide set of facts?—Yes.

1327. (*Mr. Struthers.*) Do you know that milk comes to London from Yorkshire?—I know it does, but I could not tell you from what district. I know it comes from Cheshire also.

1328. (*Dr. Tatham.*) Will you tell me whether, in your experience, the infant children of the working classes have really, as a matter of fact, much milk of any kind?—I could not tell you that, because I do not know.

1329. Is it your general impression?—My impression is that they have much more condensed milk than ordinary milk.

1330. You do not think they have any sufficient quantity of milk?—No, I do not think they are fed entirely on milk ever; I should think they have milk and patent foods mixed. The patent foods, of course, are very bad for them; they cause rickets and other diseases. But I should think very few children are fed on milk for more than two or three months, except in the case of those who are fed by these milk depôts.

1331. That is speaking generally?—They send out the milk from these depôts in stands with bottles.

1332. In Paris?—In London too, and the children get it out of the bottle that it is sent out in. *Mrs. Smyth.*

1333. It saves it from contamination to a certain extent?—Yes, but with the exception of those children fed on depôt milk they are not fed on milk. I have no reason for saying so except what I imagine and what I have seen.

1334. From what you know of the work of female health visitors in the towns you have spoken of, do you generally approve of their work?—I do not, because I think that anyone who is a health visitor should have a special education for it. They mean very well, but I think that, short of knowing something about a subject, you have no right to talk about it. Of course, there are, I suppose, very clever ones.

1335. In the case of health visitors who are acting under the instructions of a society, for instance, the society which I know of, the Manchester and Salford Sanitary Association, you know they consist of ladies?—Yes.

1336. Of gentlewomen who superintend the work of the female health visitors—paid officials?—Who are paid officials? These ladies?

1337. No, the health visitors, the women They are in pretty much the same social position as the people there.—I understand.

1338. Would you approve of that under those conditions?—Yes, I think so. I live at Brighton, and there is a society called the Women's Health Society. I belong to that just to see what they do I have now been a member for about six months, and the only thing I have heard about it in those six months is the annual meeting and a lecture on consumption. You pay your subscription, and you are not asked anything further. I think most of those societies are really for collecting money. If a Health Society were formed and I were president of it, the first thing I should say is, "Will you kindly learn up the subject and let me examine you in it?" I do not think it is a bit of good sending kind-hearted people round who are probably tactless and will only annoy those they visit.

1339. You would approve of the general principle of attaching a number of female health visitors to the municipalities as part of the sanitary staff?—Yes, I would. I do not think you could have too many women in this particular thing I think they are far better than men. I think they are quicker, and it is more in their province In anything connected with women and children especially, and in subjects of education too, I think they can judge better what is necessary for a woman than a man can They would probably be more liberal-minded, too.

1340. Might I ask you to what kind of diseases you refer under the name of digestive diseases—speaking generally?—Gastro-enteritis.

1341. Were you referring more especially to diarrhœa?—Yes.

1342. My reason for asking you is that physicians consider diarrhœa an infectious disease now. Had you any other diseases besides diarrhœal diseases in your mind?—I should say indigestion. There are people who suffer from that. I should say that a child made unhealthy would always suffer, it would not be able to eat every sort of food when it grew up—it would grow up delicate.

1343. Have you any knowledge of the spread of tuberculous disease amongst young infants?—I have heard that they get diseases of the bones and joints, and I believe it comes from milk. I am persuaded that tuberculosis is conveyed by milk, but of course, until the question is decided, one cannot tell. But I should say that the tubercular diseases from which children suffer are caused in part by milk.

1344. (*Mr. Lindsell.*) Good as milk is for young children, it would be almost better for them to have no milk at all than the milk they get under present conditions?—Yes.

1345. And you think those bad conditions start at the original farm with the cow's milk?—Yes.

1346. And not between the original farm and the time that it gets to the mother?—I do not think there is any

Mrs. Smyth.

comparison. I think the harm done at the farm is so infinitely more than that which is done afterwards that I would attack the farms.

1347. In what particular way would you say the original farm is very bad?—I believe there are 600,000 bacteria on one cow's hair; the cows are in the most filthy condition, standing in manure, and the cow-sheds, the stalls, are covered with manure; and outside the yards are heaped up with it. There is no proper ventilation; the milkers are filthy, their hands and clothes are dirty, and their vessels very often are dirty. These things have been proved. There was a most realistic letter from the Medical Officer of Health at Bradford on that point. The dirty conditions have been proved over and over again.

1348. (*Mr. Struthers.*) But these are merely exceptional farms, are they not?—No.

1349. (*Mr. Lindsell.*) Do you think that in a good Sussex milk farm this state of things would go on?—Yes, I know it. I have had them under my eyes. I had a great deal of trouble in finding a clean farm for my own child, who is an only child, and whose health I value above everything in the world.

1350. (*Chairman.*) What part of Sussex is that?—I live at Brighton. I have found a very nice farm in the neighbourhood. But with regard to the farm I was dealing with before, I got milk straight from the farm, and the moment I became interested in the subject I went to see it. I have never seen anything so disgusting. They were beautiful buildings, but the sanitary state of the place was very bad. There were lumps of manure and hairs off the cows in the milk. I said to the boy, "Look at that." He said, "That ain't nothing; it's only off the cow."

1351. (*Mr. Lindsell.*) The only remedy for that would be a much stricter superintendence and inspection of dairy farms?—Yes.

1352. (*Chairman.*) Would you go further and register them for the supply of milk—have some sort of certificate given to them?—Yes, in the way they do in America.

1353. In the absence of which they should not be able to sell milk?—I believe they are registered now in America.

1354. (*Colonel Onslow.*) Are there depôts now which can only take milk from a given source?—If you could get clean farms that would be the thing. I attribute the whole of the bad milk supply to women and housekeepers. You know these lovely looking milk shops; they are the most attractive of any shop. I went into one of those buildings the other day and said, "I would like to deal with you, but before I do so I should like to see your farms." They made a fuss, but eventually they let me see the farms, and they were filthy. If every mother and housekeeper before dealing at a shop said to them, "Before dealing with you let me see the farms which supply you," this would not occur. They are generally supplied by one, two, or three farms, and it would be no great hardship.

1355. (*Mr. Lindsell.*) Surely you would not expect a mother in Lambeth to go out beyond Willesden to see a farm, would you?—I am speaking of the country, now.

1356. It would not be possible, would it?—I am talking not of poor mothers, but of our own class. If we educated people show such a frightful example, how can you expect a poor uneducated person to know any better? I should expect that we should provide them with good milk.

1357. Supposing we have a good well-managed farm you still think there is a good deal of contamination which goes on between the milk leaving that farm and the time it reaches the consumer?—I do.

1358. It is not all the original farm's fault, I suppose?—No, but I do not think that milk after leaving any clean farm, and passing through the hands of the dealers, and arriving at a poor woman's house would be so dangerous as milk from a dirty farm arriving straight at a woman's house. The latter would be more dangerous than the clean milk from a clean farm passing through all the dealers.

1359. I see what you mean, that more harm is done at the original source than anything in transit between the farm and the mother?—Yes. Of course there are exceptional cases when probably other things go on, but as a general rule it is not so. They perhaps water it, but that is not so serious as dirt.

1360. The presence of dirt could easily be detected by analysis?—Yes, there should be analysis.

1361. You know the county councils all analyse, they can walk up to any milkman and say, "I want a pint of that milk," and they analyse it?—They cannot unless it is in their own district. The town official has to communicate with the rural authority, and he has to manage it. The town man cannot take action against a country farm.

1362. Not the original farm, no?—He can take a sample, but he cannot do that if the cart is not in his own district.

1363. (*Colonel Fox.*) Milk sent from a clean farm into a dirty depot would be better than milk from a dirty farm sent to a clean depot?—Yes, distinctly.

1364. (*Mr. Lindsell.*) It is no good getting good milk to the doors of these parents unless they will use it?—No.

1365. Your idea is that some means should be adopted for disseminating a knowledge of the good properties of milk amongst the people?—Yes.

1366. That I suppose you would entirely propose to do by voluntary agencies?—Yes.

1367. Also visitors, and so on?—Yes, and by leaflets.

1368. They might be issued by local authorities?—Yes.

1369. It would be no good doing that until you got good milk for the people to use?—I am afraid not.

1370. Another good agency you think would be the better education of the future mothers in the schools?—I think everything rests with them. I do not think that you will do much with the present mothers, but I think that you will do a great deal perhaps, not in the next generation, but in the next generation to that.

1371. In the elementary schools in London not only is cookery largely taught but also domestic economy generally?—Yes, in some, in a very few, where they have special facilities.

1372. But still there is every facility offered by the Government by means of grants for these subjects and so on?—Yes, but I do not think they take advantage of it. It only exists in a few board schools.

1373. We may look for a great improvement in that respect on account of the county councils?—Yes.

1374. Who have the management of the schools and so on. Do you know anything about sterilisation of milk in itself?—Yes.

1375. Do you know any places where that is done for the purpose of distributing it?—It is done by milk depôts. It is done very often in France by the farmers themselves. In municipal depôts milk is very often sterilised down at the farms and sent up in bottles ready to be sold.

1376. The advantage of that is it will keep much longer?—It keeps longer, but some people say it destroys certain properties in the milk. It is drinking cooked milk. To do any good it must be brought to a very high temperature.

1377. Did you ever hear of a place in Worcestershire where it is done very largely by private agency?—No.

1378. A clergyman named Eyre?—No; does he do it?

1379. Yes, for the benefit of the village and then it goes to Birmingham, to the mothers there?—I consider that in the country, with scientifically managed farms, it should not be necessary to sterilise, and I hope that it will not be necessary even for milk coming from a reasonable distance, from the country to London, during the cold weather. It probably would have to be done during the very hot summer months. In the depôt now being organised at Shadwell, they are going to put up a steriliser, but we hope that even if they use it at first it will be only necessary in the very hot summer months.

1380. You think milk is better unsterilised—more nutritious?—Yes, much.

1381. (*Colonel Fox.*) You must remember that milk is one of the best vehicles for conveying disease?—Yes.

1382. Foreign germs get into it at the first opportunity?—Yes.

1383. So that you want something to prevent that?—If you have special rules for your farms I do not think it would be a question of contamination, if the milk came direct from the farm to the depôt.

1384. (*Colonel Onslow.*) And properly sealed up?—It should all be sealed. Every drop of milk going from the Sorensen farm is sealed. I mention that because it is the best I know. It is sealed before it leaves the farm. I think the Aylesbury Company and Welfords seal their milk and inspect their farms, but of course there is a chance of its getting tampered with at the big factories in London.

1385. (*Mr. Legge.*) I do not want to dilute your evidence by pouring cold water into it, but I want to ask you one or two questions about your important suggestions for improving the milk supply. Will not all these provisions which you suggest mean increasing the care at the farm—the sealing up of the bottles, the placing of depôts where the milk is sealed under medical supervision—will not that enormously increase the cost of milk?—I had that very question asked me through the *British Medical Journal*. A letter was written saying that these suggestions were very beautiful, but would I kindly give some substantial ground for stating these facts. In reply I gave Sorensen's farm, which I lately saw. Perhaps you would care to read the letter in the *British Medical Journal* of January 6th.

1386. I thought you said the price that he charged for milk had considerably increased?—He has increased it within the last month to choke off customers. He had so many people pestering him to take milk from him that he raised the price twice within a month so as to stop them. But he is going on with that at the same price to his ordinary customers. It was merely to check increase. But as a matter of fact he sells milk at the ordinary price.

1387. He finds it a paying transaction?—Yes.

1388. He is quit of the considerable expense of the depôt?—Yes.

1389. He has not the expense of selling his milk through one of these depôts under medical supervision?—I do not understand that.

1390. You suggest that milk depôts should be established, and the milk should come from scientifically managed farms, and after being sterilized at the depôts should, under medical supervision, be sold to mothers for their infants?—Yes.

1391. It is very expensive to provide medical supervision for every depôt, where you sell milk?—I suppose in the case of a municipal depôt the services of a doctor living in the neighbourhood would be called in who need only come in for half an hour every Monday morning, and I do not think it would be very costly.

1392. (*Chairman.*) The duties of the medical officer of the district might be made to include it.

1393. (*Mr. Legge.*) You say it could be examined by a doctor once a week?—Yes.

1394. How could he weigh and examine each child once a week?—I do not think it a long business. The matron of the place would put it in the scales, and have it weighed for him before he arrived. He might see the child, but the matron would weigh the child.

1395. Do you seriously think that it is possible to get the slum parents to bring the child to be weighed every week?—I think seriously it is possible if the depôts are sufficiently spread about the different districts. I do not think they will walk six miles, but if it is fairly near they will.

1396. Do you think they would go 200 yards?—I think they certainly would, if they are taught and educated up to it. I daresay it will take time. You have to make a beginning in everything.

1397. You would not be prepared to go so far as to impose legal penalties upon them if they did not, or if they buy milk from any other source?—I do not think you could do that. I do not think it would be possible.

1398. You do not propose anything so drastic as that?—No, I think they should be gradually led to think it is for their good.

1399. Another point which you made was this: you suggested that health visitors should be generally employed?—Yes.

1400. Ladies going as sanitary inspectors. Have you thought what an army would be required to do that work thoroughly?—I think a great many would be required. *Mrs. Smyth.*

1401. You do not suggest it is thoroughly done in Manchester. They have made a beginning there?—I do not know very much about it except that there are good results in Manchester. My idea was that people whose duty it was to inspect, and others who do it for philanthropy, or a wish to help the people, should be advised to tell them to do these things. You need not necessarily have one person for every family. I know Sir Thomas Barlow, in connection with drink, thinks that each person must be watched individually for ever. That is what I think nonsense, but I think you can do a great deal without that, by taking every opportunity, and chiefly I say that I do not think you will do much with present mothers. Educating the children in the schools is the principal thing.

1402. All I wanted to get at was this: You have not any scheme or organisation in your mind?—No.

1403. You agree that all efforts at present of the sort you indicate——Must be tentative.

1404. I should like to ask you whether you have had any experience of the conditions of dairy-farming abroad, principally in Denmark and in Normandy?—I have been in Denmark and I have been in France a great deal.

1405. And you have been over their dairy farms?—Yes. I have been over them.

1406. Is it your opinion that they are better managed from the sanitary point of view than English dairy farms?—Of course Danish dairy farms are, distinctly, but I do not know that the French are.

1407. You are clear about the Danish?—Oh, quite clear, and I think it is a recognised fact.

1408. (*Dr. Tatham.*) You were speaking just now of a considerable number of dairy farms in England which you had personally visited?—Yes.

1409. And you spoke of their condition as regards cleanliness or the reverse?—Yes.

1410. Can you tell one even approximately, what proportion of the farms you have visited are in such a condition as in your opinion make them unfit to supply milk to the towns—half or a third?—I should say nearly all. I know there is one decent farm which I deal with near Brighton, and I have seen Sir James Blyth's private dairy, but I cannot think of any others which were clean

1411. Is it what is called the sanitary condition of the farm or the condition of milk, or is it all together?—Everything. There are certain rules laid down about cleaning cowsheds, ventilation, brushing the cows, washing the milker's hands and having special white coats on—these are things which are not expensive, but that simply mean supervision.

1412. And they are not put under them?—Not at present. Nothing one says has the slightest effect. I think that if the public are content to accept dirty milk, it is the instinct of the farmer to be dirty, and you cannot expect him reasonably to be clean, and to force clean milk upon the public. If the public are satisfied to pay a high price for bad wine they will not have good wine forced on them; if every woman in a household, the mother who is interested in her children, or the housekeeper, were to go and see the farm supplying her milk shop, I can assure you that in six months the whole thing would be revolutionised. A very serious thing is that they have discovered now that they can aerate milk, and there is a threatening of a great amount of foreign aerated milk coming in, as foreign butter has come in, and that we shall lose the milk trade as well as the butter trade. Another especially important thing is to get farmers to make a profit out of their dairies for their own sakes. If men can find profitable employment in the country they stay there and do not go to towns. If they find that people will not any longer buy their milk after having discovered it to be dirty, more than ever they will migrate to the towns.

Miss ADELAIDE MARY ANDERSON, called; and Examined.

Miss Anderson.

1413. (*Chairman.*) You are Principal Lady Inspector of Factories under the Home Office?—I am.

1414. I should like you to state, first of all, what your qualifications to give evidence are, as drawn from your experience as an inspector under the Home Office?—I was appointed as Inspector of Factories in 1894 by the Home Office; I had had some previous experience.

1415. Will you give us that please?—Yes. I had worked two years for the Royal Commission on Labour, from 1892 to 1894, and before that I had seen something of factory girls in clubs, and women of the Co-operative Guild. From 1894 to 1897 I spent the greater part of my time in the great textile and clothing districts of Lancashire and Yorkshire, but I also visited Dundee, and inspected from time to time in London, Leicester, Bedford, Luton, Brighton, Gloucester, Bristol, and other towns. Since August, 1897, I have been in charge of the work of the women's branch of the factory department, and have found it necessary in the course of supervision to visit various parts of Ireland and Scotland, as well as England.

1416. That was in the ordinary course of your duties?—Pursuing the duty of supervision, following up points in different parts of the country. I have spent some time in North Staffordshire visiting earthenware and china works. In every centre visited I have seen workers in their homes as well as in factories and workshops. I am in constant receipt, from the staff of lady inspectors under my direction—gradually increased from four in 1897 to seven in 1903—of special reports on conditions affecting the health of women and girls in factories and workshops in all parts of the kingdom. One inspector is stationed in Glasgow, and has special knowledge of the conditions of women's employment in Scotland and the far north of England. Another has special charge of laundries and of dressmakers and milliners' factories and workshops in the western section of London, out to and including Acton and Chiswick. The remaining inspectors I send to any part of England or Ireland where I find it most necessary to investigate conditions affecting women.

1417. You are specially qualified to tell us whether the industrial conditions under which women work in this country are likely to prove prejudicial to health, or have in the immediate past proved prejudicial to the health of the female population?—I think so, so far as the ordinary observation of one who is not medical is concerned.

1418. Quite so. I presume medical opinions often come under your observation?—Very often; and inspectors make it part of their duty to consult medical opinion in all the districts they are going to, so that we have practically a medical opinion on broad, general lines and in particular cases.

1419. (*Chairman.*) I will ask Mr. Legge to take you through the main part of your evidence.

1420. (*Mr. Legge.*) First of all, can you give us some indication of the proportion of the female population of the United Kingdom which would be affected by the conditions relating to health which obtain in factories and workshops?—I have brought together from the latest returns that we have accessible the figures of women and girls employed in factories and workshops, and I have also endeavoured to form some estimate, but it is quite impossible to make it complete, of those who are employed in domestic workshops which are only very partially under control. In this table, which I will put in, I have compared women and girls employed in factories and workshops with the total female population over ten years of age in all the different parts of the kingdom and with the total of those engaged in all occupations, so as to get some kind of idea of the proportion. It is about a million and a half who are employed in factories and workshops under regulations.

1421. (*Chairman.*) Have these tables been published anywhere?—No, they are compiled from various sources by myself.

1422. They have not been compiled before?—No, not in this way.

1423. (*Mr. Legge.*) I see you have separate tables for laundries and that is, I take it, because they are not under the same regulations?—Yes, mainly; but also because we have only recently had any figures at all. No return was possible before 1901. The Act of 1901 made that possible. We had only tables of the work-places under inspection, but no return of the persons employed.

1424. The net result of these tables seems to be that 9·101 per cent. of the total female population above ten years of age in the United Kingdom, or 28·774 per cent. of those engaged in all occupations come, more or less, under your purview?—That is so, for the whole of the United Kingdom, but the percentage varies greatly in the various parts of the kingdom. Scotland is very high, and Ireland is low. Scotland is above the average, and Ireland very much below, but I would like to add there that a large number of Irishwomen are employed in Scotland and in the north of England, and it is, presumably, because there are not industries enough in Ireland, that they come over to these countries, where the industries are ready-made.

1425. I might ask here, perhaps, conveniently, one or two questions about those tables. I notice that taking the number of those employed in textile factories the proportion of children in Ireland employed is considerably greater than in Scotland or in England and Wales?—Yes, that appears to be so.

1426. And I suppose that would apply almost entirely to the north-east of Ireland?—Yes, I think so.

1427. I also notice that if you compare the numbers employed in non-textile compared with textile factories, the proportion of young persons and children employed is very much less?—Yes, it is very much less in non-textile factories.

1428. In fact, young children are hardly employed at all in non-textile factories?—That is so.

1429. That is the same, oddly enough, in the case of laundries, which I thought was characteristically a woman's occupation. The proportion of young persons employed in them is very small?—Yes. It has been characteristically in the past a middle-aged woman's industry, I think. A high proportion are married women, but that has varied very much since steam power was applied to laundry processes. I have, published in a small report for the British Association this last year, figures bringing out the growth of employment of young persons in steam laundries. If the Committee would care to have that, those give the latest figures for laundries. I might get a copy from the Secretary of the Committee, but I am afraid I cannot spare that one. (*Document handed to Mr. Legge.*)

1430. It seems as the net result of these tables that if one were mainly considering the question of the youth, of the immature population of the country, it is in districts where textile industries are the staple that one would have to be most on one's guard?—I think so, but I think we must be on the alert as regards the employment of young persons in laundries, because it is a growing proportion.

1431. You are not able to give us any idea as to the proportion of married to unmarried women in these tables?—There are no returns to the Factory Department, and the only returns I know of are those in the 1901 census for England and Wales. They are not given for Scotland or Ireland, I think, for occupations. They could be made out for England and Wales, but they would not exactly correspond to these figures returned to the Factory Department.

1432. I will come to that later. Do you not think it would be a valuable item in the returns if we could find out whether the women are married or unmarried?—Yes. It probably varies in districts. I think it is a less serious item as regards the whole than has sometimes been supposed.

1433. You think that fewer married women are employed in factories and workshops than is supposed?—I think so, except in certain districts. It is very serious in certain districts—I think in Dundee, for instance, and in certain textile centres in Lancashire.

1434. (*Chairman.*) On what is that belief of yours based?—Simply on observation and reports from my staff.

1435. (*Mr. Legge.*) Referring to your point just now, that the terminology as regards the classification of industries does not quite agree with the census returns and the Factory Department's returns, do you not think it

would be a good thing if they could be made to agree?—I have wished it many times.

1436. So much for your general figures. You would admit, or claim rather, I suppose, that the numbers employed in home work are considerably in excess of those which you have just given?—No, I would not say considerably in excess as regards the whole.

1437. I do not mean merely out-workers, but people working at home on their own account?—It would not be so in the case of the great textile industry which forms such an enormous proportion of the women employed. In clothing I think you would nearly double the figures if you could get all the domestic workers and out-workers, and a good many of the other trades lend themselves to home work, domestic work—but earthenware, china, and food-preserving only on a very small scale; laundries, no doubt would be more than double. In tobacco there would be no home work, in furniture a little; book-binding very small. In the meantime no precise idea can be formed of the numbers of women and girls employed in domestic workshops (that is, partially regulated by the Factory Act), although in certain classes of industry comparison of the census returns with the Factory and Workshops returns gives a clue, and in some classes of industry the census distinguishes those working at home from the total employed in the industry. Taking a great group, such as the dress group in the census, in England and Wales, and excluding dealers, 252,610, and in Scotland 20,073 female workers are classed as working at home. In the laundry and washing trade in England and Wales, 73,046, and in Scotland 3,658 female workers are classed as working at home. In the hosiery industry in England and Wales, 5,529, in Scotland, 5,836 female persons are classed as working at home. In the clothing and laundry industries the number of female workers is very nearly as large as that of those employed in factories and workshops. The hosiery industry is an exception to be noted to the general rule that textile trades are not carried on much at home. You can see that in Scotland where there is so much hand machine knitting how it is that so high a proportion of home workers are found in the hosiery industry. There is some home work in the hand-weaving in Scotland in the shawl trade. I have come across it. I have visited some of the outworkers.

1438. And Harris tweeds?—It is not only in Harris tweeds. There are regular outworkers to the factory industry, but they are not reported, they are not notified, they are not returnable under the Factory Act, they are not amongst the industries classed by the Secretary of State's order for lists about which workers have to be supplied, and so I cannot form any conception of the number.

1439. It was rather a feature of the last Census that the number of women employed did not seem to have increased?—That is so.

1440. Is that borne out by your Factory Department's figures too?—On the whole, yes.

1441. But of course a large proportion of the young workers under eighteen who pass on marriage out of the factory employment have been subject to certain conditions which will affect their future health?—That is so; and that is a very important point, I think.

1442. Under the Factory Act administration there is the immense number of certifying surgeons; about how many would there be?—The last return I saw was close on 2,000.

1443. Have you any idea of what the vote for their present payment comes to?—I cannot bear it in mind, but it could be very easily found.

1444. Can you give us the difference in the points of view of an inspector and certifying surgeon with regard to this question?—The factory inspector is appointed to administer certain definite requirements of the law, and as the number is not very great in proportion to the work to be done, almost his whole energies are concentrated upon those external conditions which are to be remedied, and only where there seems reason to believe that some alleviation can be got does inquiry into health necessarily follow. Although the Factory Act administration provides in its great staff of 2,000 certifying surgeons (appointed all over the kingdom to examine young workers as to physical fitness for work in factories) an admirable basis for means of registering the progress or otherwise of the health of successive generations of workers in factories and workshops, factory inspectors, appointed to enforce certain definite prescriptions of the law, are better qualified to speak accurately of the conditions affecting health in the factories than of the results in the workers' state of health. Impressions as to health are being continually formed, and action taken thereon; but in the absence of precise measurements of physique comparison of past and present can be far more accurately made by an inspector as regards change of conditions than change of physique.

1445. The certifying surgeon's main duty is, I believe, to certify as to the qualification of children and young persons for employment?—That is the beginning, and to inquire into accidents.

1446. And also certain cases of notifiable disease?—Yes — those we may class with accidents. But they also have the duty of re-examination of persons under sixteen if required by the inspector. They also now have the duty of inquiring and reporting to the Secretary of State as to health generally.

1447. As I understand they can certify a child not as fit for all work, but for particular work?—Yes.

1448. Would you view with satisfaction any extension of their powers in that direction?—They have very considerable power.

1449. I mean in the exercise of it?—Certain standard tests of physical fitness might be laid down I think to ensure application of an equal standard throughout the country.

1450. Would you like to see that power extended to cover women, adults? At present it is confined to children and young persons; and "young person," I take it, ceases at sixteen?—Yes, I think that possibly with advantage the age might be raised. I am not quite sure whether I would immediately take that big step of the examination of all.

1451. You would limit it to women?—No; I think all persons under eighteen. Say one chooses the age of eighteen or twenty-one, all persons under that age should be examined as to fitness for employment.

1452. You would not place young women under certain liabilities that would not apply to men also, I suppose? You would be on your guard against interfering too much with the liberty of the female subject as distinct from the male subject?—Yes.

1453. With a little trouble the certifying surgeon, when he examines the child, might take certain observations in every case, and record those observations?—I think so.

1454. You think that would be a good thing?—Yes, for the purposes which I understand the Committee have in view, to note progress.

1455. And inasmuch as he examines every child when that child reaches the young person's stage one would have something like a progressive record?—Yes.

1456. Would you agree, if that could be brought about, that it would be valuable?—Highly valuable.

1457. I believe the certifying surgeons are paid for each examination?—They are.

1458. And if you put more on to them, I suppose one would have to make some provision for extra remuneration?—You mean to help the employer? At present the employer pays for these examinations.

1459. Do you think it is important enough to call for State assistance? It would be rather a hardship for the employer to provide for this additional information unaided?—It would have to be carefully weighed, no doubt, as to what would be the extra burden, and whether the subject is so important that the State should pay for it.

1460. During the period you have held your present office, have you noticed any marked change for better or worse in the physical health of women and girls employed in industrial life?—I have not. Sometimes I have fancied that I saw rather less than progress—rather a retrogression. But one sees so very much improvement in the health of women in the upper middle class that one is, perhaps, led astray by contrast and comparison only. I believe,

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on the whole, there has simply not been as much progress as there might have been. One gets to know more and more of the physical condition of the women in factories and workshops and it is very serious.

1461. (*Colonel Fox.*) If the improvement had been very marked in the upper middle class, surely it would be more conspicuous if the others did not improve in the same proportion?—That is so. Sometimes when I have thought they were going back I have explained it to myself by saying that we expect more than we should.

1462. Have you noticed that there is any difference between the upper and the lower middle class?—I think the upper middle class has advanced markedly in the last fifteen years.

1463. More than the lower working class?—Much more.

1464. (*Chairman.*) You doubt whether they have advanced at all?—I doubt whether they have advanced at all. Certainly it does not seem to me that they have advanced in the same degree as the conditions have improved in the factories.

1465. They have not responded to the advantages they enjoy?—No. Also I think it is very largely because of external conditions outside factory and workshop life.

1466. (*Mr. Legge.*) You say that the ill-health is comparatively seldom of a kind which is attributable mainly or solely to the surrounding conditions in the factories and workshops, although it frequently is aggravated there and generally is capable of being either improved or made worse according as there are or are not good hygienic conditions and reasonably good wages, without unfair and uncertain fines and deductions?—That is so.

1467. These indications of ill-health, of course, are not confined to factories and workshops, but are to be found elsewhere?—Yes, excessive prevalence of anæmia, malnutrition, inappropriate clothing, lack of physical vigour, gastric and various functional troubles, headache, indigestion, poor circulation, toothache and faceache, backache, are all to be frequently found amongst factory and workshop employees, but are not peculiar to them. Apart from special industries (to be touched on presently), where injury is attributable to the work itself, or particular methods of working, factory and workshop labour within proper limits as to hours and periods, and with such hygienic surroundings as are attainable, may be a means of improving the health of women and girls of the poorer classes. I think in some cases it has improved by those means—I mean where the employer has done his best. I have seen progress myself in individual factories.

1468. And you are aware of factories where the employers, though not legally bound to keep a doctor of their own, or to submit workers for medical examination, have done so?—Yes, I have. I am thinking particularly of a case where the employer had a very large workshop and had a medical woman attached to the place to examine them.

1469. You would like to see the extension of the medical inspection of women by women doctors?—Wherever it is practicable. I think it would tend to make the examination more thorough where girls and women are concerned.

1470. I suppose you would admit that one reason why there has not been more apparent improvement in the health of working women in factories is due to the fact that many of the most valuable provisions of the Factory Act are of quite recent date?—That is so. The provision for the ordinary ventilation of work-rooms did not exist in the Acts before 1901. It is true that a provision for reasonable temperature existed before, but the temperature might be raised or lowered by means which vitiated the atmosphere, and it was so very frequently.

1471. What about legal working hours?—The legal working hours remain very much the same. I think in many cases they are too long.

1472. Could you hand in a summary, which could be printed, of those hours?—I could prepare one, certainly, with the exceptions allowing for overtime and so on.

1473. Could you hand in a table setting out the main women trades individually in descending scale as to numbers employed?—I can hand that in now. I have prepared a table which does not pretend to be exhaustive. If the Committee desire, I could make it exhaustive.

1474. I think you claim, under this table, that though half-a-dozen of them have an overwhelming importance from the point of view of the total numbers employed, yet the other trades have a considerable significance, inasmuch as each may be concentrated in a particular district?—That is so.

1475. And affect the majority of the inhabitants in that district?—Yes, that is a most important point to be borne in mind.

1476. Will you kindly give us instances of that?—Interesting and significant for individuals as are the health conditions in the last ten trades on the list, the overwhelming importance of those in the first six are most obvious. The first four alone form 79·943 per cent. of the total female workers in factories and workshops. The importance for the community, however, of the health conditions in even the smaller trades, as in the greatest, is greatly increased by the tendency of trades to concentrate in localities. For example, india-rubber, seventeenth on the list (with processes certified as injurious to health), can and does exert a considerable depressing influence on the health of working women and girls in one town where large works are found. I say one town, but there are others. Not merely the notes of the inspectors, but observations in hospitals, dispensaries, and local practitioners establish this point. In the same town also great hemp works with injuriously dusty processes have to be considered. The importance of the nail and chain trade for women is not shown by the percentage its employees form of the whole female working population. Its concentration in a district of the Midlands, and the great extension of the "out-work" system in it, have to be reckoned with. Again, the risks and injuries of even a comparatively larger industry like the "potting" or earthenware and china trade assume a far more serious aspect by the concentration of nearly three-fourths of the whole industry in one district of England.

1477. Then you have laundries in London?—With regard to laundries in London I shall be able to supply the Committee with a complete table—it is incomplete at present—with laundries for England, Scotland and Ireland, showing that the great bulk of the laundry trade is in the southern half of England and very largely in London.

1478. Also you have lace and other trades in Nottingham, jute in Dundee, tobacco in Bristol, Liverpool and Glasgow, and clothing in Leeds, Stockport, Bristol and Belfast?—Yes, all these are very important. Some of the industries in this table one would like to group together in another way. Rag-sorting stands at the very bottom of the list with 3,048 female workers. That is the rag-sorting for non-textile trades. In the shoddy trade there is a good deal.

1479. In the West Riding?—Yes. That would immediately double the figures. And if one added the paper mills elsewhere, where very peculiarly dirty rags are sorted, you would bring it up pretty high in the table, somewhere near the nail and chain industry.

1480. Could you classify broadly the sources of injuries to health, life and limb?—The first class is accidents from machinery, explosions, falls or other external agents. The second class is injury or poisoning from toxic agents or injury from excessive dust, fumes or vapour or extremes of temperature. The third class is injury through overfatigue (long hours, insufficient pauses for food, carrying too heavy weights, etc.). The fourth class is injury through defective ordinary hygiene in the workplaces.

1481. As regards the first and second heads, do women or men suffer most?—As regards the first, absolutely men suffer most on the whole.

1482. But there are exceptions?—There are exceptions.

1483. (*Colonel Fox.*) I see later on you refer to the aerated water and laundry trades, where you say the risks absolutely are reversed?—Yes, those are the exceptions. There are enormously greater risks for women and girls in the aerated water trade.

1484. But as regards the second?—As regards poisoning the great majority of sufferers are men, again.

1485. Are we to understand that the work is the same for men as for women?—No. I am taking the whole of the industry throughout. Accidents are more liable to happen to men than to women.

1486. But when you compare the men with the women

you are comparing them doing similar work ?—No, the women and men are generally doing different work.

1487. The heavier work would go to the men ?—Yes.

1488. The more fatiguing work ?—Not more fatiguing in relation to the strength of the person.

1489. The men in some cases predominate enormously in the way of injury ?—Yes, because they are working more dangerous machinery.

1490. But they are working at the same factory ?—In the textile trades it is a different work or different part of the same factory.

1491. Absolutely different ?—I was going to give the total figures for poisoning.

1492. (*Mr. Legge.*) Not merely for earthenware and china ?—No. The total in 1902 of cases reported for men was 581, of which twenty-two were fatal; the total for women in 1902 was 100, of which three were fatal. But if you take an individual industry like earthenware and china you find the proportion reversed.

1493. You are taking the same number of women and men ?—No, in earthenware and china, on the whole, 44,000 men are employed and 29,000 odd women. There were forty cases of lead poisoning amongst men and boys, and forty-seven amongst women and girls.

1494. Then your fourth head, injury through defective ordinary hygiene in the workplaces, that would affect men and women equally ?—All classes of workers.

1495. What about your third head, injury through over-fatigue ?—I think that applies more to women and girls than to men.

1496. And you think that is an aspect of the problem which has not been sufficiently studied ?—Yes, I think the question of fatigue resulting from work ought to be scientifically studied.

1497. Has there been any attempt made ?—There has been an attempt made. The question has been discussed recently, for the first time broadly, I think, at the International Congress on Hygiene in Brussels, this last autumn, I was present, and some very valuable observations were made there, and recommendation was made that Governments should do all in their power to further this inquiry so as to arrive at something more like the scientific adaptation of work to the human motor.

1498. Fatigue, of course, can arise through long hours. You have already said you will hand in a table of the hours of work of women, and you have indicated your opinion in some cases that they are too long ?—I think they are certainly too long in some cases. They are longer for women than men would have in their organised industries.

1499. Another point is insufficient pauses for food. You think the pauses secured by law now are insufficient ?—In certain industries where it is the custom to allow only half an hour in the middle of the day for food, very serious results are produced—in London, for instance, in the dress trades.

1500. Which are the industries which give the best field for illustration of injuries arising from insufficient pauses for food ?—The clothing trade and dressmaking, particularly in the big towns. In the large towns where workers have to come a long way to begin work, and come from outlying districts, and only half an hour is allowed in the middle of the day, they do not have a proper meal. They start in the early morning, with an insufficient breakfast, and have a hasty meal in the middle of the day in a vitiated atmosphere. They have no time to go out, and have not sufficient money to get food from restaurants.

1501. Are there any other industries besides clothing ?—For long hours laundries are most important. There are long spells of work in laundries; and also in the food preserving industries you find exceedingly long hours, such as jam making, fruit preserving and fish curing.

1502. Another item is the undertaking of work which involves a strain, such as carrying excessive weights ?—Yes.

1503. Can you give me any illustration of that ?—The Inspectors of my branch have paid considerable attention to this subject. They have seen so much of enormously heavy weights carried by young persons and by women. I can give you illustrations. Illustrations may be given from food preserving works, the bleach and dye works class, earthenware and china works, various metal trades. During 1903 (in addition to numberless instances given in my published reports of earlier years), I have come across and received reports of the following:—In earthenware and china works (*a*) a frail girl of fourteen carrying a wedge of clay, weight 67 lbs., carries three to four of these an hour; (*b*) a girl of seventeen fetches eighteen lumps of clay a day, each about 56 lbs.; (*c*) a girl of sixteen fetches four lumps of clay a day for each of seven moulders—twenty-eight lumps—each lump 56 lbs.; in a brick works two women wheeling a trolley on rails, 812 lbs. Young workers frequently carry weights nearly as heavy as themselves; *e.g.*, weigh of young worker, 77 lbs., weight carried, 69 lbs. One of my colleagues weighed the worker and the burden here. That was during 1903. In a textile factory in 1903 complaint received and verified of cumbrous heavy weights, one young woman of twenty-three overstrained, under medical care, attributed to carrying bags 5 ft. by 4 ft., filled with fibre weighing from 48 to 59 lbs. In the tin-plate works many striking examples quoted in the annual report from Miss Squire's reports of immensely heavy, bulky weights carried as part of ordinary work by women—100 lbs. and over. At a sack works during 1903 I had the weights carried by a child of fourteen weighed—70 lbs. These are all very remarkable weights, and they were just incidental. There are a good many instances in the past published reports which are even higher.

1504. Other circumstances conducing to excessive fatigue would be dusty processes ?—Yes, extremes of temperature and working in a humid atmosphere.

1505. I do not think we need go into the details of those; it is the general question which occupies our attention. Still I suppose for all these products remedies of some sort are provided by law ?—Yes, and of course are being year by year better applied, more thoroughly enforced.

1506. Many of them in fact are of too recent an origin to enable us to see their effect yet ?—Yes, they are. Do you mean the injuries or the regulations are too recent ?

1507. Many of the legislative remedies and departmental regulations which have followed on them ?—Yes, they have not been long enough applied for us to state how far they are efficient.

1508. In what particular line do you think most definite improvement has been shown ?—On the whole in the application of exhaust ventilation to removal of injurious dust, and in the remedies for defective structural conditions in factories I have seen most advance. But there is, of course, an enormous amount to be done.

1509. In fact we have only made a beginning ?—Yes.

1510. All that you have been saying about the conditions of life in factories is very much the same as what any social reformer would say of the conditions of life outside the factory—the condition of the homes—with regard to ventilation, dust, and all the rest of it ?—Yes, you want greater cleanliness there, too. We are trying to get it in factories. I should imagine that over a considerable field of factories and workshops we have advanced beyond the conditions in home dwellings. Possibly some of the ill-health and anæmia one finds is more due to the home conditions than to the conditions in the factory.

1511. It is not only necessary to provide time in which people can take their meals in healthy conditions, but they must also learn how to cook their food properly ?—That is most important. I do not think nearly enough is done yet to teach the girls, while they are still within reach, the science of domestic economy and the practice of it.

1512. This anæmia and low vitality which you seem to single out as one of the marked features of the female working population is supposed to be largely due to want of proper attention in their childhood before they reach the labour age.—I should think so.

1513. Any improvement in the care of infants and young children and so on would also help ?—It would tell on the improved physique of the factory workers which one would see later on in their power to resist disease which may be associated with the occupation.

1514. Have you any considerable knowledge of the domestic servant class ?—I would not say I had considerable. I think I have a fair average knowledge.

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1515. Has it struck you that a very fair proportion of them suffer from this anæmia?—Yes.

1516-7. Are you aware of any means by which one could get statistics on that point? It is rather difficult we know. In your judgment are most young domestic servants working in better sanitary conditions than the average factory workers?—In the well to do upper middle class I should think they are considerably better: better food, and not quite such long hours. Then of course a very large proportion of them are suffering from anæmia. The way to get at the information would be the way in which we get at the information as to the health of the workers, by inquiring of the medical practitioners in the locality, or at hospitals, by noting the occupations of the persons treated at the hospitals as we have done in the laundry trade, for instance—Miss Deane has made a special study at the hospitals in the locality where laundry workers are much to be found—and by getting at the comparative ratio of women suffering from diseases likely to be engendered by the employment. I cannot think of any other way in which you can get any estimate as to the health of domestic servants.

1518. (*Mr. Legge.*) Could you summarise the significance of what you have been telling us?—I desire to emphasise my experience and point out its significance in connection with the scale of numbers employed in the industries shown on the third table, that progress in health in factory and workshop life is mainly a question of raising the ordinary general hygiene. Sufficient inspection and, where necessary, well-considered amendment of the law to make thorough cleanliness, sufficient ventilation and light, freedom from dust or extremes of temperature, adequate provision of proper sanitary conveniences, reasonable length of hours and adaptation of workers to the work for which they are fit throughout the kingdom are, if possible, even more important for the general welfare than remedies for injurious trades. You are dealing with the great masses when you are dealing with these subjects, general sanitation and length of hours and proper arrangement of hours.

1519. (*Colonel Fox.*) And a period of rest?—Yes, a proper period of rest.

1520. (*Mr. Legge.*) Of course, besides the effect the factory inspectors are having in improving the conditions under which work is carried on, there are local authorities as regards workshops?—An immense task lies before them now.

1521. What do you think of the way they are doing it now? Do you think they are doing it pretty well?—In some districts they are working it thoroughly well, but it is only since 1901 that they have had powers to deal with them in a systematic way.

1522. Where the inspector thinks they are failing in their duty he or she can step in?—Yes, with the authority of the Home Office.

1523. With regard to the value of repeated medical examinations and the great need of some standard test of physical fitness, you think this should be secured?—That is extremely important. The certifying surgeons have now a tremendous power for good. They can select young workers for certain processes. They may qualify their certificate.

1524. Indicating special work?—By refusing a certificate for a class of process that is not suited to them individually.

1525. Especially in that one case?—It may be done by rejection. They may decide to see for themselves whether the process is suitable for the individual child or young person. That is most important. You cannot get at what is proper normal work for a normal worker until you have weeded out the unfit for particular processes. One worker, a young person, might be quite fit for one class of work and able to grow and thrive under it and be unfit for another, and be gradually turned into an invalid through a wrong selection having been made.

1526. That power of discrimination has been granted?—Yes.

1527. (*Colonel Onslow.*) Is that power exercised in the case of boys as well as girls?—Yes.

1528. But only up to a certain age?—Up to sixteen years of age. Up to sixteen years of age an inspector may, if he or she shall see fit, specify the child or young person for re-examination with regard to the particular work the child is doing.

1529. Would you advocate that re-examination should take place in all cases compulsorily?—I believe the time has come for considering that.

1530. Automatically at a certain age?—Yes.

1531. (*Mr. Legge.*) Of course you inspectors are periodically conducting inquiries as exhaustively as you can into the health conditions of particular trades?—Yes, we are.

1532. You have given me examples of Miss Patterson and Miss Deane at work with regard to laundries, fruit-preserving, and fish-curing?—Yes, and india-rubber works.

1533. And lucifer match works?—Yes. In one or two instances very exhaustive inquiries were made, producing certain figures. In others more general inquiries were made.

1534. So far as is practicable, you think the inquiries of the inspector should be more extensive than they have been?—I think the inspectors could produce most valuable information, if they had sufficient time to continue those inquiries.

1535. And if they had assistance from the certifying surgeons or other certifying people?—Yes.

1536. You perhaps would agree that there is some advantage in having a central Government bureau or small office, whose business it should be to superintend, working through other agencies, the collection of statistics—not only from schools, but also from factories?—I do not see how you could have that carried on in conjunction with the Home Office administration very well.

1537. I meant, for instance, those people would be people of very wide experience, who would assist the Factory Department very much in deciding on what particulars to call for and in what form?—I do not think I could express any opinion about that unless I saw just what the scheme was.

1538. We have an Ordnance Survey and a Geological Survey. Is not the survey of ourselves just as important?—Yes, so far as it is purely survey, I think it would be admirable.

1539. You think that, so far as getting any facts about the health or physique of employees in factories and workshops is concerned, one must work through the inspectors and certifying surgeons?—I think so. I think that by duplication of inquiry you would only get confusion and irritation of the employers.

1540. (*Colonel Onslow.*) You say: "At the same time, sight must not be lost of the very large proportion of young workers under eighteen, many of whom pass later on to marriage out of factory and workshop life, after passing the critical years which more or less determine what shall be their future physical health, in work places which are under inspection." You are speaking of girls working under the Factory Acts. Notwithstanding the inspection of workshops and ventilation and other improvements, does the actual nature of the employment render those girls more unfit for marriage and for child-bearing than in the case of a country girl employed in country employment?—No, I should think not, on the whole. I think if you compare the health of young women in many rural districts it actually is not superior.

1541. The work itself does not cause physical deterioration?—No, only in individual cases.

1542. And the way it is done?—Yes, and the way it is done.

1543. If it is well looked after?—It ought to be a means of raising health.

1544. (*Colonel Fox.*) Is there any fixed limit of hours they have to work?—Yes, and overtime beyond for women over 18 years.

1545. May I understand there is a real fixed limit?—For all factories and workshops, a daily limit except laundries, where the limits are more elastic.

1546. But nothing in the way of a period of rest in the middle of the day?—There is a period of rest prescribed.

1547. It is fixed?—It is not fixed within definite hours. The employer may choose.

1548. He may choose the period of rest?—He may work ordinarily in the round of the clock—that is, seven to seven, or eight to eight, and out of that time he must let them stop work at least an hour before three o'clock and in all an hour and a half for non-textile works and two hours for textile factories.

1549. I understood from you just now that many of them only get half-an-hour?—They get half-an-hour in many cases because they start work at half-past eight instead of eight, and they stop for only half-an-hour in the middle of the day.

1550. That period of rest is purposely given for a rest in the middle of their work, is it not?—Yes.

1551. I mean that was their original intention?—Yes.

1552. Not to divide it into two half hours, but to have one long rest, enough for them to digest their midday meal?—Yes.

1553. That is not adhered to?—It is not laid down that the hour must come as a whole.

1554. That is where the importance comes in is it not?—Yes: they cannot give less than half an hour; that at least is prevented.

1555. (*Dr. Tatham.*) What is the earliest age at which young persons of either sex come under your official notice?—At twelve years in factories and workshops now.

1556. You have no official cognizance of the health of young children?—No; only incidentally seeing them when I visit the workers in their homes. Of course we saw them at eleven years of age during the first few years of our experience. Eleven was the limit until quite recently, now it is twelve.

1557. Does your organisation permit of anything like a complete register of sickness amongst the factory operatives?—It could not be now enforced, but there are a good many employers who fall in with suggestions in that direction, and we make use sometimes of sick clubs in the factories or workshops, and get a good deal of useful information in that way. I could give instances if you desire.

1558. You know I am sure that once in ten years at any rate particulars are published by the Registrar General with respect to the mortality of occupation?—Yes.

1559. But that is only mortality?—Yes.

1560. Can you see your way at some future time at any rate to the establishment of a corresponding register of sickness—you see it would be much more valuable?—It would be ever so much more valuable. If we had only some such system of insurance against sickness as exists in Germany then we should be able to get at it.

1561. You would appreciate it if you could get it?—Yes.

1562. It would be of enormous value to you in your work?—Yes. When we made that inquiry into the health of china scourers in Longton we had only the returns of death, the census returns, and the factory returns. All we could find out was that the deaths from phthisis of china scourers were fifteen times greater than that of other women in that locality. We could not get any further than that.

1563. With regard to the question of phthisical sickness amongst the operatives which you have just spoken of, is there any attempt, private or otherwise, to obtain statistical evidence of the prevalence of tuberculous phthisis amongst the operatives?—They have spoken of it.

1564. You speak of one class?—Yes, amongst the hatters' furriers—the felt hat makers. They have a sick fund. We got some statistics from them as to the amount of phthisis. It is a matter we are going to follow up sometime—the amount of sickness amongst them.

1565. As regards tuberculous phthisis more especially?—No, it is rather a rough classification of the various sorts of lung troubles. (*A document handed to Dr. Tatham.*) Those were personally given to an inspector by that society. By following the records and carefully visiting the workers who were not in the society one would get a great deal of information.

1566. I notice this is death, not sickness?—I am afraid it is so. However there are societies which keep registers of the administration of their sick fund to those who are only sick.

1567. If it were possible in any way to obtain such a register of sickness for your own purpose it would be enormously valuable?—It would be enormously valuable, yes. I had some help in the Potteries in one or two factories; the men helped the girls to start a sick fund and contributed to it largely, too. There I got information as to workers who were away ill at the time from the factory in receipt of sick pay. *Miss Anderson.*

1568. In the event of your hearing of the excessive prevalence of such a disease as phthisis amongst the workers in any particular factory, do you find any difficulty in getting at the facts from the factory owners, or do they object to your asking questions?—No, not ordinarily.

1569. They are willing?—Yes, it only wants a little patience, and going about it quietly. You generally get all the information in time.

1570. You have not heard of cases where in particular factories, for instance, there has been concealment?—Yes, there has been.

1571. I wanted to get that fact from you because I happened to know of certain cases of the same thing myself in times gone by?—Yes, in times gone by, but I think there is less of that, and I think it can be overcome.

1572. By the process of education?—Yes, by process of education. In the lucifer match industry, of course, there was a great deal of concealment, in one case wilful systematic concealment, but it all came out in the end.

1573. It was not necessary in that case to prosecute?—Yes, it was; there was prosecution by the Factory Department.

1574. And what was the result?—The result was perfect openness afterwards. We got all the information.

1575. You think speaking generally, the health condition of the factory operatives is improving, and not retrogressing at present?—The external conditions are certainly on the whole improving.

1576. And the physical conditions, the health conditions?—Do you mean the state of the persons themselves?

1577. Yes?—I do not think it is as great as the external conditions.

1578. You think not?—I think not. I have seen more change in the surroundings of the factory for the better, than I have in the actual condition of the women and girls.

1579. Could you account for that in any way?—No, I should imagine that it springs from the same general causes which prevent progress in all the women and girls of the poorer classes. They start insufficiently fed, and not properly clothed, and sometimes they have too sedentary a life, and sometimes too fatiguing a life. There is not enough knowledge from the beginning of how to attain personal health. They do not think about it; they do not know about it. There is not enough knowledge of how to make the best of food materials and how to make the best of clothing, and how you ought to have fresh air always in your rooms, and so on.

1580. And you think sometimes the ill-health of factory operatives may be really the result of mischief begun in early childhood, probably?—Yes, and continued throughout.

1581. So that they start with the disadvantage of impaired constitutions before they get to the factories?—Yes.

1582. You have no reason to believe factories themselves do much harm?—With the exception of the injuries which do come from them—a very dusty process, or heat, and so on. I wanted to make it quite clear that I do think that ill-health is often aggravated by it, but it is not essential in factory and workshop life; it can be remedied and it is being, very gradually, more or less remedied.

1583. Things are improving?—Yes.

1584. Should you think it is practicable in almost all cases to conduct factory labour without harm to the persons who work there?—Yes, except in some cases, and even in those our knowledge will advance, of course.

1585. (*Mr. Lindsell.*) I suppose the most direct bearing of the employment of women in factories which comes

Miss Anderson.

under your notice with regard to such an inquiry as we are holding now is how far the conditions of factory life interfere with their duties as mothers; do you consider the present conditions of factory life are such as to materially affect the physical condition of the race at the present time?—On the whole, comparatively not.

1586. It does not have a very important bearing on it?—No, I should think there were bigger causes to be considered.

1587. And so far as it did have any bearing upon it it would be in that way, in unfitting them for the discharge of their duties as mothers?—Yes.

1588. (*Mr. Legge.*) Or as soldiers in the case of men?—Yes. I think it could be made more a means of raising the standard than it is, and no doubt it will be in time, if people continue to think of factory legislation as a means of helping to raise the race, making the race progress.

1589. The men employed in factories and so on would be fitter as soldiers, and the women would be fitter to be the mothers of soldiers?—Certainly, and I think there is a growing tendency amongst employers to have a sense of responsibility in that direction, and it should be encouraged.

1590. You think at the present time, good as the recent factory legislation has been, that a great many of the children born of factory parents are physically deteriorated in consequence of their being in factory employment?—I should think so from the past, yes.

1591. But that is daily getting less?—Yes.

1592. Would you be in favour of more stringent legislation about women being employed in these factories immediately before or immediately after they have had children?—I do not see my way to further safe legislation in that direction. I think it is highly desirable that they should not be there.

1593. I think the time is a month now?—Yes.

1594. (*Chairman.*) Why should not that be extended to three months, say?—I do not think we have got enough knowledge of the number and circumstances of mothers who are being employed in factories yet—before we take a big step like that—to say that they shall not work. You have to think of the number that you may expose to the greater misery of starvation.

1595. Do you think that that would be so?—I do not know.

1596. (*Colonel Fox.*) Take the case of a widow who happens to have a child—her husband dies we will say a month or two before. If she is to be away from the factory for three months she must starve?—Yes, unless someone helps her.

1597. The factories do not assist her in any way?—No.

1598. (*Chairman.*) She might be a fitting object for charity. You say it depends in your opinion upon the number of married women employed?—Yes.

1599. Surely if only a few married women are employed excluding them from the factory for three months will not have a particularly great effect?—Except on the individual.

1600. Whereas if a great number are employed surely the prejudicial effect must affect a great number of children and therefore there is all the more reason for interference? Yes, but you have to think of the rates.

1601. I think the rising generation is more important than the rates?—It is, decidedly; but you have to consider that and the effect of restriction on the women. You do certainly drive them out upon charity or upon the rates if you prohibit them from employment

1602. You assume there is no husband in receipt of wages?—Yes.

1603. But there may be?—Yes, of course it may be that a woman goes back and deserts her child for a little money, but I think that is rare.

1604. (*Colonel Onslow.*) Is it not common in the cotton industry for the woman to do the work and the men to loaf at the street corners?—I think it would be more common in the laundry trade. I think we want more figures and more information as to what happens. It is very desirable that the women who are mothers should be kept out of the factory.

1605. In Dundee, for instance?—It is desirable they should be persuaded out if they can be persuaded, if they are going there when they ought not. But with regard to compulsion to keep them out, I think to force them on charity is rather a serious step.

1606. (*Chairman.*) The recent change in the law must rest upon principle or not. If it does, surely that principle would require that the prohibition of employment should extend to a period which is of real value?—To the mother or the child?

1607. To both?—Yes.

1608. (*Mr. Lindsell.*) Tremendous importance has been attached to this point. It has been instanced to us that Jewish children are so much healthier and stronger for that very reason that under the Jewish dispensation, the mothers are not allowed to go to work for some time before or after?—Yes, and that is a voluntary regulation of the race.

1609. Yes?—And it is accompanied by a provision for the mother from the start.

1610. (*Mr. Lindsell.*) We had evidence to-day that abroad it is made compulsory.

1611. (*Chairman.*) It is three months in Switzerland?—That is quite recent.

1612. (*Mr. Lindsell.*) It was said that in Belgium, Holland, Austria, and Germany, the regulation is the same as in this country, but in Germany the period is six weeks unless a medical certificate can be produced approving employment at the end of four weeks. In Switzerland the law goes further and prescribes total abstinence from employment in factories of women during eight weeks before and after child-birth.—I think it is highly desirable that it should be extended if it can be done without producing other and possibly worse evils.

1613. (*Colonel Fox.*) You do not want to go so far as three months?—I do not know enough to be able to say. I want more light on the subject. I do not think that women with young children ought to be in the factory if they can possibly be out of it.

1614. (*Chairman.*) It is accepted I think from what you have said that the conditions of factory employment are much more favourable to health and physical development than they were?—Yes.

1615. Even to those who go there with constitutions impaired?—I excluded from that general statement the industries where there was special injury—poisonous or dusty surroundings.

1616. You cannot make the process of certain industries healthy?—No, there you want to select workers who are best able to do it. You want to work in that direction.

1617. Could you say that the employment of women in factories is on the increase relatively to population?—No. I think the returns show that is not so.

1618. Is it diminishing?—No, it is not diminishing, but there is no significant increase with the exception, say, of the laundry industry. It is increasing there.

1619. Should you say that the conditions of factory life in their effect upon young persons disincline them to undertake home responsibilities?—In some districts I believe there is the tendency that way.

1620. Do not you think it is likely to be a general tendency?—No, I do not think so.

1621. The excitement and sociability and so on of factory life would prevent a woman settling down when she marries and looking after her children?—That is so in some districts. There seems to be a tendency that way, but not on the whole.

1622. You would not say it is a general tendency?—No. But they certainly do want companionship and they like to work together.

1623. You would admit, I suppose, that the employment of married women has a disintegrating effect?—Yes, it ought to be discouraged by all means possible, but I do think that more important than anything is to see that the women get sufficient knowledge while they are still at school. If it were possible to keep them longer at school, longer than the boys, in order that they should learn something about principles of domestic economy, that would be most important.

1624–5. Or at any rate concentrate the acquisition of

knowledge of that sort upon the last period of school attendance?—Yes, it is most important. Everything that can be done in that direction should be done, and every step that can be taken to convince young women of the honourable nature of that work should be taken.

1626. In reference to the point I was asking Mr. Booth, are many women employed in small workshops where the immediate employer is merely a sub-contractor of some man in a larger way of business?—Yes, they are, in the clothing trade.

1627. Because Mr. Booth refers to that class of employment as having about it all the worst evils of the sweating system?—Yes.

1628. He suggests in this book of his a way in which he thought that might be dealt with, and that was making the owners of houses used for industrial purposes legally liable if improper conditions prevailed. He said he upheld the same view when giving evidence before the Royal Commission on Labour, and that he reverted to that suggestion because he believed that in no other way could the evasion of the Factory Acts in small workshops be checked. Referring to his book I said, "With a view to checking the unfavourable conditions in which those who work on small premises are often condemned to labour, you advocate a double system of license by which both the owner of the premises and the employer of labour may be held responsible to each other and the State," and he agreed to that. Then I asked, "How far in your opinion do the provisions of Part VI. of the Factory and Workshops Act 1901 go to provide a remedy for the evils you describe," and he answered that they did not touch them at all.

1629. (*Mr. Legge.*) I had that out with him and we went into Section 108?—Part VI. relates to home work. It seems to me that affords a better prospect than anything we have ever had yet. We are at the beginning of getting real control of sanitary conditions in workshops and outwork.

1630. (*Chairman.*) But no attempt is therein made to make the owner of the premises responsible?—The local authority who administer it have power to attack the owner. *Miss Anderson.*

1631. Surely a district is only charged with the duty of bringing it home to the employer and not to the owner of the premises?—But that is in addition to the power they possess under the Public Health Act to require owners of property to make them in a healthy condition.

1632. It is when the owner is an employer himself, is it not?—No, the sanitary authority, I believe, has power to visit every dwelling house in the district; in fact it is their duty. It is a house-to-house visitation, and of seeing that all the premises are in a sanitary condition.

1633. But for the purpose of labour?—They have the additional powers given by Part VI. of the Factory Act.

1634. Then you think the case is met?—I have a little summary here of the powers of the local authorities which might perhaps be useful. It gives a history of the powers to deal with workshops by the local authority. (*Document handed to the Chairman.*)

1635. It is in the preface to this?—And there is a summary of the existing law.

1636. What book is it?—It was a paper which I prepared to cover the whole field of the sanitary conditions of workshops for the International Congress on Hygiene. The power of the local authority is briefly summarised there. They have both powers. The Factory Act only adds to their powers for particular cases of out-work. The whole of the sanitary condition of workshops is regulated; the ordinary sanitation of workshops is regulated by the law relating to public health.

1637 (*Colonel Onslow.*) You think the existing powers are quite sufficient?—I do not say that. They are a great advance on anything we have ever had before. They were only enacted one year ago and we are waiting now to see their effect. I do not see how we very well can fundamentally alter the law at this stage by requiring a licence. It was thoroughly threshed out at the time.

FOURTH DAY.

Wednesday, 20th January, 1904.

PRESENT.

Mr. ALMERIC W. FITZ ROY (*Chairman.*)

Colonel G. M. FOX.
Mr. J. G. LEGGE.
Mr. H. M. LINDSELL.
COLONEL GEORGE T. ONSLOW.
Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY, (*Secretary.*)

DR. ALEXANDER SCOTT, M.D., called; and Examined.

1638. (*Chairman.*) You are certifying factory surgeon of Glasgow?—That is so. *Dr. Scott.*

1639. Will you kindly state for the information of the Committee what your experience has been?—For a short time I was certifying Factory surgeon to a small district, but while acting as such I had considerable experience in general practice amongst an industrial population of factory employees. Then about five years ago, I was appointed to a large district in Glasgow where I had far more scope for investigation than I had in that place, except those cases that came under my personal knowledge as a general practitioner. Besides that I am one of the physicians to a department of Glasgow Royal Infirmary, the largest institution of the kind in Scotland. Then I have also been medical officer to Parkhead Reformatory for boys.

1640. You also have been chairman of the Shettleston School Board, I understand?—Yes.

1641. Are you chairman at the present moment?—No, I had to give it up owing to the hard work. I was six years chairman of the District School Board.

1642. You have written upon subjects relating to the health of the people, I understand?—Yes, a great deal. I will give you a few examples of them.

1643. You have set them out in your précis?—These are just a few of them, and I have copies here if you would like to see any of them. The following are contributions on diseases of dangerous trades:—(1) chronic lead-poisoning in dye-works, with special reference to its prevention; (2) poisoning by carbon-monoxide in ammonia works; (3) the danger of anthrax in the manipulation of horse-hair; (4) nervous tension among railway servants as a cause of accidents; and (5) medical inspection and supervision of workers in factories.

1644. I do not know that we need go into these cases,

Dr. Scott.

with which you are familar. It would probably take up an unnecessary amount of your time. They seem typical of the diseases that people employed in factories are liable to. But I understand you have some remarks to make upon them—would you kindly indicate what those are?—Well, first of all, I give you these cases for the sake of explaining to you the wretched condition, I might almost say, of factory workers in 1887, when my attention was first drawn to the prevalence of lead poisoning and to compare it with my experience of last year in a much more extended area. You have the cases there that I detailed in my paper in 1887, and I need not go over those. Coming to 1903, I have only five cases of lead-poisoning that came under my notice. Now the first one was a case of very great interest to me. I was physician to the Royal Infirmary and a patient was sent to me, by a practitioner in the suburbs of Glasgow, suffering from lead-poisoning with complete paralysis. (That was a recruiting case and I have got the history of it). This is an extract from the Ward Journal to show you how these cases originated and it was written before I was asked to come here. It is headed "Dr. Scott's Note, 25th November," and goes on:—"When between twelve and thirteen years of age the patient began work in a pottery and was engaged dipping the various articles in a solution of lead glaze. He continued at this work for six years, and although there were no special rules in force for careful washing of the hands and the use of the nail brush, the patient never suffered from any symptoms of plumbism. He states, however, that always before taking food he washed his hands. After having served a year in the Army he was next engaged for two years as a hammerman"—a hammerman is a sort of a smith—"About one year ago, he resumed his old employment as a dipper when shortly after that date the symptoms of the present illness"—that is the lead-poisoning—"began within six months. How is this to be accounted for? For at the present time special rules are employed whereby the dipper must wear an overall, must wash carefully, and must use the nail brush. The reason is apparently to be found in the fact that the patient's habits have not been so regular and temperate as formerly." How interesting that case was! Here was the boy who went in at thirteen years of age and worked as a dipper in this solution of lead glaze for six years, and never suffered anything from it. He had the advantage of keeping his hands and arms clean. After that the next story which we have, he becomes wild; he gets a better wage, and he becomes intemperate, and joins the Army, and after a year his parents bought him out.

1645. Do you attribute that to the demoralising effects of the Army service?—No, not at all. It was after he had been out of the hands of the factory inspector and after he got a bigger wage, he became a little wild and then joined the service, becoming a soldier. Very well, then, his parents bought him out a year after he joined the Army, and when he came home he did not resume his former employment; he went to do hammerman's work; but his evil habits had not deserted him, with the result that he continued to be irregular and intemperate. And the man who, as a youth, as a growing youth, could work as a potter and be impervious to this lead poisoning, within six months developed the most violent form of lead poisoning after his physique had been depreciated.

1646. And I presume he was lax in observing precautions?—Yes; lax in that too; it was within six months. He ought to have been in better condition than he was as a youth of thirteen years of age. That case I thought would be interesting.

1647. (*Colonel Fox.*) You think that it had lowered his vitality, and that he was less likely to resist disease?—That is the point. That was the case of B.D. My next were three cases of men engaged in enamelling baths with lead powder. They have to use a powder made of lead and shake it over this iron bath when it is red hot, and thus inhale the poisonous dust. Strange to say, this does not come under the Factory Act, and all that we have got to do is to report it. There is no medical supervision or inspection, because it is not a plate and does not come under the provisions of the Act. These baths are not said to be plates. It is a pure quibble. In each of those three cases these men all earned good wages, contracted this disease from the same cause—intemperance—a lowered vitality, as you said, and therefore they took this disease. The next case was that of a fitter who was using white lead, and neglected to wash thoroughly. Of course I have given you the remarks about these cases, but there are many in addition which are not in this list which should come under medical inspection and supervision. That is all that I have got to say with regard to lead poisoning.

1648. (*Chairman.*) The last cases were not persons whom the Factory Acts affected?—The Factory Act does not look after them, and even at the present moment there are no special rules for them. These three last men that I have just referred to, were exposed to lead poisoning very much indeed.

1649. Would you make it an obligation on the employer to employ a doctor for this purpose?—Well, strange to say, in two of those cases the employer had a doctor. What was the good of him? He went and reported to the Inspector of Factories that there was a case of lead poisoning; whereas when I go in under the Factory Act, I say to a girl—"Now you have got a blue line along your gums. If you do not be more careful to wash your hands, and to keep yourself perfectly clean, I shall suspend you. You are taking lead poisoning." At the same time I say to the Employer—"This girl has got incipient lead poisoning." There is nothing that these people fear more than suspension by a certifying surgeon—"Unless you be more careful—you have lowered your vitality by taking alcohol—we will suspend you for two or three months."

1650. But those persons were not under the purview of the Act?—Not at all, but that is what I recommend.

1651. Those who are engaged in work that results in lead poisoning you think should be under the purview of those Acts?—Yes.

1652. (*Colonel Fox.*) What did you say about that blue line?—It is the blue line along the gums.

1653. (*Chairman.*) What have you to say with regard to the workshops that are detrimental to health?—Well, that is an anomaly altogether. The certifying surgeon examines girls in factories and not in workshops. Workshops in my experience are not so healthy as a factory. They are all sitting sewing, for instance, in a great big workshop, and they are mostly young growing girls and young women, and what I have found is that they suffer most from defective ventilation.

1654. Did not the recent Factory Act touch this?—It did, but not with anything like medical supervision. Here is the strong point that I have marked on my proof, medical inspection, to note that these poor girls are not suffering from any disease.

1655. You think there should be medical inspection of workshops.?—Yes, the same as for the factories, and above all to work this test for carbonic acid—C.O.2. It is horrible, the ventilation and the amount of carbonic acid that is in it. And then the dust, supposing any of them be tubercular, which is very likely, and which is highly dangerous in that respect—if they spit on the dry workshop floor the danger of tuberculosis by infection is very great.

1656. Do you think, as far as these factories are concerned, the changes in the recent law are sufficient for the ventilation?—Yes.

1657. Do you think that they should be extended to cover workshops? Is that your view?—Yes, I believe in that strongly.

1658. Will you state what you know as to the comparative results of examinations and rejections during recent years. It is understood the same standard is applied, I suppose?—The very same standard. I have made no difference whatever. As I have already told you, in 1898 I had a very small district, but then I was appointed to a larger district in Glasgow, and during the year 1898 I examined 1,912 youths, that is, children and young persons. Of these 904 were rejected.

1659. Just under 1 per cent.?—Yes. In 1899 a much larger number were examined, 2,305, and 1 per cent. were rejected. In 1900 there were 1,620 examined with 1·2 per cent. rejected. In 1901 there were 1,895 examined, and ·67 rejected. In 1902, 1,736 were examined, and 0·8 per cent. were rejected. In 1903, this last year,

there were 1,912 examined and 0·4 per cent rejected—a considerable diminution, you see.

1660. Yes, but you do not attempt to infer that that diminution is due altogether to an improvement in the physique of the persons examined?—I would say so. That is noticed further on where I point out that it decreases just as the age limit was raised, and as you put away the number of half-timers.

1661. You were dealing with a stronger type?—Yes, far better.

1662. Would you give us the medical reasons for those rejections?—The chief medical rejections are first, imperfect constitution and debility. I mean children of low vitality and weakly debility.

1663. A child damaged from its birth?—Suffering from its birth; no rich blood in it. Then second, and I give them according to the numbers rejected—Number one was the most important, that is imperfect constitution and debility, and next in importance is number two, rickets and tuberculosis; number three, ophthalmia and bad eyes; number four, bad legs and flat feet; number five was mental defects. The decrease was most marked in rickets, ophthalmia, and bad legs and flat feet.

1664. The first of the reasons you give for the decrease of rejections does not point to any improvement in the health of Glasgow-bred children?—That is to say, rickets?

1665. No, the reasons for the decrease—that hardly points to any improvement in the health of Glasgow children, as such. As you say, the reasons for decrease in rejections are the influx of country-bred children. You say that produces the decrease?—That is my first reason. There is an enormous influx of country people coming into Glasgow at the present time. That is one of the reasons why there is this decrease.

1666. What becomes of the persons they displace?—I have something to say about that later on in the next paragraph. The first reason I give is the influx of country-bred children—there is a large number of them. Then the second reason I give is this—of those rejected the youngest were in the majority; the younger the children you find the greater number of rejections.

1667. When you say young you mean between fourteen and sixteen?—Say, it is fourteen now. They can be allowed to work now between thirteen and fourteen, if they get a certificate from the schoolmaster, which is a stupid thing, and which makes our work all the more serious. If you notice my numbers, they have decreased very much since 1900, and the reason of that was, there have been no half-timers since then, and I am awfully thankful about that, because it was a terrible mistake to have half-timers. The children are brought there and are not fed and cared for with the same regularity. Not only that, but the fact that they went the half-day to the school and the other half-day to their work made them irregular in their habits. It did not make them punctual and those boys grew up to be loafers and not at all like those boys who come in at fourteen and get their food regularly.

1668. You mean they have settled habits of industry?—Yes. And now the age limit is raised to fourteen years, except under special circumstances which I have already mentioned. Then here was the case of William Macdonald which to me was intensely interesting. That boy I rejected because he was suffering from imperfect constitution and debility. He was not fourteen years of age. I rejected him. What did he do? He had got this certificate from the schoolmaster or the board school to say that he was allowed to leave the school. He quietly goes away and gets another boy's certificate of birth, a boy called Todd, and passes down to another works, and presents his certificate as "John Todd," and passes, and I hear nothing more about him till within two months. That boy is brought to my ward in the Royal Infirmary in Glasgow, suffering from chronic rheumatoid arthritis, just as if he were an old man. It was a most interesting case, but to the day of his death that boy will never be better, and that is owing to his physical development having been arrested by the premature employment. He was employed at bottle work, a hard and exhausting occupation. With regard to ophthalmia, I have had no rejections for two years, owing to better home comforts, better hygienic and sanitary precautions. That is remarkable. But in examining this public school I found no fewer than twenty-five children suffering from ophthalmia; the epidemic had set in and they had not the means of keeping it down that they ought to have had. When I became medical officer of the Park-head Reformatory there were three cases in the year. We have not had a single case of ophthalmia for ten years. If we see anything about their eyes, however trifling, we rest not until it has been stamped out. They have to be isolated. If these twenty-five cases had occurred in our Institute, His Majesty's Inspector would have demanded an explanation.

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1669. What is the prevalence of this sort of ophthalmia due to?—First of all, it is an infectious disease of the eyes. Secondly, it is due to dirt.

1670. Is it owing to neglect at the period of birth?—Very often it is—sometimes it is. But what I am speaking of now is school children; but home life seems to be better now because there are very few cases. I have had none for two years in the factory. I have to be very careful to look out for a boy or girl suffering from ophthalmia, in case the eyes be affected by their work. You would ruin that person's eyes for ever, and besides spread the infection right through, if you did not take some steps. Well, that is very much better. Then the next note I have is—imperfect growth and development are favoured by city life, by cold, damp, atmosphere and by ill-ventilated houses.

1671. Is it not the case that the conditions of life of the great mass of the people are perhaps harder and more depressing in Glasgow than almost in any other town in Great Britain?—That is so. You will have boys placed here, country-bred children.

1672. What becomes of them?—I have had the stevedore district, the district along the banks of the Clyde, a very poor district; not only that, but the houses are miserable and they go down to the very harbour. They are dirty, awful dwellings to be in. They call that the Finniston district of Glasgow. Well, now, in that part you have some of the finest shipbuilding yards in the whole of Glasgow. The chief industries are ship-building, engineering, boiler-making, and iron-moulding. All first class shops. I was appointed on 1st October last, and as I surveyed the surroundings and considered the nature of the work I anticipated a good many rejections. Not at all. They were splendid boys. I measured several of their chests, and did not get one under twenty-nine inches—they were splendidly developed boys.

1673. What age were they?—Fourteen; that is the time they come to learn the trades there—say from fourteen to fifteen, and I have not had a single rejection. Why? Because these boys are sent to a trade to which they are required to serve an apprenticeship, perhaps for seven years. It is a splendid trade, the shipbuilding trade—it is a splendid trade to be an engineer on the Clyde. The prospect is a very good one for a working man. Therefore a very good working man, a well-doing working man, is anxious that his son should go down to this excellent place to learn his trade. They, therefore, come here, big strong boys, and any other ones will not be employed. The question that arises is the one you put to me: what becomes of the poor miserable wretches running about the streets where the works are? What I found out was that there are large works in the district, such as printing, lithographing and book-binding, and those undergrowths rush into there or else become loafers, for they are not fit for heavy work. But the majority of these cases of undergrowth have been born and reared in these wretched houses on the banks of the Clyde. And yet they are working people; they are not like the thieves of the slums, but actual working people in those houses built hundreds of years ago on the banks of the river and never improved.

1674. Are they frightfully overcrowded?—Yes.

1675. Is the Corporation doing anything to improve these things?—They have done their very best.

1676. But they must proceed gradually, I presume?—Yes. I live out of Glasgow three miles, and the number crushed out by the city improvement, where they can get a cheap house! they are simply shifting them and sending

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the thieves and dirty people out there. But the Corporation is simply proceeding on the right lines in that respect.

1677. Is that class multiplying, or becoming more or less sterile?—I think there is not much improvement, I am sorry to say.

1678. Have you any suggestions to make as to the line the statistical inquiry should proceed upon?—With regard to the factory employees?

1679. With regard to the next subject heading of your evidence?—That is the children attending public school.

1680. Yes.—I thought this might interest you, although your Secretary did not mention it in his first letter to me, with regard to the examination of children, and I have a knowledge of children in the public school. I examined the public school on the 12th of January of this year. Now the parents of these children are all working men, that is to say, belonging almost exclusively to the industrial population. As you can understand, three miles from Glasgow, any person who is well off sends his children to a higher class school in Glasgow. Therefore, I thought that this was a very good example of a school of working men's children and I examined them. There were 856 children present. It was a mixed school. I simply wanted to know, first of all, with regard to how these children would stand supposing they were presented to me as a certifying factory surgeon. Supposing they were fourteen years, how would they stand, how many would I reject on examination?—I took rickets first. I found that in that school suffering from rickets the proportion was 1·16 per cent. Then I took the different ages and I found between ten and thirteen years of age the percentage was 0·29.

1681. Was that with regard to rickets?—Yes. Then between six and ten years of age the proportion was ·87 per cent., nearly four times as much, showing that youth was the point—that between six and ten was the time in which there was great prevalence of rickets. Well, then I took my next subject, undergrowth; and as to undergrowth among those 856 children the percentage was 2·8 per cent.

1682. (*Mr. Legge.*) What was the standard for height?—I did not measure them for height; I could not measure them, but I just had every class before me and went round each of them, and saw one that I knew ought to be much taller than he was.

1683. It was a standard fixed by observing the mass of the children before you, was it?—That is so. In the short time that you gave me I could not have got up the particulars, and I took the survey such as I do in examining under the Factory Acts. As to the undergrowth of those, I said that the proportion was 2·8 per cent.; between ten and thirteen the proportion was 1·12 per cent.; between six and ten it was 1·68 per cent. Then the next thing I came to was eyes. In that school there were 25 children suffering from diseases of the eyes in some forms that ought to be attended to. As there was an epidemic, I do not think it is worth while my giving you the different ages, but with twenty-five that gave us the percentage of 2·92 per cent.

1684. (*Dr. Tatham.*) Will you mind my asking you, as a medical man myself, if you will kindly say in what form you found rickets to show itself more especially?—In bad legs.

1685. You mean bent bones?—Yes, bandy legs.

1686. What is your standard which would lead you to reject a person?—For example, now, with a growing boy, if the leg was bent at all you would have almost surely flat feet. That is always my standard. Whenever I found the leg going, I said, "Now, we cannot allow this; this must be attended to in the hospital or somewhere else." The torture which these children sometimes suffer, who are not under the Factory Act, and are perhaps doing some kind of work, from these flat feet, is very great. They are brought to me in the Royal Infirmary and their fathers and mothers say to me that they have been very much troubled with rheumatism. Nothing of the kind; they are suffering from plain flat foot arising from the condition of the limbs, so that I generally take the two together, and reject them, knowing it would be bad for them.

1687. Have you any degree of deformity of rickets to warrant you in rejecting them?—Yes.

1688. Is it the same high standard commonly adopted by factory inspectors?—I really do not think so.

1689. You spoke just now of ophthalmia: Is that purulent ophthalmia *i.e.* the granular lids so common in school children?—Yes, granular lids.

1690. That is caused by the common use of towels in washing?—Yes, and want of cleanliness. If I get a strange case into the infirmary of the Reformatory with blepharitis, I am just in terror when that boy goes out to see his friends in Glasgow in case he should take that ophthalmia; that boy with blepharitis goes into the slums, and his eyes are peculiarly susceptible, and he no doubt will take the infection with him.

1691. Do you reject such cases of ophthalmia in the factory?—Yes, first of all I have to do that, for the child's own sake. He is perhaps a weaver or works with papers. Then, secondly, I have to reject it for the sake of others. It would spread like wildfire, as in this case; here there are twenty-five at the present moment. Well, I have said with regard to these eyes the epidemic was there, and that I did not take it into account as really a disease of that school, which I have examined. I have something to say about it. There was one with mental defect. The total number rejected was sixty, that is to say, in a school of 856 it gives a percentage of 7 per cent.—of 856 in that school presented to me at fourteen years of age I would have rejected 7 per cent. of them.

1692. What is the test of mental defect? Is it simply dulness of intellect?—If he is too dull I would not pass him. I was sent the other day to inquire into an accident to a boy, an apprentice fitter. He was a stupid looking boy, and he was between seventeen and eighteen years of age. So he told me quite intelligently how the accident was caused. Then his mother said to me: "You know he is an unfortunate boy." I said, "How?" She said, "That is the third time he has been injured, one time he nearly got his arm torn off, the other time he got his arm broken, and now he has got his fingers taken off." So I said to her the boy looked fairly intelligent. At the same time I began to question him and I found out that the boy was just a stupid, heedless boy, and I said to his mother, "Now, don't you think it would be very much better to change this boy's occupation?" "Why?" And I told her. She said "I think you are righ.."; Of course that was beyond my duty. I had no business under the Factory Acts to do it, but I told the mother that she should not allow that boy to work among machinery, and in my report I simply said that, unofficially, I had advised that this boy should not be allowed to work in this place again, as it was the third time he had suffered by an accident from machinery, and that in my opinion it was due to mental defect.

1693. To extreme mental dulness?—Yes; he would do to fill a barrow and carry a load to a station, but when he sees the machine he has no idea about his fingers. He was thoughtless and careless.

1694. You do not call it disease of the mind or brain: you simply would consider it backwardness or dulness?—Simply stupidity. There were between ten and thirteen years of age 2·3 per cent., then between six and ten years of age there were 4·6 per cent. rejected—still holding out what I say, that the younger you go you get the greater number of rejections. Then another thing which may interest you, when examining this school of 856 children, I took occasion to ask them regarding how many of them had porridge and milk for breakfast. Now this was very interesting, inasmuch as the fathers were working men.

1695. (*Chairman.*) Were the fathers earning good wages?—They were coal miners and such.

1696. Did they get very good wages?—They were getting 5s. 6d. and 6s. per day, the carters and labourers, up to engineers and mechanics.

1697. All more than £1 a week, I suppose?—No, some of the labourers might have 18s. or 19s. I would say not less than £1. Then I asked them how many had

porridge and milk for breakfast, and they came out to exactly 90 per cent. that took the porridge and milk for breakfast.

1698. That is rather remarkable?—That is very remarkable. It is very interesting. First of all I said to them, "How many had porridge and milk this morning." There were 65 per cent. held up their hands for porridge that morning. But you must remember that while I was making the investigation it was the time of festivities.

1699. After Christmas I suppose?—They had hardly got over the festivities. I said, "I know many of you take porridge" and I said, "Now then those boys and girls who did not get porridge this morning, but were in the habit of getting it, hold up your hands," and I got 90 per cent. of the whole of those children who took porridge and milk. I shall have something to say about the reformatory on this point.

1700. (*Colonel Onslow.*) Your 7 per cent. is the rejected from all causes whatever?—From every cause whatever in that school. Supposing 856 children to be presented to me under the Factory Act, I would have rejected 7 per cent.

1701. (*Dr. Tatham.*) Is that a high percentage?—Not a very high percentage.

1702. And you attribute it to being fed on unwholesome food not porridge and milk, and getting plenty of it it?—Yes; good milk.

1703. (*Mr. Legge.*) What sort of milk, was it buttermilk?—No. Sweet milk, pure milk.

1704. (*Chairman.*) Not tinned milk?—Not separated milk, as we once had at the reformatory—it is pure milk as it came from the cow.

1705. Do you desire to establish a comparison between the condition of those children and those in the reformatory schools?—I thought that my experience there with regard to that might be useful. What I was going to establish between them was this: this is a very remarkable communication by James G. Thompson in 1884 in a paper read to the Philosophical Society of Glasgow. He was very much interested in the number of cases of rickets in Glasgow. You know at that time Glasgow was simply notorious for the number of people who had bad legs and pigeon chests. It was something terrible.

1706. You mean crooked legs?—Yes; bandy legs. Well that gentleman was quite a scientific man, and he was taking a great interest in this subject, and got up an enormous number of statistics. He went into the most typical streets in Glasgow, and waited the whole day there to see the children, and counted the number of them with bad legs and flat feet. The number of children he saw gave the percentage of bad legs and flat feet. The list was something terrible as you will see from that paper (*handing in the same*). Besides he went out to several villages and towns surrounding Glasgow, such as Lanark, Strathaven and Larkhall. These are towns and villages on side Glasgow, and he gathered statistics there as well. I thought that coming before you I might be able to show you that really this condition was improving very much in Glasgow. You know it was the home of Osteotomy, and statistics prove that there were hundreds of cases for every ten that there are now, and not only that, but the number of cases of flat feet that comes under my experience in the Royal Infirmary is not one-tenth of what it used to be.

1707. (*Colonel Fox.*) What is the principal cause of rickets amongst the poor?—Soft, ill-fed bone.

1708. Is it owing to bad nourishment?—Yes.

1709. (*Colonel Onslow.*) No farinaceous food?—Not proper food, but bread and jam and tea, instead of milk and oatmeal and potatoes.

1710. (*Colonel Fox.*) Now you say lately they have improved. Is that owing to better feeding?—Yes.

1711. (*Chairman.*) Is it due to more consumption of sugar?—That is a mistake: that is not scientific.

1712. (*Dr. Tatham.*) You are not afraid of sugar?—No. I agree with Herbert Spencer in his famous essay.

In this paper which I have given your chairman, Mr. Thomson examined in the town 755 children, and he found that out of that number 22·57 per cent. were effected with rickets.

1713. (*Colonel Fox.*) 22 per cent?—Yes: 22 per cent. Then in those places in the country he examined 400 children and he found 6 per cent. affected.

1714. (*Dr. Tatham.*) Against 22 per cent. of the towns?—Yes. Taking town and country he examined 1,135 children, with 17·7 per cent. affected with rickets. Now if you take the case with the figures for many places now you find that there is a very marked improvement, and that coincides with my own experience as a physician of Glasgow of the Royal Infirmary where I did not get them as surgical cases, but as cases of rheumatism and entirely due to flat feet and bad legs. In the school where I examined 856 the percentage affected was 1·16 per cent.

1715. Before you pass on may I ask you whether you have made any observations with regard to the prevalence of pulmonary tuberculosis?—No. In the time that you gave me to look after those children I had no chance of getting that out. Under the Factory Act with regard to tuberculosis it is out of my duty to look after that in the present state of the law, but with the good will and consent of the employer I sometimes have the chance of examining a girl or boy, but I have had no large experience.

1716. You will agree with me that the prevalence or absence of phthisis amongst children of this class is a very important matter?—Very highly important.

1717. Do you think if sufficient time were given, you could provide the Committtee with statistics as regards the presence of pulmonary tuberculosis?—I think so.

1718. It would be of enormous value, probably more than any other point we have to consider?—I had the report of the Physical Inquiry lately, and in that Inquiry there is a report of Dr. Leslie Mackenzie, of Edinburgh, and one of Dr. Matthew Hay, of Aberdeen, giving this very thing that you are speaking of, and I have no doubt that Dr. Chalmers will be able to say something about that. He is the medical officer of Glasgow, and I have no doubt that he will give you that information, as he told me that he was coming before this Committee.

1719. But I think it would be very advisable if you could add to this information in your proof of evidence when it is sent to you?—In the case of factory children or school children?

1720. In the case of both?—Just my own personal observation?

1721. Yes. In England the question of phthisis prevalence is of vast importance in this relation, is it not?—It is very important indeed. When I was getting up this work for the Committee I was impressed more strongly than ever how it is that it is allowed to be spread broadcast. There was one strong point that has never been touched under the Factory Acts and that is employment of children in coal mines. There is no medical examination. Fancy a fine factory, a factory inspected by His Majesty's Inspector, in which no young person is allowed to enter unless he is examined by the certifying surgeon, and yet with regard to the coal pit with all its grime and dirt and misery and damp there is no medical examination of those boys. In the night time I have heard these wretches coughing as they were going along; and yet these boys go down these pit-holes where the air may be impure, and water constantly dripping from the roof. The only condition is that they are to be of a certain age, and it does not matter to the manager whether they are scrofulous, ricketty, phthisical, or anything else—they get them into the pit.

1722. (*Colonel Fox.*) You explained to us just now that there is a great diminution in the number of children suffering from rickets, and you attribute that to better nourishment. Am I right in that?—Yes.

1723. Can you explain what has been the cause of this; how has it come about, this getting of better nourishment?—The social condition of the working man is very much better. He gets far more, and if he would not drink whisky he would be far better off; and the food is cheaper, in fact they get more food.

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1724. (*Chairman.*) And they have better water, I suppose?—I will come to that.

1725. (*Colonel Fox.*) How do you explain that? You say that it is far more plentiful?—Lately, when passing, I have seen pieces of bread thrown aside by school children, a thing which would never have been thought of at the country school when I was there. They have more food, their social condition is better, they are far better dressed, they go to church better dressed, and the houses are better. Since the passing of the Act in which the medical officer is appointed for each county, houses that were insanitary and uninhabitable have been taken down, no matter whether they are in the country or in the town. The people's surroundings are more healthy and the sanitary precautions are far better. Then again, all infectious diseases are just looked after at once. They are taken care of more than they used to be. They always say that the rickets in children in our city was due to the want of lime in Loch Katrine water. There is a want of lime. It is the finest water in the world if we had a little more lime in it. But apart from that the rickets are disappearing.

1726. (*Chairman.*) You go as far as to say that?—Yes.

1727. (*Colonel Fox.*) Is there any difficulty about the milk supply amongst the children?—No. We can get plenty of milk. But it is the dishonesty of the milk seller when he waters the milk.

1728. (*Chairman.*) Does it come to the market in a clean condition?—Yes, if it is watched. But with regard to the watering of the milk—this is what I was going to refer to as regards my experience in the reformatory school—some years ago, H.M. Inspector asked me to give a very full and exhaustive report and analysis of our dietary list. He gave me a number of dietary lists from other institutions of the same kind from which I made a comparison, and our dietary list took a very honourable position indeed. The reason of that was that we kept cows and that we had a large supply of excellent milk. We got a new manager who insisted that the cows should be put away and that we should be supplied by contract with our milk. The contract meant that the milk seller sent his offer as to the price for which he would supply these children with a sufficient quantity of milk. His price—that is, the man that was successful—was 5d. per gallon of milk. Well, this was terrific: I at once reported this to H.M. Inspector, pointing out the danger to life and health, and sent specimens to the Corporation analyst. What was the result of the analysis? It was not milk; it was not even skim milk with the cream taken off: it was what is known by milk sellers as separated milk. You know, Dr. Tatham, the salts only were left in the milk and there was 13 per cent. of added water to it. I sent that to H.M. Inspector, but fortunately for me and him, too, he came down and I took care that I was there to meet the Inspector, and I said to the governor—"Now you will bring a glass of milk that these boys are getting, because I want the Inspector to see it."

1729. You did not want the Inspector to taste it?—The Inspector got it and tasted it, and he put down his foot and a change was made at once. I remember this in his report in the next visit—"There is a better supply of milk, and a very great change on the poor rubbish I tasted on my last visit," with what result? I have made a comparison of my work on November and December of 1900 with that of the same months of 1903, and find that besides the usual cases we had in that reformatory, we had no fewer than 110 cases among those boys during November and December, 1900.

1730. (*Dr. Tatham.*) What kind of cases were they?—Febricular, especially, and pneumonia. The boys had nothing in them to withstand the cold. They had no milk, no fat, to withstand the cold, and almost every boy that was exposed was brought into the sick room, and I had to attend 110 cases in November and December of 1900.

1731. Of a more or less dangerous disease—pneumonia?—Yes, that is out of the general run of cases. They are very liable to take catarrhs.

1732. (*Colonel Fox.*) Was this owing to the milk?—Yes. They were getting this at 5d. per gallon until the inspector put it down.

1733. (*Dr. Tatham.*) They were being starved wholesale?—Yes. In my last quarterly report to the Inspector, I intimated that during November and December, 1903, the worst months of the year, I had only four acute cases. Why? Because we have excellent milk, and I get the milk analysed and examined. The Governor is most attentive, and the milkman never knows when his milk is to be analysed, and my professional work is being reduced to a minimum altogether.

1734. What price do you pay for the milk now?—10d. per gallon.

1735. In place of 5d.?—Yes, they take it from the cheapest man, and I proved this, that it was not milk, not skim milk, but separated milk.

1736. (*Colonel Fox.*) You were paying a high price for it then at 5d.?—Pigs would not have thriven on it. In this institution I have had a good opportunity of making out all these things.

1737. (*Chairman.*) Have you anything further to say as to your experience in the reformatory school?—Of course, the inspector now asks for a Return, which I do not interfere with in any way whatever, of the height and weight and the chest measurements. Of course, I do not take these, but they are splendid fellows now, and since the season of the bad milk the physique of the boys has improved, and many will develop into good men.

1738. They are all derived from very poor parents, I suppose?—Many of them have been constitutionally unhealthy—unhealthy for generations.

1739. (*Dr. Tatham.*) Would they make good soldiers?—Yes, and good workmen too. The only thing is that they have to go back to their old haunts, and I am always sorry to see some of the finest fellows going back to their old haunts and falling into slum life again.

1740. Do you find much syphilis among them?—Not very much—perhaps 2 or 3 per cent.

1741. Is it hereditary?—Oh, yes.

1742. (*Chairman.*) You attach the very greatest possible importance to nutrition of the young, do you not?—Yes. If we can preserve their health between birth and seven or eight years of age, that is the time that makes or mars.

1743. With regard to the first year, is the infant mortality in Glasgow as bad as ever?—Yes, in certain districts; this very district—the Broomielaw or Finniston.

1744. Is that owing to the carelessness of the mothers and fathers?—It is due to the ignorance of the mothers. I give you an interesting example. I was down in Arran, a health resort of Scotland, a lovely spot, an island, where everybody bathes in oxygen. There was a shepherd who had a family of girls, with one boy. This boy was a little delicate boy, and the shepherd and his wife were very proud of their boy, who was called Angus. He did not thrive, and yet they were kinder to him than to any one of the family. But their kindness consisted in not giving him the nourishing food that they gave to the rest of the family, but they gave him tea from a pot that was rarely cold, and he died.

1745. He was being killed with kindness?—Yes. In the result, the others got the milk from the cow, and Angus did not. He was "dwining away," to use an expressive Scotch phrase—he was simply falling away. Well, that boy with his tea was being poisoned, simply through the ignorance of the mother.

1746. I want to ask one or two questions about infant mortality. Do you think that infant insurance is one of the causes which makes for carelessness of the lives of the children?—There is no doubt that some of them are made careless. I would be inclined to think it makes them careless.

1747. You think it makes them indifferent?—Yes.

1748. Will you go so far as to recommend the prohibition of infant insurance up to a certain age?—Yes, up to a certain age.

1749. What age?—Five years.

1750. Do not you think that the absence of any proper

medical certificate for registration of deaths may also have a bad effect ?—That is terrible.

1751. There is no means of finding out what is culpable carelessness, almost to the point of criminal liability ?—That is one of our difficulties in the Royal Infirmary of Glasgow. They bring their children, and we cannot tell what is wrong with them until they die. The only thing we have to say, is this: "If you do not allow us to make a *post-mortem*, we will not sign the certificate, and you will not get the insurance money." But a very sad thing happened not long ago. A child of six years underwent a *post-mortem*, and that child suffered from a cirrhotic liver. It had got "d. t." from the day that it was born.

1752. Would you like to see a medical certificate in the case of registration of deaths up to the time the children are five years old ?—Yes.

1753. A leading obstetrician, Dr. Champneys, was with me the other day, and he said: "I hope you will make compulsory the registration of any still births," which he thought of very great value ?—Quite so.

1754. You know Dr. Champneys. I suppose you quite agree ?—I am very strongly of that opinion. Any man of experience would agree with that.

1755. Do you see any prospect of overcoming this ignorance of mothers. From your experience as Chairman of the Glasgow School Board, you may be able to indicate it to us. Do you believe that the efforts to teach household management and cookery are having an effect upon the rising generation ?—At the present time I do not. I have very fixed opinions upon that, especially from my experience as Chairman of the School Board of Shettleston.

1756. Is it because the instruction is not of the right type ?—Not at all.

1757. Or at the right period ?—Well, I was one day present at the examination of the very school that I referred to about the inspector. He said, "Dr. Scott, come here. This will interest you very much." And I said, "Yes," and he handed me a test card of an examination on physiology for the children attending the school. He said, "Let me hear what you think of it." Well, the first question that was on the paper was—"Describe the skin." "Well," I said to him, "I do not know that I could do that very well, but it would take me an hour and a half, or two hours." Well, the second question was—"Describe digestion." I said, "that would take me three hours, at the very least. I could not do that very well either." Then the third question was—"What is the composition of the air ?" "Well," I said, "that will do mighty little good." And the fourth was something about albumen in food he was to describe, and he says, "Now, you are hypercritical—what would you do ?" Now, here, as to the first, "Describe the skin." I would say—"Why is it necessary to keep your skin clean ?" And the second would be—this question with regard to digestion—"What is the use of your teeth ?" I would take the first part of digestion—"What is the use of your teeth, and how would you preserve them ?" That is No. 2. Then I said with regard to the 4th question about albumen, "Tell me which forms the best breakfast, porridge and milk, or bread and tea and jam, and why ?" No. 3: "What is bad air, and what would happen if you breathed bad air ?" One of the boys of this school went home and told them that he suffered from a pain in his epigastrum. How can the schoolmaster teach these boys to answer these papers in five weeks ? And in five years after they have left, they do not know a single word of it. But if you have questions such as mime the boy cannot forget them for his life, and you will teach him something. With the result that he never had another paper. That schoolmaster is dead now, and he never presented a paper on physiology in that school in his lifetime.

1758. But still you agree that a great deal might be done if proper methods were adopted ?—Oh, yes.

1759. Now as to the cooking ?—We have got a cookery teacher for each school, but their idea is that this teacher is to teach the children how to make puddings. It is not to explain to them how to boil a potato or to make beef-tea. It is not that at all. They think that the teacher is there for another purpose. The mother will say, "What have you been learning ?" and if the girl replied, "To make porridge and boil potatoes," the mother would have been shocked—it would have been impudence on the part of the teacher to do that. Now that is what I think about cookery. Now as to what I think about teaching. I would have the laws of health taught in these schools. It is far more important than to let them know about ambulance work, to tell them how to protect their health and how to live healthily. A great deal of our intemperance, and I know we have an enormous amount of it in Glasgow, is due to this ill-cooked food, and they want something that will rouse them.

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1760. You mean something with a bite in it ?—The grimier the work and the more depressing, the more anxious are they to get a dram when they come out. I would teach them what I have indicated in my account of the examination paper to the children, namely, about the laws of health and so on. For example, I once lectured in a series of popular lectures in a village that I took a great interest in, and I had for one subject, "Alcohol, it's use and abuse." Well, I explained in that lecture how tremendously dangerous it was to be dead drunk; how that a man who was in that condition was simply on the brink of a precipice; and that had more effect than all the temperance lectures in the world. Judging from that, I hold that it is necessary that they should be taught these things. They do not know. The mother does not know that the fresh air that is coming in is really life and health to herself and sick child, and so she covers up every crevice. They should be taught these things. The physiology that is taught in the school is not worth anything. Neither is the cooking. It should be done entirely differently. Until you have that result, you will require to have this medical inspection and supervision. These children ought to be medically inspected.

1761. Medical inspection of all school children or only those served by the lower classes of the population ?—That is so.

1762. That is the most important ?—Yes, the schoolmaster that I visited on the 12th January actually has turned a boy away with desquamation from scarlet fever—and this case was from one of the dirtiest families in the school. I would have, first, medical inspection of school children, and, secondly, of factory employees. I read this paper on "Medical Inspection and Supervision of workers in Factories." (*Handing in the same.*)

1763. Would you like to have it put in the appendix to the report ?— Well that is what I advocated at that meeting in Manchester. I have got copies of these other papers to which I have referred, and will be glad to give you copies, except of the first one of 1887 which I have not got, but I can give you the others.

1764. We shall be much obliged if you will let us have them ?—Then I have pointed out that the chief rock is up till eight years of age. All my experience of those cases goes to prove that it is up to eight or ten years of age that you have the most trying period. During the time that they are under the Factory Act they do very well. You have no deterioration then; you have no deterioration except from the diseases in dangerous trades, of which I have already spoken. But immediately after the young man gets out over eighteen years of age, and is not under the Factory Act, and gets a better wage, and becomes irregular or intemperate, then his health suffers and he gets to be an old man at forty-five.

1765. What proportion of them go to pieces in that way—I hope not a very large one ?—I could not give you an idea.

1766. Have you ever considered the effects of cigarette smoking upon boys ? That is a subject which is attracting some attention now ?—My experience is quite definite on that score; I mean in every case, if you have an undergrowth, there is hardly one, say 2 per cent., of those undergrown who has not been habitually a smoker of cigarettes.

1767. Are you prepared to say that it is frequently due to that ?—There is no doubt of it.

1768. Would you prohibit cigarette smoking ?—I would have it an offence.

1769. I am told that the evil is partly due to the fact that sweetshops very often hold a license for the sale of

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cigarettes, and the young get into the habit of smoking cigarettes ?—Yes, and that is extending very rapidly. The mother will buy a cigarette instead of "rosebuds" and other sweets.

1770. Then you think that anæmia and neurosis are due to excessive tea drinking ?—It is a fact, but it is mostly in those workshops where the women take tea.

1771. The evil is not so very apparent in the young children ?—Oh, no.

1772. (*Dr. Tatham.*) You promised that you would give us all the information you could by way of adding to your proof with respect to the presence of tuberculosis amongst people coming under your observation. That will be of great value to us and it will permit of comparison with similar facts accumulating in England on the same lines ?—Yes. Of course I am handicapped. I cannot go as far as I would like to in this respect. In granting my request to examine children, the School Board suggested that I ought not to be too particular in case the parents might object. However, I can give you particulars of examinations under the Factory Act, and at the Out-door department of the Royal Infirmary.

1773. One question more. You know that in England, at any rate, there has been a statement made pretty widely that there is not only physical deterioration amongst the lower classes but that it is a progressive physical deterioration. Now, according to your experience, is that the case in Scotland ?—It is not.

1774. Should you say that the reverse is the case ?—I would say that they are even improving. I thought that question might be asked and I have seriously thought of it since you first intimated it to me—I cannot say that it is. I thought that in this case, with reference to the case of lead poisoning, when he joined the army that he had been one of those sent off within the two years' discharge, but that was not the case. He was a healthy man and the father and mother bought him off.

1775. (*Mr. Lindsell.*) You consider that there is a marked improvement ?—I do.

1776. And that is due to the general improvement in the supervision of factories and health conditions generally, the sanitary conditions generally ?—It is due to sanitary hygienic conditions.

1777. Are there any influences working in the opposite direction ?—Yes, alcohol—intemperance.

1778. You mean the increase of intemperance ?—Yes, they are living on it, some of them ; and the lower you go the worse it is. In one of these fine works, for example, I said to the foreman, when looking at a workman working with very great care on a piece of beautiful work : "Was it possible that that man was not a teetotaller ? I was sure that that man did not have drink." The foreman said, "I know he does." I said, "I am quite sure from the condition and the fineness of the man's work, and the delicacy of the work he had to do at this shipbuilding place that he must not take drink," but still he had. The foreman explained that most likely that man had had a *dram* to steady his hand. I was quite disappointed that day, because I asked about a great many of the workmen, and there is no doubt that this intemperance is killing more than anything else.

1779. Is that intemperance confined to the male sex ?—No, not altogether. You know, last Saturday a woman, the mother of nine children, came to the Royal Infirmary to consult me, and she had come from her work and I smelt whiskey on her, and, after examining her, I said, "You are in the habit of taking whiskey ?" She said, "Yes, she whiles took a half because she had to do hard work." That is the beginning of alcoholic neuritis. And yet that was the case with that poor woman, the mother of nine children, working hard and simply living on it. It is that constant tippling, the "nipping" that is going on, that is the chief cause of deterioration.

1780. And it is increasing among women as well as men, you think ?—Yes.

1781. Does that affect the children born of those parents ?—Oh, yes. I read a paper once on the diseases of the nervous system through heredity and the number of cases of hereditary alcoholism that I had was appalling. I was going to say in the last number of the *British Medical Journal*, printed last Saturday, the very recommendations which I had sent on to Mr. Pooley were given here in an article on "The Physiology of Fatigue." It says : "If we are to classify the reforms necessary in connection with factories and workshops in the order not only of importance but also of practicability, we should place first the sanitary improvement of workplaces. Much has already been done for these, though, with the exception of lead and other forms of metallic poisoning, the subject has been too little regarded as a problem in the prevention of disease. When phthisis in workplaces becomes a notifiable disease much more can be done. Next comes the prevention of accidents, and here factory inspectors are doing admirable work. There remain the problems of the limitation and rational distribution of the hours of labour. In our opinion the advocacy of a 'day' of any particular duration would be a mistake. The conditions vary in different industries." —That is a strong point that we took.—"Much more exact and detailed medical investigations in workplaces are needed before a positive conclusion can be arrived at." That is exactly what I had sent to you, and that is in the *British Medical Journal* of last Saturday.

1782. Another cause operating against steady improvement would be the continual spread of urban instead of country life ?—Yes. We have little or no country life compared with what we have had.

1783. You have no doubt that the physical conditions of country life are infinitely better than those of any town, however good its sanitary arrangements may be ?—Yes : I think that my conclusion is that it is seventeen years better in the country than in the town. It is long ago I came to that conclusion when working upon this subject.

1784. But, suppose, owing to the increased facility of locomotion, an increasing proportion of the labouring classes in towns were living in a quasi-country, what would you say then ?—Oh, yes, in the suburbs, that is a fact ; since the electric cars were introduced into Glasgow that change is most marked.

1785. And the hygiene of the suburbs is almost as good as the country ?—Almost. For instance, in that school to which I drew your attention there were no slummers. They were working men ; they were all engaged in something ; but they were not loafers or living by thieving.

1786. I wanted to ask you about page 3 of your evidence, about the half-timers. You say there have been no half-timers since 1900. Is that due to the school law of attendance that it is dying out ?—No, no. You will excuse me saying that it is a very strange thing that in Scotland the chief town for half timers is Dundee, and that is the most wretched town in Scotland for rickets. At that meeting at which I read that paper on medical inspection and supervision, my friend Dr. Campbell, who is the certifying surgeon in Dundee, spoke very warmly in favour of the half-timers and their condition ; and I could not help standing up and giving my experience in Glasgow as being entirely the opposite of his ; and yet I saw Sir Archibald Hunter's remarks on the children of Dundee, and I could not help thinking that if there were fewer half-timers it would be better.

1787. The abolition of half-time would be, in your opinion, a valuable thing in improving the health of the younger generation ?—Certainly. If they want to work they could run errands, or something of that sort.

1788. (*Chairman.*) There is plenty of home work that they could do ?—Yes. A very interesting case is this : A girl came before she was fourteen years of age to be examined by me. She wanted so long before she was eligible, and I told her, "I cannot pass you," and she cried. But I said, "I will tell you what I will do : if you will go and come back here in three months' time, I will examine you again and see what I can do,"—with the result that she came back to the day, a rosy, healthy girl. Why ? The reason was this : The child was crammed to death in the public school. When she came to me she was anæmic and I could not allow her to work, and I said, "Come back in three months." During the interval she got plenty of work to do, such as the running of messages and carrying milk, and so on, and came back a fine, rosy girl, and continued to be.

1789. (*Mr. Lindsell.*) But she was free from school ?—

Yes. I said to her, "If you come back in three months you shall go to this factory." With this experience the girl went away to carry milk and run messages, and came back in splendid health, with the fresh air that she had got, and she was blooming and rosy.

1790. Then you do not think that great regularity is altogether a benefactor in national health?—No, and especially cramming. Of course, we are not so badly off now, as used to be the case. When they passed the 5th standard they used to be allowed to leave school.

1791. You said there was a change in the law and that the age limit had been raised to fourteen?—Yes.

1792. You were referring to the Scotch Education Act of 1901?—Yes, that is so. You are not allowed to go into the factory until fourteen years of age, unless you get a certificate from the School Board.

1793. It gives them power to certify. Under the old conditions is that being applied?—There are no special standard conditions—they impose attendance conditions, is not that so?—No, if they are over thirteen years of age, and under fourteen, they will be allowed, if they have passed the examination and taken a certificate, to leave school; then they can be presented to a certifying surgeon before fourteen.

1794. But there seems to be no distinction in the Scotch Education Act between children between twelve and fourteen?—No.

1795-6. Any child over twelve may be employed subject to such conditions as the School Board think fit as to further school attendance?—I know; they first must satisfy the School Board that they have got a sufficient education.

1797. And that is the condition substituted for the Factories and Workshops Act of 1901, in the case of Scotland, for the English condition about becoming a young person at the age of thirteen?—That is so.

1798. At that public elementary school that you spoke of, they were a better class of artisans?—I would not say that they were a better class of artisans. They are labourers with about £1 — 18s. or 20s. — a week, and then up to perhaps 35s. a week; they were there of all kinds. But as I said, it was a typical working men's children's school.

1799. I suppose it was better than a good many in Glasgow?—Yes.

1800. You have not applied a similar test to any other school?—I had just this one school and I had plenty to do.

1801. (*Colonel Onslow.*) Is that the Eastern district of Glasgow?—It is the Tollcross district; it is where the working classes are—those who can afford it send them to a better school, and they could do that by electric car or by the train. But I thought it was an extremely good case of the working men class.

1802. (*Mr. Lindsell.*) Among the remedies that you consider most important to improve anything wrong in the physique of the young you attach more importance to food than anything else, I think?—Yes.

1803. And among them a supply of good milk?—Yes, and this inspection and supervision.

1804. Well then you also advocate that there should be a medical inspection and supervision of all school children?—Every child.

1805. That would entail enormous expenditure?—I do not think so. I see in the recommendations of the Physical Inquiry report that they say the medical officer of the town or county should do it, and that his honorarium should be £100.

1806. To go round the thousands of children in elementary schools, would it not require an immensely increased staff?—No. In this report they suggest an increase of the staff of the Inspectorate and medical men connected with the Government, but not in the medical officers of health.

1807. To require medical inspection of the eyesight you would require an optician, and for the teeth a man who understands dentistry?—Perhaps not.

1808. But great importance is attached to the eyesight and the teeth now?—Yes.

1809. But even when they have recommended general medical inspection they have recommended beyond that the examination of the teeth of children?—Yes.

1810. I am afraid you are rather severe upon the system of the laws of health and hygiene in the school teaching?—Yes.

1811. Is it not the case that in England, and I suppose in Scotland, the education authorities provide grants and facilities for teaching those subjects?—I know.

1812. What do you think is wrong?—I say that it is not practical enough.

1813. Your objection is the unpractical way in which it is taught?—Yes, it is not practical, it is not every day life.

1814. Could you suggest anything to us, for we should be glad to have any hints to improve the present system of instruction on these subjects?—Well, I have already given you an example of what I told the inspector of schools, for example. Instead of teaching the children about their epigastrum you should teach them that milk contains all the elements of good food.

1815. What is really wanted is that teachers should be educated to give this instruction in a practical and not in a mere book form, you think?—I say they ought to be told about these common things and not to teach them as if they were going to make the boys and girls doctors.

1816. You think there is a want of intelligence in the system, in the way the teachers impart this knowledge?—That is so. There is one point that I should like very much to go into that I thought very interesting, but I have not time to do it, and that was to go round the various works and to get the list of all the recruits that have gone out from these works and how many were rejected, and why.

1817. (*Chairman.*) Could you take the opportunity when you return to Glasgow and let us have it?—Yes.

1818. (*Colonel Onslow.*) Would you be able to get it? In some places you would?—Well, I am thinking of a large good-sized engineering works where there is a commissionaire who is the gateman, and this is the man I first spotted as the man who would help me. I said to him "how long have you been here," and he said, "fifteen years." I told him where I was going and I asked him if he could tell me the number of young men who have joined the army and the navy, and he said he could, and he gave me a list of the names and the addresses of those young men who have left there in these fifteen years. Only one man, William Baines, was rejected in the whole lot; his father and his mother were wee people and he was rejected on account of his height. Of course we could not help that.

1819. (*Chairman.*) If you could get that it would be very interesting?—I shall do so.

1820. (*Colonel Onslow.*) I know a great many men who only pass a short time in these places, and those men come to us in the army and the navy. They are only the casual labourers as it were?—Very likely. This man that I have been speaking of is a commissionaire, an old soldier himself, and he is interested in the whole subject.

1821. (*Chairman.*) If you can let us have it in the next few weeks we shall be glad to have it?—Yes, it would be reliable information. I have had a great number of the miners who joined the army during the war time, and I do not know one single man who was rejected.

1822. That would be interesting if you could give us information about it?—Of course the population is a purely industrial one.

1823. (*Mr. Legge.*) That instance you gave of the girl whom you provisionally rejected from the factory service but afterwards passed leads me to ask you if you would be prepared to except from your adverse criticism the half-time employment of girls in their own homes who assist their mothers, provided the school authority was satisfied that the home was a decently kept one?—As I pointed out the first thing that struck me was that their habits were not well bent in that direction; they were not regular; they have a half day or a whole day, and the next

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day they are idle; and they were working in a factory not getting the regular benefits from work in that factory, the regular habits such as the breakfast hour and the dinner hour, and the next half day they were running wild. You know they are bound to attend school when they are working half a day in a factory.

1824. I quite agree with all that you said about that, but I am asking whether you would make an exception in favour of allowing a school authority to license a girl if the home were a decent one for half a day?—Then that is not under the Factory Act at all.

1825. No, I am talking of an entirely new provision of the law?—That might be. It never struck me.

1826. You think it might encourage a mother to have a decent home?—It might in the suburbs; that might be a very good idea.

1827. It might be perhaps the means of providing them with the more practical instruction in cookery and so on that you desiderate. With regard to progressive deterioration, have you any feelings that the lowest form of home life is dying out not through sterility, not because the parents cannot bear children, but because the children they bear are too feeble to survive the first year of life?—There is a great deal of physiological truth in that statement.

1828. I have one or two questions to bring out your views as to the extension of the Factory Acts. First of all I gather that you would like to see the provisions of medical examination and inspection already obtaining in factories extended not only to workshops but also to a number of employments at present outside the law?—Yes.

1829. Now would you like to see what powers you have in regard to factories extended?—Yes.

1830. Further, would you like to have similar powers in relation to the examination of adults that you now have in relation to children and young persons?—No, that is to say unless there was something prompting me to do so. For example, to a working engineer I would say no, but if that man were pointed out to me as having a cough and spitting, I would say that it was my duty to say not only for the sake of himself but for the sake of his neighbours that something should be done; and then again, in the enamelling work I want power to go into that enamelling work and say "now your health is lowered and I am afraid you are taking chronic lead-poisoning. If you do not be careful I will suspend you for a month and you will require to get other work." That to me would be a stroug lever in making this man take care of himself. There is nothing they are more terrified about than that they should be kept off for a month. They make splendid wages, and the drink results in the vitality being lowered and they become subject to lead poisoning. If they are strong and healthy men and clean men that is a different thing. I spoke in my evidence as to the dipper in a pottery who had been there twenty-five years, and he never had the sign of lead colic about him, but he is a total abstainer and a cleanly man. In my opinion especially those laws under the Factory Act, given to us at the present moment, are quite sufficient to keep it down, but they would require to extend it, as Mr. Legge said just now, to other parts, not to have special rules but rules to apply to every factory wherever disease arises or crops up in dangerous trades.

1831. With regard to adults you would be satisfied with extension from time to time, as might be found desirable, of the provisions already obtaining with regard to certain dangerous trades?—That is so.

1832. I was interested to hear you say of a particular class where you gave a note to the employer about a girl as to the girl's condition?—Yes.

1833. You think that anything that makes the occupier of the factory responsible or feel the responsibility is an advantage?—A great advantage.

1834. With regard to the employment of women during pregnancy, would you like to see an extension of the period within which she must not return to the factory?—I would not allow the woman to go to the factory at all.

1835. You mean before birth?—Yes, whenever it is known that she is pregnant she ought not to be there, and she ought to be dismissed, and if she is a married woman and have children she has no business there—I would set my face against it.

1836. You would be prepared to advocate an amendment of the law by which it would be made illegal for a pregnant woman to work in a factory?—Yes, that is so.

1837. And for what period after the child's birth would you exclude her from the factory?—That is going against my recommendations that I have given to you already. I say that the great danger arises in the period of youth when the mother goes out to work.

1838. Would you absolutely prohibit a mother who has children from working in a factory or workshop?—Yes. The children must be attended to if they are to be healthy subjects of our King, and I would not let them work. Look at the case of that woman of Saturday last in the Royal Infirmary, the mother of nine children, and yet drinking all the money she was making.

1839. Now as regards statistics, do you not think that it would be a very good thing if we had some sort of means of a comprehensive survey continually going on. We have an ordnance survey, we have a geological survey, would it not be a good thing to have a survey which would bring out facts, which would show the physical condition of the population or certain specified sections of it at a particular time?—I do.

1840. As regards factory operatives, a large portion of the population, any central bureau, ought to work through the certifying surgeons: ought that not to be?—Yes.

1841. You have given a number of examinations you have taken in particular years; would it have been a great addition to your labour in examination of those 1,912 cases, say in 1896, if you had had a card on which you filled up certain physical details?—It would have increased my work and it would have increased my interest and I should have liked to do it.

1842. You are paid a certain fee for those examinations and that fee would have to be increased?—It would take longer time.

1843. Could you say what absolute minimum of physical measurements is necessary. You would want height?—Yes.

1844. Would you want weight?—No.

1845. Do you want chest measurement?—I would, and the very fact that you are taking the chest measurement would give an idea about phthisis.

1846. You would take chest but not weight?—I would, with all my heart.

1847. But the chest is not easy to take?—Why? Those I did take, that I have given you to-day.

1848. How did you take them?—First of all, they were working in Finniston; those good boys that I was telling you about. The boy had a vest on, and what is called a sweater. I said, "Pull up your sweater,"—a knitted thing; and I got my tape right round his nipples and under the scapula.

1849. (*Colonel Fox.*) You took in the scapula?—Over the nipples.

1850. And under the scapula?—Yes. And then I measured it. Took a little time, but got it pretty satisfactory. The boy generally had nothing but this sweater on, a cotton shirt, and that opened out, and you put it right round. I had not much difficulty.

1851. (*Mr. Legge.*) Did you take the chest fully expanded?—Yes. I said, "Breathe out, and draw in your breath." And it took a good while to get the boy educated to that.

1852. (*Colonel Fox.*) You took two measurements?—Yes. One on the expiration, and the other on the inspiration

1853. (*Mr. Legge.*) You think that rough and ready method would be ample?—I think so. I repeat that taking that rough and ready method would lead you to see if there was any marked sign of tuberculosis. Do you not think so, Dr. Tatham?

1854. (*Dr. Tatham.*) Probably.

1855. (*Mr. Legge.*) I do not know whether you are aware—they seem to have made very elaborate inquiries about linen workers in Belgium—whether the Belgian authorities laid great stress on grip?—Yes.

1856. Do you attribute great importance to the strength of the grip?—No, I never tested it, except in nervous diseases.

1857. Do you attach importance to what they call a reactionary test?—No; there are so many concomitant circumstances.

1858. You would be satisfied with the form which gave height and chest measurement?—Yes.

1859. You would be glad to see an extension of such inquiries as have been made by the factory department, either by their own inspectors alone, or working in conjunction with the certifying surgeons, as a more detailed survey of those engaged in a particular occupation?—Yes. Very strongly. There is an interesting field there.

1860. One of those particular points, which you have laid stress upon as a matter for detailed enquiry, is fatigue?—Yes.

1861. I have one or two questions to ask with regard to the teeth. Do you think for the proper keeping of the teeth a tooth brush is indispensable?—Almost. If they live on porridge and milk, and good healthy food I would not care so much; but it is very useful.

1862. But I mean, would you be satisfied if they rubbed them with a rag or a finger. Have you ever heard of a crust of bread being used?—Yes. I have heard of that. The fact is, that the use of the tooth brush to my mind is this, that it simply draws their attention to the fact that it is absolutely necessary to preserve the teeth in any possible way whatever.

1863. Now, as to anæmia. Is it your opinion that this is commoner amongst females than males?—Yes.

1864. Why is that?—I would think that it was due in a large measure in the females from the drinking of more tea, and their being more sedentary in their habits. The young man plays football, and gets out a great deal more.

1865. (*Chairman.*) You think it is the confinement in the case of the females?—Yes.

1866. (*Mr. Legge.*) Now we have had some evidence very strongly condemning the conditions under which milk is supplied in this country. Are you satisfied with the sanitary conditions of dairy farms, as you know them, and dairies?—In the first place, I would say that the conditions have very much improved. I would say yet that there is much requiring to be done—very much with regard to servants' hands and sore throats, and I think there should be far more examination and supervision.

1867. Would you go so far as to advocate rigid inspection of all dairy farms?—I would in Hendon cow disease, which is allied to scarlet fever.

1868. Would you advocate an extension of the system that has already begun, of municipal depôts?—I would, especially in towns such as Glasgow.

1869. But you are not prepared to roundly condemn, so far as you have the means of judging of the present system?—No.

1870. (*Colonel Onslow.*) What standard have you of examining factory children?—Have you any standard laid down for the guidance of inspectors?—No. Just what you consider. First of all, you know what the boy or girl is going to be engaged in, and the question one has to decide is, to say whether that boy or girl is fit for the work, and you are at liberty to go and see that place.

1871. You say that you find that porridge was greatly used in Glasgow?—Yes.

1872. Is that generally the case in Glasgow the whole year round?—The statistics I gave here just now are from that school.

1873. Just at that time. I know that Dundee is a great place for rickets?—I have only read that. I never saw them.

1874. I am speaking from a practical recruiting point of view that in Dundee that is a very constant cause for rejections for recruits. In inquiring into it last summer I found that practically none of the poor people took porridge—is that the case?—I could not tell you with regard to Dundee.

1875. And that porridge is now confined almost entirely to the country?—That is not the case in Glasgow.

1876. That accounts a great deal for the prevalence of rickets in Dundee?—Yes.

1877. In your experience do you find much trace of hereditary disease, such as syphilitic?—Yes.

1878. Anything which is liable to be transmitted—you find that?—There is no doubt about it.

1879. You say you do not think it is important that children in case of any regulation for constant inspection should be weighed. Why do you not attach importance to it?—You will get one big flabby boy for instance; another spare and muscular.

1880. But weight conjointly with the height would surely be some guide?—I do not think it would be much. I get far better results from grasping the muscles of a boy's arm.

1881. As regards that system of taking the chest measurement, that would do no doubt to ascertain the presence of any disease in the chest?—Yes.

1882. But it would not do where you have a scale of chest measurement that would debar from following a particular occupation. For instance, in the case of recruits you take a recruit under a certain chest measurement and your chest measurement would not do—it would not be sufficiently accurate, would it?—In taking these measurements for example in the way I did— —

1883. You spoke of taking the clothes up like that?—Yes.

1884. But that shows the bad form of the shoulders?—You have looked at the shoulders already and you have simply to keep the clothes on and get it round. You cannot do it with girls at all.

1885. But with boys?—I find that quite serviceable with boys. Well it certainly as you say makes them unshapely.

1886. Does it give a very good measurement?—Yes. I would be quite satisfied with it.

1887. Do you find that the teeth are very bad in those children?—No; they are not very bad.

1888. (*Colonel Fox.*) You said just now that you were probibiting mothers from attending the factory before childbirth?—Yes.

1889. (*Chairman.*) He said altogether.

1890. (*Colonel Fox.*) For a certain period.

1891. (*Witness.*) If they were having young children they ought not to be there at all.

1892. Would you prohibit them from being there?—Yes.

1893. And for some time after childbirth?—If the child died, she could go back, but so long as the child required a mother's care, I would not allow it.

1894. For how long would you prohibit it?—A child requires perhaps not so much attention after three years of age.

1895. (*Chairman.*) You said that no mother that had young children should work in a factory?—Yes.

1896. (*Colonel Fox.*) Now in the case of a woman whose children are absolutely dependent upon her wage what would you do?—In that case there should be a *créche* or something to put the child in. It is not fair to leave it anyhow.

1897. I am speaking of a woman who is entirely dependent upon her wage for the support of her children. What would you do then?—The child should be taken care of by the municipal authorities.

1898. Then you recommend that she be provided for by the municipality?—Not to take away her independence.

1899. She has to live?—Well, she is working. Here is the point. I say that if this child is younger than three years of age it should be taken in charge by the Corporation, by the authorities, and they will take care of this child from six in the morning until six in the evening.

1900. (*Chairman.*) And the mother pays?—And the mother is working.

1901. (*Colonel Fox.*) But she has been prohibited?—No, she goes there if the child is taken care of. But I say if there is no one to take care of the child she has not to go to the factory.

Dr. Scott.

1902. (*Dr. Tatham.*) You were mentioning just now the notification of phthisis. You know that in this country it has been proposed to make the notification of phthisis compulsory just as in the case of any other infectious disease. You agree with its notification?—I do, strongly.

1903. Do you propose that in Scotland notification of phthisis should be made compulsory?—Yes, it should be made, but I would not say compulsory. I would not have it reported, the same as scarlet fever, but that every medical practitioner should notify it voluntarily to the medical officer of health.

1904. With what view would you wish for voluntary notification?—This information would direct the attention of the Medical Officer to the district of the street, and even the house in which the disease was most prevalent, would keep him in touch with those more directly exposed to the infection, and would enable him to use means for the prevention of the disease.

1905. But you have not in your mind the desirability of compulsorily isolating a patient because he has got phthisis?—They will require to be educated to it.

1906. You have not that in your mind?—I would have that, if possible.

1907. Do you think that the people would stand it?—I think that they would. Besides, they are educated up to that point now, especially with regard to small-pox and other germicidal diseases; and they would be isolated, and it would be to their benefit to be isolated.

1908. But do you think that if you went to a man to part with his wife because she has got phthisis he would allow her to be taken to a hospital? Do you think that that would be generally acquiesced in in Scotland?—I do.

1909. Your principal reason for advocating it would be in order that the sanitary condition of the house should be improved.?—Yes, and the place and the surroundings, in order that it might not spread, as it were, either to the inmates of the same house or to people in that district.

NOTE.—*The Witness subsequently sent the following Memorandum, relating to Question* 1834, *et seq.*:—

I have carefully re-considered this part of my evidence, and would now suggest:—

1. That the nature of the employment—and not the maternal condition *per se*—ought to be considered.
2. Medical inspection and supervision.
3. That all children under three years of age ought to be cared for, either by the mother or some reliable person, or in some *crèche*, nursery, or school;
4. No life assurance till after five years of age.
5. That drunken fathers be compelled to support their families, and, if necessary, employers have the power to retain part of their wages for that purpose.
6. That the laws of health and hygiene—chiefly practical—be taught in school.

Alexander Scott.

Mr. HARRY JAMES WILSON, called; and Examined.

Mr. Wilson.

1910. (*Chairman.*) You are His Majesty's Inspector of Factories and Workshops in Newcastle-on-Tyne?—Yes.

1911. In considering the question of physical deterioration you have found an initial difficulty in determining the normal type?—Yes, I understand no standard height, weight, or chest measurement, for different age periods, has ever been agreed upon so far as the United Kingdom is concerned, and one is immediately confronted with the difficulty of determining what a normal individual should measure relative to his age.

1912. You know the normal type will differ in different parts of the United Kingdom according to the ethnological tradition of the people?—Yes, according to the racial characteristics. In studying this question myself, I have considered the crofter or small holder, such as one finds in the rural districts of England, but more especially in Scotland and Ireland, as a fair type physically of what an individual brought up under reasonably healthy conditions ought to be. The men and women of this class are usually of good height and weight, have superior muscular development, and possess the power of endurance in a marked degree. I am not aware there have been any fundamental changes in the environment of this class for many generations, except that their habitations have been materially improved, and their diet slightly modified of recent years. In all probability also this type represents fairly accurately the rural inhabitants who tilled the soil of these islands during the last few centuries, and constituted then the bulk of our population.

1913. How does the town-bred artisan compare with the type you have taken?—Very unfavourably.

1914. Will you explain how?—Contrasted with this class the town-bred artisans are, more especially in large, industrial centres, distinctly less both in height and weight, and their general development inferior. Even shop assistants and clerks drawn from the families of the lower middle classes compare very unfavourably with these men, and their equal is only reached among the upper middle classes where the individuals have been trained to an outdoor life, or allowed sufficient exercise and sleep during the period between leaving school and attaining full growth. Students might be considered as having these advantages, there being no necessity for them to commence work at an early hour, thus curtailing sleep, nor any pressing reason why they need remain many hours on end in confined or dusty atmospheres.

1915. Where do you find most marked degeneracy?—The most marked degeneracy, in my opinion, is found where the greatest number of adverse circumstances are actively at work from birth to maturity, as for instance among the very poor in our old industrial centres, and is especially noticeable in the case of poorly paid and unskilled indoor workers, the women suffering about equally with the men. This degeneracy can be best studied in certain textile industries, or wherever the remuneration is so small as to attract the lowest in the social scale.

1916. You place the wage first as a factor in influencing physique, but may you not in certain cases be rather putting the cart before the horse. Is it not physique which often determines the wage? I mean that the class of population is so poor in physique that they are not entitled to a good wage, and it is the fact that they will do work for an inferior wage, which not only keeps them in a condition from which they can never emerge, but also tends to press the class above them who but for their competition would be in receipt of a better wage?—I fancy I am rather misunderstood. I mean that it is the wage of the parents which determines the physique of the offspring. A man's own personal wages have very little effect upon his own physique, at least after maturity. The wage determines more or less the following: (1) The class of house the parent can live in; (2) The class of food he can supply his family with; (3) The locality in which he must reside; (4) The quality and quantity of the family clothing; (5) The age at which the children must commence labour, and the trade they are to be put to; (6) In certain instances whether the mother must be a wage earner or not. From the above, it will be observed that in the case of an unskilled labourer, assuming that he personally is physically strong, by no means so common as one would imagine, if in receipt of a wage under 20s per week, he will be compelled to live in a very small house, say one or two rooms, and necessarily in a central locality, for his wage will not allow of railway or tram fares to and from his employment. Houses of this class are usually in the poorest localities, frequently overcrowded, and the death rates for infants and adults almost invariably high.

1917. What are the chances of the children under such circumstances?—A child born in such circumstances commences life handicapped from birth, possibly even from before birth. Assuming that the parents or either of them were in a low state of general health due to overwork, underfeeding, or intemperance, at conception, it might be expected that the offspring would exhibit signs of constitutional debility after birth, and I am not aware that the employment of mothers during pregnancy in arduous indoor-work, possibly in high temperatures, such as a spinning mill, necessitating prolonged standing,

contributes in the least to the child's benefit; rather, one would expect the reverse.

1918. And then in the ensuing years?—If the child survives the first year in the city slum, fed at times with cold tea administered by means of dirty bottles and tubes, seldom bathed, and rarely carried out and aired, he yet may carry to his grave the effects of parental neglect and ignorance during this period. Infectious diseases always associated more particularly with the densely populated town areas, will probably attack him during his childhood, and his food almost to a certainty will from time to time be insufficient in quantity or unsuitable in quality.

1919. You do not think that is at all a highly coloured picture of the conditions of childhood among great numbers of the class from which factory operatives are provided?—They vary so much in different cities. That is rather understating than overstating the condition of affairs in Dundee, for instance.

1920. You speak with a special knowledge of Newcastle? —And of Dundee also. I have had three years experience as an inspector in Leeds, and I was in East Lancashire for a short time. I was five years in Dundee and I have been three years in Newcastle.

1921. We heard from Dr. Scott that Dundee was probably the worst town in Scotland, or even Great Britain? —Yes, I could give you a great deal of evidence on that point, because I had a great deal to do with the operative class there.

1922. There is a great deal of half time?—It is now reduced to 1,200 or 1,300 children.

1923. That is considerable?—There is a large proportion of women there—many more women employed than men.

1924. With regard to half time, can you say from your knowledge that it is very prejudicial to physical development?—That is the impression I gather from my experience there, and I had a great deal to do with it.

1925. You confirm what Dr. Scott said?—Yes; but there are special circumstances why these children should be so bad. To begin with it is usually only the very lowest class of child who is sent to work half time, because the parents are so poor. The wealthier parents do not send their children to work until they are fourteen years of age, so that they do not come under the unhealthy conditions of factory life until they are rather further advanced in growth and development.

1926. Then will you continue your description of the children from school through adolescence?—Yes. White bread and tea one constantly finds supplied to growing children and to boys and girls of fifteen and upwards, working long factory hours at exhausting duties. That was the case in Dundee. I have been time after time in the houses of the working classes there during the meal hour and seen them have bowls of tea without cream and sometimes without milk, and wheaten bread.

1927. And strong tea which has stood for a long time? —Yes, that was the habitual custom there. Immediately on the expiration of the compulsory school attendance period, fourteen years of age, this child will commence to labour for his own bread. If he resides in a textile district, employment at relatively good wages will be readily found for him, but the hours will be long, fifty-five per week, and the atmosphere he breathes very confined, perchance also dusty. Employment of this character, especially if carried on in high temperatures, rarely fosters growth or development: the stunted child elongates slightly in time, but remains very thin, loses colour, the muscles remain small, especially those of the upper limbs, the legs are inclined to become bowed, more particularly if heavy weights have to be habitually carried, the arch of the foot flattens and the teeth decay rapidly.

1928. Are these effects the effects of factory employment under the most favourable conditions, encouraged by the law?—These, I should say, are largely gathered from my experience more particularly in Dundee. I could not speak of them in Newcastle because the industries there are more of an open air character or partially so. In the shipyards the men are working in the open-air all day.

1929. And therefore it is pursued under more healthy conditions?—Yes, in the jute mills and the flax mills in Dundee; and the cotton manufactories in Lancashire and the woollen mills in Yorkshire, this is very much the condition of affairs. *Mr. Wilson.*

1930. You think the recruiting returns indicate the effect upon health?—Yes, I think so, from examining them. Hundreds of factory youths answer to this description, and an examination of the Recruiting General's annual reports will confirm my statement. Were the females submitted to a corresponding examination they would be found little superior. They exhibit the same shortness of stature, the same miserable development, and they possess the same sallow cheeks and carious teeth. I have also observed that at an age when girls brought up under wholesome conditions usually possess a luxuriant growth of hair, these factory girls have a scanty crop which, when tied back is simply a wisp or "rat's tail."

1931. Do you think that as a whole girls resist the effect of these surroundings better than men?—That is my impression. I weighed and measured a few and that is what I gathered at the time. My impression is that, generally speaking, females withstand the evil effects of adverse environment slightly better than males from birth to at least maturity.

1932. Can you explain this?—I am unable adequately to explain this, but the heavier mortality among male as against female infants is quite recognised. You know these facts better than myself, but I understand that during the first year of life the statistics show there are a larger number of deaths amongst males than amongst females, and I am rather inclined to suppose that that delicacy continues even after the first year. During puberty, girls appear to shoot upwards and develop rapidly; they seem to receive a stimulus which the boys do not experience, and I have frequently noticed members of one family brought up under exactly similar conditions exhibit marked contrast in physique, the lads being singularly thin and undersized, while the sisters appear better nourished and relatively taller.

1933. Have you formed any opinion of the relation of employment to development?—The character of employment has a profound effect on development, as it covers a considerable period of the growing age usually from fourteen to twenty-one, but in the case of half-timers it may commence as early as the age of twelve. The most unsuitable class of occupation has been described; the most beneficial, perhaps, is farm labouring, after that industries partially conducted outside, such as shipbuilding, rope-making, iron-rolling, quarrying, and fish-curing. The best all-round muscularly developed men I have met with among working classes are undoubtedly navvies; almost without exception these fellows are country bred and hail chiefly from Ireland. The most powerfully built are I think West Irishmen, and particularly natives of County Kerry.

1934. I suppose occupations have some selective effect? —Yes. Occupations have a powerfully selective effect, the strongest following the calling where their physical powers will have the maximum advantages in wage earning, and the weakest drifting to those where their lack of vigour will tell least against them. Thus one finds splendid men working as navvies, pig iron carriers, that is in blast furnaces, bleaching powder packers—a very trying occupation, one of the most trying, I should think—cement workers, labourers in steel plate mills, and to a slightly lesser degree, as steel smelters. These occupations are not only exceedingly arduous but throw a severe strain on the powers of endurance and speedily sift out the inefficients. The vast majority of these workers are country bred and have grown to maturity at farm or outdoor work.

1935. Where do you find the worst types?—Persons of poor constitution, or suffering from slight deformity, frequently become tailors or shoemakers, and the great mass of ordinary tradesmen with medium development and stamina one finds working as joiners, printers, moulders and fitters, etc. I would place barbers, clerks, shop-assistants, textile operatives, and bakers, etc., below ordinary tradesmen in point of physique, their occupations not being of a character to foster development; but the very poorest are met with in the lowest paid and unskilled textile operations, as casual labourers, and occasionally in potteries. Personally the poorest specimens of humanity I have ever seen, both men and women, are working

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in the preparing and spinning departments of certain Dundee jute mills. There are special reasons, of course, why they should be so extraordinary bad there.

1936. Because the wages are poor and they come from the very poorest class?—Yes. I think in my annual report for 1900 to the Chief Inspector of Factories, I made some remarks about the textile industries of Dundee. I could give particulars of 169 boys and girls that I weighed. I am now speaking of the number of half-timers: "By far the largest proportion of children in the district are employed in Dundee itself, the number engaged outside being relatively small. I append a table shewing the substantial and steady decline in the numbers of children working in Dundee during the five years I have been in the district:—

In	1896	there	were	2,793 children.
,,	1897	,,	,,	2,617 ,,
,,	1898	,,	,,	2,437 ,,
,,	1899	,,	,,	2,135 ,,
,,	1900	,,	,,	1,824 ,,

I believe now it is down to about 1,200. "If this reduction continues for a few years more, child labour in the staple industry will become a thing of the past. As you are aware, I have remarked year by year upon the poor physique of the typical Dundee half-timer, and suggested certain causes for this unfortunate condition of affairs. Many of these children are born and brought up in single and double-roomed houses, or in large tenements, where the conditions of life are almost as unnatural and injurious as it is possible to imagine. Overcrowding often exists, in conjunction with general squalor and intemperance on the part of one or both parents. Injudicious and unsuitable feeding during the susceptible period of infancy, exposure to inclement weather, and general neglect appear to be largest the cause of infantile deaths, as the children who survive seem to suffer more or less from weak constitutions throughout life. The latter class are often very short and far below the normal standard in weight. Undoubtedly, factory life, although not specially injurious to workers who have naturally strong constitutions or who commence labour after having reached maturity, nevertheless neither fosters growth nor development, and has a distinctly harmful effect on undersized or badly nourished young persons. Thus I have frequently conversed with full-grown men of twenty years and upwards who do not stand more than 5 feet or 5 feet 1 inch in height, and who scale less than nine stone. These men have not the physical strength for heavy manual labour, or indeed any task which demand prolonged efforts, but must accept unskilled labourer's wages in mills or factories all their lives." As a matter of fact these men are doing women's work very often. They get from 10s. 6d. up to 17s. a week. "Such wages are usually very small and quite inadequate to support a wife and family. The degeneracy exhibited in males is similarly remarked in females, but in a slightly lesser degree. The present race of mill workers in Dundee are the descendants of generations of operatives, there being little intermarriage in this class with persons of rural origin. The operatives in the surrounding towns of Forfar, Arbroath, and Brechin are taller and more robust looking than their colleagues in Dundee." I have here the figures of the children that I weighed and measured:—"Towards the close of last year I measured 169 boys and girls and weighed them, with a view to discovering the exact amount of degeneracy as compared with the recognised normal for children of the ages specified. The heights were measured in stockings, and the weights include ordinary winter clothing. The children and young persons were exclusively employed in jute mills in the heart of Dundee, and were taken indiscriminately, so as to secure as far as possible a fair average. The following are the results, two tables being ranged alongside for comparison, selected from 'Treve's Physical Education,' and (Holts) treatise (American Authority) on 'Diseases of Infancy and Children.' Assuming that the figures given by these to be approximately normal, the Dundee children will be remarked as decidedly deficient in both height and weight; indeed the contrast is remarkable."

BOYS.

Age.	Dundee.		Treves.		Holt.	
	Height.	Weight.	Height.	Weight.	Height.	Weight.
	Ft. In.	lbs.	Ft. In.	lbs.	Ft. In.	lbs.
11–12 years.	4 2	62·8	4 5½	72	—	72·4
12–13 ,,	4 4½	68·5	4 6¾	76·7	—	77·8
13–14 ,,	4 5½	68·9	4 8½	82·6	—	88·3
14–15 ,,	4 6	70·5	4 11	72	—	99·3

GIRLS.

Age.	Dundee.		Treves.		Holt.	
	Height.	Weight.	Height.	Weight.	Height.	Weight.
	Ft. In.	lbs.	Ft. In.	lbs.	Ft. In.	lbs.
11–12 years.	4 3½	63	4 5	68·1	—	70·3
12–13 ,,	4 5	68	4 7½	76·4	—	81·4
13–14 ,,	4 6½	76	4 9½	87·2	—	91·2
14–15 ,,	4 7½	77·5	4 11½	96·1	—	100·3

That figure of 62·8 lbs. in the first column is lower than the worst children in Edinburgh, according to the Scotch Blue Book. The figures for Dundee all contrast very unfavourably with those given alongside. Then I also give some figures for Brechin.

1937. It appears that the difference grows as they grow older?—Yes. It would hardly be credited that the children of these diminutive dimensions are earning their bread at laborious work. I gave an instance of the way in which children are brought up by intemperate parents.

1938. In the way of mal-nutrition and so on. It is admitted that that is the poorest and most ineffective class in Dundee; it is not the average type of the population of Dundee?—No, it is typical of the poorest. I do not think you could get them worse than that.

1939. You have considered minor causes of degeneracy as well, have you not?—Yes. If a child has been systematically ruined from birth by insufficient and unsuitable nourishment in infancy, lack of fresh air while asleep and awake in the helpless period of existence, and no means of exercise during summer or winter, but that afforded by playing about the staircase of a densely populated city tenement, it is obvious that a frame so stunted even under the most favourable subsequent environment can rarely attain to the standard of height, weight and vigour which nature intended. I mention that because those who are familiar with the very poor of a city will know that young children are rarely carried out and aired as they are among better class people. Until a child is able to creep about, or get outside itself it gets very little fresh air.

1940. What sort of tenements do the people in Dundee occupy?—There are a great number of single room tenements and two room tenements in Dundee and big blocks.

1941. Blocks which are perhaps in some respects no more healthy than the others?—A great many of those have no privy accommodation at all except a common one in the yard.

1942. What are the municipal authorities about in Dundee to permit that? You have the same laws in Scotland by which the local authorities can enforce a remedy for these things if they choose?—Yes. They are better perhaps than they used to be.

1943. Are they doing much in the way of progress?—When I left they were making a little progress.

1944. You have lived there some time?—Yes, five years, but in that respect they are still very bad. Among the minor causes of degeneracy I would include excessive cigarette smoking, a habit which is vastly commoner than it was even a few years ago among very young boys. When I went to Dundee in 1895 there was very little cigarette smoking amongst young factory lads.

1945. Do you think cigarette smoking brings intemperance in its train very often by creating a sensation of thirst; would you connect the two at all?—I believe the two might be connected, but this cigarette smoking which I noticed was amongst very young boys, eleven, twelve and thirteen years of age, a class of boys who do not drink, although you get lads of fifteen and girls of fifteen and upwards drinking in Dundee and getting intoxicated. I have frequently seen them intoxicated at fifteen or sixteen years of age—quite helpless. Early intemperance commencing at fifteen or sixteen, and insufficient sleep from infancy to maturity is an important item.

1946. That is almost inseparable from the conditions in which they live?—It is to a very large extent.

1947. Where there are single tenements or two room tenements?—Yes; there is always noise and fuss going on, and then in the morning the parents are getting up to work and they disturb the children. The children are running about the streets till 9 and 10 o'clock at night in the slums of most towns. This latter statement is important and can be easily verified by a study of the working classes in large cities. It is difficult to account for the subtle effect of fresh air, but it has an extraordinary influence on the health and growth of children, and undoubtedly also so has sunlight. Both these necessaries are largely denied the very poor, the child breathes an impure atmosphere at home, at school and in the factory.

1948. Is it the case at school?—The air analyses of schools which I have seen reveal a very bad state of affairs. *Mr. Wilson.*

1949. But that is from preventable causes and so also in the factory?—Even though there is not a very large amount of carbonic acid present in the air there are probably other influences at work, such as organic matter expired from the lungs and emanating from the skin.

1950. Noxious dust and so on?—Yes, which do not benefit a susceptible young creature. For nearly six months in the year he goes to work in the dark and returns in the dark, that is literally true—his only experience of sunshine being limited to the brief Saturday afternoon and Sunday. I have hardly touched on the question of general health, but my investigations lead me to believe that sickness is far more prevalent among the very poor than in any other class, and their powers of resisting cold and high temperatures correspondingly lessened.

1951. Now we come to the important question: Is degeneracy progressive? that is to say, are the conditions which no doubt make for the increase of degeneracy being gradually brought under control by ameliorative tendencies or otherwise?—I am in great difficulty in answering that question. I have been thinking a good deal about it since I prepared my evidence. I am not prepared to say that physical degeneracy is progressive. I have a suspicion that the lowest forms die out, not through sterility, but the offspring are too feeble to survive the first year or so of life.

1952. What does that suspicion rest on, have you any direct information on the subject?—When I was in Dundee I had a good many conversations with parents of children working in factories, and it was quite a common thing to find a woman had had as many as thirteen children and had lost eleven or twelve out of that number, in some cases the whole of them. It was quite a common thing for a woman to have had seven and lost five. The infantile death rate in certain of the worse parts of Dundee was extraordinarily high.

1953. Do you know how many per thousand it came to?—I could not exactly say now but it was comparable with some of the Lancashire towns. There are certain areas in the town in which it was far higher than for the whole town, infinitely higher. I myself have seen children who have subsequently died in Dundee lying very ill, wasted, over and over again. I have seen the operative causes at work very distinctly, where the mother was intemperate and giving the infant almost no nourishment. I have no doubt however that the number of inefficients and undersized men and women are rapidly increasing, owing to the greater proportion of the population being bred in unwholesome environment and nourished on unnatural foods. What I mean is that there are a larger number of the population now born and bred in towns and brought up in more or less unnatural conditions. They are not necessarily really unhealthy people or unsuitable for work, but they are not so big as if they had been brought up in the country.

1954. You attach some weight to the increasing knowledge of hygiene and so on, and the greater sanitary precautions which are taken. I suppose the organisation of sanitary appliances is higher in the town than in the country?—I understand that tinned milk is vastly more used by the working classes now than a few years ago. Its use is enormously increasing in Dundee and the Newcastle district, and there are about a million people in the vicinity of the latter city now.

1955. Do many of the parents get access to a decent supply of fresh milk?—The impression I have at Tyneside is that fresh milk is becoming too costly for them. It seems to me that that factor is at work.

1956. There is no municipal or charitable organisation upon a more or less commercial basis by which they can obtain it, is there?—Not that I am aware of. With the rural depopulation there is a corresponding decrease in the number of strong country bred men and women who in years past have helped materially to maintain a healthy stock by intermarriage with town dwellers.

1957. Have you formed any opinion as to how far the evil influences which you have described can be counteracted, mitigated?—It is a very big question. There are many ways in which it can be done.

1958. Would you like to see stronger municipal action taken? Do you think that educating the rising generation

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of parents to a better knowledge of their duties would do it?—I would certainly say the senior girls at school ought to be taught how to wash and bathe a child, how to clean the feeding bottles, and what is wholesome and what is unwholesome food for children. It struck me that the want of that knowledge in Dundee was very marked. You will find quite young girls becoming mothers there who have not the least idea of what to do or how to nourish a child.

1959. Would you regard this as a proper ideal in the instruction of girls, "A course of instruction should be given to the older girls in school in the practical tendance and feeding of young children and in the practice of household cleanliness. Such a course would embrace the choice of milk supply, the sterilization and storage of milk, the preparation of the infants' food, the management of the infant as regards dress, cleanliness and simple elements, proper mode of cleaning the house and so forth?" —Yes, but a child is almost too young to benefit by that

1960. A child of fourteen?—Yes, she seems to forget it. After she leaves school she goes to work in a factory, and by the time she becomes a mother she forgets it.

1961. The factory occupation tends to denaturalise women rather?—Yes. I believe she would acquire some of it, and it would be in the right direction—she would not be totally ignorant.

1962. We were furnished the other day with a return of the number of women working in factories. I suppose it would be possible for the departments of the Home Office to give us statistics as to the number of the male population working in factories?—Yes, statistics are almost ready for 1901. I do not think they can give you the number of married women, but they will give you the male and female.

1963. We know there are not statistics about married women. You say, in the course of your experience, that the conditions of factory life have very considerably improved?—Yes, in certain directions they have advanced very much, but that has been more in combatting the effects of dangerous trades, and, after all is said and done, these dangerous trades only affect a comparatively small number of the working population.

1964. Has much been done to improve the general sanitary conditions of factory work?—There has been some advance, but still it has not been great.

1965. You do not think legislative interference has by any means reached its maximum?—No, I do not think it has. To take a concrete instance of a child in a textile factory, it is the long hours in a high temperature, breathing a somewhat impure air, which tend against its general health more than anything else, I think; and it is difficult to see how you would overcome that unless you shorten the hours of labour. The child starts at six o'clock in the morning and works till six at night, and the only opportunity he has of getting fresh air comes after that, and in winter time that is not much.

1966. It does not work twelve hours, surely?—It has twelve hours with two hours off for meals, except Saturday. And along with those long hours, of course, to begin with, the child is physically small, and its food during its growth is frequently poor.

1967. Does your experience as a factory inspector suggest to you any change in the law which you think would further the cause of public health?—I do not know that the Factory Act is the proper weapon to attack the question with. I am afraid the problem must be attacked from the outset—the child's birth. It would have to be applied to the parent in the home. I quite agree with what I heard the last witness say—that the first years of life are the most important, and especially the first year of life. I have noticed the children boarded out, who have been sent to a little place called Tomintoul in the Highlands of Banffshire. You could pick out those children who have come from the slums of Glasgow, although they have been living there on exactly the same class of food as the local children; they have retained that pinched appearance which is characteristic of slum children. I think also one might get useful information from industrial school children. I believe everything is done for their benefit, yet I question whether they are quite so big and strong as children born and brought up under the healthiest of conditions, because the mischief is done before they go to these institutions.

1968. A good deal is done to counteract it?—I may say I have some more figures, if you want them, of some men I measured at Tyneside, some navvies and outdoor workers, and I mention cement work as being an instance of an industry where the duties are so exhausting and arduous that only the most powerful men can stand them. They have found that the only fellows that can do that kind of work seem to be outdoor brought up men, especially Irish navvies. Town men cannot do it. They simply are physically unable to do it. It is a pretty severe test to put a man to, of course, and only applies to certain works.

1969. (*Dr. Tatham.*) I want to ask you a question or two bearing upon this tendency to migration from country to town, upon the general condition of the labouring classes. I understood you to say, and what you say confirms that which we have heard from other witnesses, that country-bred people of both sexes are much more robust than those who are bred in the town?—Yes.

1970. That is your experience?—Yes, certainly it is.

1971. The effect, of course, of the migration of so many of the best of the country-bred folks to the town deteriorates the country population considerably, does it not?—Yes.

1972. I mean to say their best blood goes to the town?—Yes, probably it does.

1973. Is there any other way in which the country population becomes deteriorated, do you think?—Yes. On the question of food, the quality of the food is changing, I believe, as it has changed in the towns. From my experience of farm labourers in the North of Scotland, I know they get vastly different food from what they got when I was a boy.

1974. Do you mean better food?—No, it is more expensive, but I do not know that it is better. For instance, some of the best built men I have ever seen are working on the Spey salmon fishing, their food as children has been oatmeal and milk and cheese, a little butter, meat perhaps only once a week; at present they are working twelve hour spells on night and day shifts, are out in all weathers, and have very hard work. They have broth in the morning before they go out, in the middle of the day oatcakes and cheese with some milk, and at night when they come home they have a large soup-plate of porridge. After that they may have one boiled egg and a cup of tea, and some bread, jam, or cheese. That is their diet, pretty much, from one week's end to another, except that on Saturday they may have Scotch broth with boiled meat in it. In place of porridge they may vary with mashed potatoes, rice, pea, or potato soup.

1975. The reason I am putting this question is that whilst the best blood of the country migrates into the town on the one hand, on the other hand the domestic servants, when they are taken ill, and people when they become too old to work, return to the country to die?—I believe so, to some extent.

1976. Do you think that that, to some extent, is the cause of the deterioration of the country population—it is believed to be so generally, and I want to know whether it is your experience?—Do you mean as affecting the death-rate?

1977. No, the general physique. Of course, eventually it affects the death returns, but I was not referring to those?—If you mean that the strongest men, physically and mentally, leave the country districts to go into the towns where their abilities will benefit them, I agree with you.

1978. That is unquestionable?—Yes, I have noticed cripples and imbeciles, and that sort of people, are left about country villages.

1979. They are?—Yes, I have often noticed that.

1980. So that in both ways the country population stands to become deteriorated?—Yes, and yet, of course, you cannot really point your finger and say that the country population are smaller than they used to be.

1981. Speaking now of the town populations, more especially of the lowest class of the town populations, do you think that they are deteriorated, as compared with what they were, say twenty years ago—the dregs—I do not wish to use an unkind term, but the lowest class?—I am hardly old enough to give a really valuable opinion.

1982. Say, as compared with ten years ago?—I do not know that they are worse than they were ten years ago. Judging from the number of very small old men I have seen, I do not know that they are worse.

1983. My reason for wishing to get this opinion from you, since your experience is large and valuable, is this: that there has been in England at any rate for some time past, a generally expressed opinion that there is physical deterioration amongst the lower classes of the population, and it is very important to this Committee that we should know from gentlemen like yourself, who have had a large and varied experience, whether that is the case?—I certainly think that there is deterioration from the type of people that used to live in the country districts—I certainly think that, but if you get down to a certain level, I question whether it gets worse.

1984. Taking the population as a whole, and not dividing them into country and town, do you think there has been deterioration amongst the poorest class of the population?—Most undoubtedly.

1985. Within the last ten years, a progressive deterioration—it is very important that we should get to know this?—I would rather like to know what you mean by "progressive"? Do you mean that the off-spring of a father gets worse than the father, and so on—that the race gradually deteriorates?

1986. No, I mean this—taking the whole of the labouring classes of the country, do you think, or do you not think, there is a progressive physical deterioration in their condition?—Yes, if you put it in that way, I certainly think there is progressive deterioration—I mean as soon as a couple come in from the country and have children, those children will not be so good as the parents. I have remarked that over and over again. I have seen pig-iron carriers, blast-furnacemen, coming over from Ireland with their Irish wives, and I have looked at their children, and not always, but as a rule, the father is a big man and the son is a smaller man. City life seems to tell at once, even though the race characteristics are transmitted.

1987. Taking the country generally, and without distinction of town and country, do you think that the labouring classes in the entire population are deteriorating?—I find a difficulty in answering the question unless I divide the classes. Among the purely rural artisans there appears to be very little degeneracy, but among the town workers, who after all constitute the largest proportion of our industrial population, there is a marked deterioration going on, becoming more accentuated the lower one descends the social scale, and I have no evidence pointing to the younger generation being in any way superior to their fathers, but the reverse. I qualify this statement by observing that possibly the very lowest types are disappearing, but against this I notice a more general degeneracy affecting an increasing number of working people both male and female.

1988. I may tell you—I think I am entitled to do this—that as regards the evidence which we have had up to the present time, the contrary seems to be the case, namely that there is not only no progressive physical deterioration, but that there is evidence of the reverse, evidence of an improvement; is that in agreement with your own experience?—I believe myself that the worst types are dying out. Perhaps the very poor specimens in towns are getting fewer. But there is a very much larger number of men in industrial cities, varying in height from 5 ft. 1 in. to 5 ft. 5 ins., than you find in the rural districts—a very much larger proportion.

1989. (*Mr. Legge.*) But are there more to-day in any particular town? Is the proportion of those undersized men from 5 ft. 1 in. to 5 ft. 5 ins. greater to-day in any particular town than it was ten years ago?—I think it is. There has been such an enormous migration into these towns from the rural districts.

1990. But that is an impression. You would naturally expect to find that. But have you any observations upon which you can base that opinion?—I have had 300 or 400 men in iron-works in Hartlepool through my hands, and it was astonishing to find the small proportion of town-bred men there were among them; they were nearly all country-bred men, because the work was so hard that town-bred men do not readily take to it.

1991. (*Colonel Fox.*) Just now you admitted that the country folk, both men and women, do migrate into the town; they are healthy and strong people?—Yes.

1992. Would not that tend to improve the breed, the population of the towns; would not that tend to improve the physique of the towns?—I say that when their children come into the world in the towns, they do not compare favourably with the corresponding children in the country because the unsuitable environment tells on them at once. *Mr. Wilson.*

1993. But the town people would intermarry without fresh blood being brought in, and would not the effect of strong men and women coming in from the country naturally tend to improve the physique of the population?—Yes it tends to keep it up, but what I wish to say is, in my opinion there is a much larger proportion of undersized men and women in the country to-day than there was some years ago, owing to the fact that there is a much larger number of people engaged in industrial work, and especially in town industrial work. I understood by the word "progressive" that it was meant going from generation to generation, getting worse and worse.

1994. (*Dr. Tatham.*) With regard to the question of factory life you have had a considerable experience?—Yes, I have been in the Factory Department twelve years.

1995. In factories and workshops?—Yes, inspecting them.

1996. Do you think amongst girls approaching puberty the tendency of life in factories is to produce laxity of morals?—It is rather a wide question and it varies in different centres and in different industries. I should say that a great deal depends upon the character of the foremen who are in charge of the department in which the the girls work. I have known mills which had a very bad name because they had rather a low lot of foremen there, probably immoral foremen who had immoral relations with some of the women, and in that way no decent girl would go near the place. There were other works where they were strictly looked after and I cannot say that there was any particularly immorality in them.

1997. You think it is a question of management?—To a very large extent.

1998. Do you know whether the proportion of illegitimacy among the factory girls is higher than among the general population?—That I cannot say. In Dundee there was a good deal of it, but then there was such an immense amount there of couples living together who were unmarried. It was an extremely common thing there, but confined I may say to only the lowest classes of workers.

1999. With regard to infant mortality have you taken note of that?—Yes. I consider that is an important thing. You generally find it is associated with degeneracy, I think.

2000. The Chairman asked you a question as to infant mortality in Dundee: do you remember anything approaching the figures which have been reached of recent years, taking the normal for England and Wales at something like 150?—My recollection is that Dundee runs from 170 to 180.

2001. It is distinctly high?—Yes, and the real evils are masked by the fact that the very healthy suburbs of Dundee are included. I think taking the very worst areas I found they were eight times as bad as outside, but I do not wish you to take that as certain.

2002. (*Mr. Legge.*) You may correct that if necessary? Yes, if it is possible.

2003. (*Dr. Tatham.*) Do you know of any other town in Scotland where the infant mortality is markedly higher?—No, Dundee is unique. There is a different class of working people there from any other district.

2004. You think there are no worse spots?—I do not think so. The working population which I referred to to-day are not really Scotch, they are a mixture of Scotch and Irish, and a very degenerate lot of Irish at that. The real Scotch operatives are a better class and the weavers are distinctly superior women; it is the spinners and hands in the preparing departments who are the worst as a rule.

2005. Do you think a fair amount of attention is given by mothers to young children in Dundee compared with other towns you know?—In Dundee the attention is shockingly bad, among the lower operatives.

2006. Is it because mothers leave their children at an early age?—Yes. They nearly all work at the factories there. They send their children out to neighbours to

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look after and the children of course are not properly cared for.

2007. Is there any legal restriction of the time after confinement in which the mother may return?—One month in the Factory Act, but it is difficult to administer that because a woman can say it is a month since the child was born and you cannot verify it, at least it is difficult in every case, and the women remain in the factory up to the very last moment.

2008. Till just before their confinement?—Yes, it was disgusting to see them.

2009. The law has not been altered in that respect in regard to the period before confinement?—No.

2010. The period before child-birth has not been interfered with?—No. I have had anonymous complaints from workers in factories complaining of young girls being associated with women in that advanced condition, but of course we could do nothing.

2011. (*Mr. Legge.*) You have a very strong opinion as to the superior physique of country bred children and men to town bred?—I have.

2012. Are you aware of any statistics which throw any definite light on that point?—Practically what I have got myself, but I may say I have looked at that thing pretty carefully for years, and I have constantly contrasted the countrymen with men working alongside them and noted the difference.

2013. Have you, for instance, compared the two, class for class?—Yes.

2014. Do you believe, for instance, that the tinker children of Scotland are physically better than those Edinburgh children who formed the subject of a report of the Royal Commission on physical education?—I have seen so very few of these tinker children that I could not say.

2015. You know, at any rate, the class is a considerable class in Scotland?—Yes. But you only see two or three at a time. They look very healthy.

2016. They are the slum children of the country?—Yes. They look very healthy and brown, but I do not know that they are very big; but I would not give an opinion on that.

2017. Are you acquainted with the rural districts in England?—Some of them—Yorkshire and the northern counties.

2018. You do not know Dorsetshire and the eastern counties.—No.

2019. You cannot express any opinion as to whether there is a class in Scotland corresponding to the agricultural labourer class in England?—Judging from the agricultural labourers which I have come across in cement works and heavy iron works in the north, Norfolk and Suffolk men are fine big fellows, almost as big as the Irishmen, but not quite.

2020. You mean agricultural labourers?—Yes, those that come up there to work in the iron works at any rate. They are not at all bad fellows.

2021. But still you would be surprised to learn that according to the census of the Anthropometric Committee of the British Association, which published a valuable report from 1882 to 1884, the physique of the lower classes in the country did not show any very great superiority over that of corresponding classes in the town?—Yes.

2022. For instance the artisan in towns is pretty well up to the decent agricultural labourer in the country?—I do not think you will find that now. I am certainly prepared to believe that you will not find that now. In the figures you are speaking of I think the lowest were in a county in the south of England, while the agricultural workers in Galloway were amongst the best.

2023. Knowing both countries I myself am inclined to think that the rural population of Scotland, setting aside the tinker class, is distinctly superior to the rural population in England in physique, but that is a mere impression. You think it would be valuable then to collect comparative statistics of this definite sort?—I do indeed. It seems to me that that is a thing you must have if you are going to find out the facts. I think you must have that done. You could do a good deal by training yourself to observe in the same way that a farmer can judge of the weight of a cow. By experience, you could do a great deal to train your eye to estimate the size of a man, and if you do that for a period of years you get a fair idea of the size of people you are meeting.

2024. I think there are great dangers in depending on the evidence of the senses. I think one's condition for observing differs so much from day to day and before and after a meal. However, you agree in the advantage of having some method of collecting comparative statistics?—I do.

2025. And as regards your work a good deal could be done by operating through you inspectors, if you had the time, and the certifying surgeons?—Yes, I think so. They are distributed all over the country and might do a great deal. I myself had a weighing machine: I arranged a spring balance on to which a man could hang and in that way I have taken the weight of as many as 100 or 150 men in an hour or two.

2026. What is the absolute minimum of detail which it would be useful to call for: I suppose you would like height?—Yes.

2027. Do you think it worth while to have the weight?—Yes, because the weight includes development to a large extent.

2028. And the chest?—The chest measurement would be very useful, but of course it takes a great deal more time. You can weigh and measure a man in a few minutes, but it takes a long time to take his chest measurement.

2029. What about grip?—I do not know that that is of so much importance.

2030. The Belgians in their great enquiry about linen workers made a special point of this grip?—Yes.

2031. (*Colonel Fox.*) And in addition to this they test the power of the back, arms, and legs, I saw their anthropometric measurements the other day and they are too complicated.

2032. (*Mr. Legge.*) What about the reactionary movement tests, the object of which is to see how long it is before a person actually does act on an impulse given? Would you attach much importance to that?—I do not know that I should. It seems to me that the most important thing for the working population is that they shall have good sound health, that they shall be fit for the work they have to do daily, and that they should have endurance. That is the great test I think, and that is the thing which seems to be weeding out the inefficients just now. I can give you a concrete instance of want of endurance. In a certain operation in cement making the material has to be put in barrows and wheeled away. It is hard work, but in addition to that the men are working on hot stone slabs of a high temperature which tends to make a man rather faint, almost sick, and it has been found that townsmen cannot do it well, at least that is what I have been told, but country-bred Irishmen experience little difficulty.

2033. I should like to suggest to you another explanation of the fact that the hardest work done in towns is done by country-bred people and not by town-bred people; it may be very much the same reason why in Switzerland you find all the hard work done by Italians—the native Swiss on the spot naturally selects for himself the least arduous work; he is more up to the ropes?—Yes.

2034. Similarly in the town they know perfectly well that the hardest work may be connected with the shipbuilding or cement works and they say, "This will not suit me at all," and they find an easier job; they are in a better position to do so. The raw countryman coming in has to take what he can get, which is the hardest work?—Yes, but you rarely find big men among indoor workers.

2035. I gather that you look to the general ameliorative tendencies of social legislation and administration to effect any improvement?—Yes, I think we should catch the children very young.

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2036. And there is one detail which you would like no doubt, namely, to see the factory law strengthened so far as it assists in producing an improvement. You say you have seen very little improvement. Take such a detail as ventilation: have you seen no improvement in the last ten years in the ventilation of factories?—We have got a great deal done in the way of providing fans for exhausting dust and that sort of thing and keeping down the temperature slightly, but we have got little advance yet in the way of ventilating work-rooms where people are engaged at sedentary occupations—tailors and dressmakers.

2037. You think there is the chief point where we can effect more improvement if we determine to get it?—Yes, I do. Do not you think yourself that the important thing is to benefit a youth when he is growing, not so much after maturity?

2038. But let us get at both—let us do what we can for both?—Yes.

2039. You have already alluded to the emphatic evidence of the last witness on one point. Would you go so far as he did as to absolutely prohibit by law any mother from working in a factory or workshop up to a certain age?—No.

2040. You would not be prepared to do that?—No, I think that would be cruel, seeing the absolute poverty some of these women are in.

2041. But if you could by some other means provide the woman's support, granting compensation as it were, for her being deprived of the capacity of earning wages in a factory or workshop?—Do you mean that the Corporation should assist a woman with young children, such as a widow or deserted wife?

2042. Yes?—I certainly think the municipalities might step in there with benefit.

2043. (*Colonel Fox.*) You were speaking of the crofters as being such a sturdy race of people can you tell me what their staple food is?—These Spey fishermen are partially crofters because they have little crofts which they work during the winter, and I have told you their food.

2044. Do they feed well. I was under the impression that they, like the Irish, feed on potatoes and inferior food?—No, the working classes of Scotland I think, taking them all over, really live well, and the food they eat seems to benefit them. It is plain food, but it seems to be very wholesome food—oatmeal and milk and cheese with sometimes a little fish and potatoes and vegetables.

2045. That is a good varied food?—Yes, of course, tea is coming in and bacon, which used to be almost unknown.

2046. (*Chairman.*) You do not think the use of oatmeal is being displaced by other things?—It is to some extent.

2047. But not to a large extent?—Well, I believe amongst the very poor it is. Amongst the very poor in Dundee there is hardly any oatmeal at all and in Newcastle and Tyneside there is haraly any, and among the miners' children little or none.

2048. Was there ever much?—I do not know that there was, but at the present time there is not, whereas among the better classes it is a good deal used.

2049. (*Mr. Legge.*) Have you any statistical tables which you have compiled yourself?—I have measured and weighed some hundreds of men, but I have not had an opportunity yet to average them up, I have only made one or two notes here which show the slight difference in height and weight.

2050. (*Chairman.*) Then perhaps you will send that in when completed and we can see if it is desirable to print it in the appendix?—So far as I have gone it tends to show that country-bred men both in height and weight are distinctly superior to town workers.

Dr. Thomas Fred. Young, M.D., M.R.C.S., called; and Examined.

Dr. Young.

2051. (*Chairman.*) You are President of the Association of Certifying Factory Surgeons?—Yes.

2052. This note which you have left with the Secretary does not indicate very exhaustively the opinions you are able to express, but I understand you have had considerable experience as a Factory Certifying Surgeon?—I have been twenty-five years in the north half of Liverpool.

2053. Your experience has been gained in Liverpool then?—Yes.

2054. What evidence of the physical condition of people has come under your notice there?—In Liverpool our people are very mixed. There are different classes; I mean to say you have the artisan class, the dock labouring class, you have people working in jute works and people working at varied employments, and in each place almost you find that there is a different physical condition. In the last few years there has been certainly very great improvement in the general artisan class. Then since the Factory Act has become more stringent there has been a weeding out from all the employments where good wages are paid. In the first place the employers do not wish to have the expense of the Factory Surgeon coming unnecessarily, because they have to pay a fee when they come, and therefore before the Factory Surgeon is sent for all the youngsters who come in for employment are carefully gone through by the taker-on or by the timekeeper.

2055. All the ineffectives are weeded out?—All those who are likely to be ineffective are weeded out. The youngsters will apply for trades which are perhaps not so favourable, where there is dirty work and which they do not like so well, and some will be taken on; others who are not will gradually go off as shop boys and to run messages and such employment as that. But in the other trades such as the engineers, carpenters and joiners and all those boys, there has been a very marked improvement in the last few years.

2056. What becomes ultimately of those who are weeded out of chances of employment in the more remunerative industries, do they sink lower and lower?—Yes. They sink lower and lower. There is a regular gradation through the factories. You get the best class and strongest looking boys amongst the engineering and ship-building classes.

2057. That is outdoor employment?—Practically outdoor employment, but it embraces foundry boys. There are a certain number of boys in the foundries who are engaged in the riveting works, and there you find a small and poor type of boy. But amongst the engineers apprentices and the moulders and the higher branches of engineering you get a very good class indeed. Only last week I went to one of the engineering places and took occasion to tell the employer that I wanted to see what his boys were like. He brought up all the apprentices he had—he had twelve varying in age from fourteen to twenty-one one years of age. They varied in height from five feet three inches to six feet; they were muscularly strong and particularly healthy. Out of the whole twelve there was only one whom one would call below the average.

2058. Were those town-bred boys?—Now, in Liverpool with the facilities we have for getting about, with cheap trams, the most of the people really are living out except those immediately engaged about the docks. Those I should say are really the best, although the town-bred boys are living on the outskirts.

2059. (*Mr. Legge.*) Of what social class?—The better class artisan.

2060. Have they attended Board Schools?—Yes, all these boys mostly attend Board Schools.

2061. (*Colonel Fox.*) But are these boys you are speaking of, these well-grown boys, of the lower class? They do not come from any special class, do they?—They are usually the sons of engineers and people who have been in trades.

2062. A better class than the ordinary lower class?—Yes, decidedly better.

2063. (*Chairman.*) Men in receipt of say £2 a week?—Yes and more. £2 and £3, quite.

2064. (*Colonel Fox.*) They are of a special class?—Yes.

Dr. Young.

2065. They would not be the pick of the lower class?—No. The fathers of these boys have probably been engineers before them. The class tendency runs very strongly in that way, for fathers to get their sons into the same employ, both in the ship-building and also in the engineering. When you come to the saw mills, of which we have a large number, you find a different class of boy there again.

2066. A lower class?—Yes. They are not so well educated. They do not come of as good parentage, and generally all round, both mentally and physically, they are a lower class. I have some measurements of just a few—not picked, simply as I was going round on my day, as I came to them. The boys of fourteen years of age whose average height ought to be 4 ft. 11½ in., I took them seriatim, as they came: these are boys of fourteen years of age—4 ft. 10 ins., 4 ft. 11 ins., 4 ft. 9 ins., 4 ft. 7½ ins., 4 ft. 6 ins., 4 ft. 3½ ins., 4 ft. 9 ins. The physical condition of all these was fairly good, though they are below the height. I have not weighed them but they were muscularly good. Then I have girls of fourteen, whose average height ought to be 4 ft. 11½ ins.: I found them 5 ft. 1 in., 4 ft. 11 ins., 5 ft., 5 ft., and 4 ft. 9½ ins. Their condition was fairly good. We come then to boys of fifteen whose average height should be 5 ft. 2½ ins.: we have 5 ft., 4 ft. 9 ins., 4 ft. 9 ins., 5 ft. 5 ins. The boys of 5 ft. were very good; the boys of 4 ft. 9 ins. were very poor. The average height for boys of fifteen should be 5 ft. 2½ ins. These are the measurements from the Anthropometrical Society.

2067. (*Colonel Onslow.*) Those are averages you are taking?—Yes.

2068. (*Chairman.*) Do you mean the report of the British Association, 1882 and 1884?—Yes. With regard to girls of fifteen, whose average height ought to be 5 ft. I have two cases here, one 5 ft. ½ in., and the other 4 ft. 10 ins. One was very good and the other was poor and had phthisis. For girls of sixteen, the average height should be 5 ft. 1½ ins. I have one case of 4 ft. 8 ins., good, then a boy of sixteen and three quarter years of age, 5 ft. 3 ins., very good.

2069. There is nothing in the figures which you have collected which is at all disquieting as to the condition of things?—These show somewhat below the average in height and the physique is perhaps below the average. Some of them are very poor and had to be weeded out; but these have all been creamed before I saw them. There has been a large percentage of those who are indifferent who have been creamed out by the time-keeper before they were presented to me. We would find some of the weeded out boys probably in the soapboiling works. That is not clean work and not favoured by the boys. After they have been refused in other places they gravitate to these more dirty industries, the soap works and the jute works, &c.

2070. (*Colonel Onslow.*) They come under inspection?—Yes, when I come to these works I find we get a distinctly lower class of boys. There is the biscuit factory, the soap works and the jute works; they are all dirty employments and the boys will go everywhere else, and until they find they cannot get employment in other places; then they gravitate to them.

2071. (*Colonel Fox.*) Do you mean lower classes physically or a lower class of people?—They are lower physically and a lower class of people as a rule.

2072. Do the people you speak of, who are biscuit workers and all that sort of thing, all come from about the same class?—Yes, except the engineering class. These are low class.

2073. They are all of the same stratum?—They are a lower class.

2074. Lower again?—Yes, physically and mentally.

2075. (*Colonel Onslow.*) Very bad physically and very low socially?—Yes. You find the difference very marked. I have been assured by some of our School Board teachers that there is a very marked difference in the educational powers, the powers of receiving education amongst the children who have come of parents like the engineers who have had a fairly good education, and the others; the children of the engineers receive education much more easily, and are very much brighter and very much more intelligent than the class who come from what we call the dockers and the indifferent class. That I think is a very well-marked observation with all the different Board School teachers. I have collected some evidence from a large number of the different certifying surgeons—we sent round asking them for their views—and the results of all those letters show very divergent views in different places. I have epitomised a good many of the letters, which, with your permission, I will read.

2076. (*Chairman.*) First I will ask you whether the proportion of rejections within your own experience have increased in number or diminished?—They have diminished for this reason.

2077. That they are more careful in presenting them?—Yes, but there is a further reason than that. At one time I was in the habit of rejecting all cases which were not absolutely physically strong, but I found there was such an amount of distress that by refusing them employment I practically refused them food.

2078. And you relaxed the standard?—Yes. Cases of bad anæmia and cases of eye trouble and cases of nose and throat trouble I gave provisional certificates allowing them to work, but conditional upon their being in attendance at the nearest hospital. I marked all my cases in the certificates to whom I gave permission to work under those conditions, and I notified on my certificate that it was a provisional certificate.

2079. The last Factory Act permits you to exclude them from certain industries while permitting them to go to others?—Yes.

2080. And that system of differentiation works well, I suppose?—Yes, it works very well. Also in some of the works you have different branches. Take Hudson's Soap Works. Some of them suffer from bronchial troubles and it would never do to allow them to remain in the packing rooms, where they fill the boxes with soap powder, because in many of those the room is saturated with the floating particles, but you can say to those who are suffering from bronchial troubles "I will not certify this boy for work in this room, but he may work in the packing case room where they have no dust."

2081. That system of adjustment works well?—Yes, it works very well; it is good for the employers and good for the employed.

2082. Will you give us a summary of those reports which you have been kind enough to collect?—Yes. Dr. G. Bird, Edgware Road, says he has not noticed any marked alterations in physical conditions; there have been a fair proportion of well grown and well developed children, especially amongst girls. Dr. Oxley, East India Road, says that the percentage of undersized, etc., is not greater. Dr. Atkinson of Camberwell New Road, has noticed deterioration. Then Dr. Neston's letter from Newcastle is very important and I should like to read that in full. He says: "There is undoubtedly great deterioration in the physique of our City population, and this is attributable to two chief causes, first a decadence in home life which entails improper food and clothing, irregular habits (drinking and gambling) absence of order and thrift; second, the miserable housing and high rents which prevail; overcrowding, with its consequences, is an important factor in physical and mental degeneration. The fathers and mothers of the rising generation do not recognise, in their gravity, the obligations of paternity, which are left to the authorities, educational or parochial. There is an undoubted falling off in the physical condition of the infants vaccinated and young persons presented for employment during the last quarter of a century, and this is due to the fact that they are the offspring of town-bred parents, who produce *sui generis*." Then Dr. Crossley, Weight, Halifax, says that he has convinced himself that there is a certain deterioration progressing amongst the people; Dr. Dudley, Stalybridge, states that there is no deterioration, and Dr. Eames, Manchester, says that there has been some amount of deterioration, the rejections having increased over 50 per cent., and being due to anæmia. Then a doctor in Sheffield writes that the physical condition is not improved. Dr. Dudley's letter is also perhaps one that I might read to you because it shows there the point I wish to bring before the Committee, that there are a class of local conditions which tend to alter the physical condition of the people in different places. He points out very strongly

that while food and work were good the people improved considerably. "I have been in Sheffield now for twenty-five years and have during that time been in constant contact with the labouring and poorer classes of these inhabitants"—the factory employees—"as certifying factory surgeon. My first impression of the working people of Sheffield was bad. I thought I had never in any other place seen so many small, undeveloped, and deformed people, but looking back on this I have no hesitation in saying that the physical condition has distinctly improved. Sheffield is a cold, hard place to live in, but the work is healthy, the wages are good, and the work people live well and take plenty of holidays." Of course he does not include the steel and knife grinders and people like that, but owing to the generally improved conditions there with regard to wages the people live in a healthier condition, more in the open air, and have more physical employment, and he has noticed an improvement in the people themselves on that account. Now Dr. Watson of Manchester says that there is very considerable physical deterioration, more generally than twenty years ago. He is at Ardwick. There, of course, they have not got the open spaces in Manchester and there is that contrast between them and Liverpool. In Liverpool both the municipal authorities and private people have done a great deal for the working classes in open air spaces and physical recreations of different kinds, encouraging them in it. Our Board Schools are exceptionally good. I do not know any place where the Board Schools have such care given to them, and do so well. Everything which is possible to be done in the way of ventilation and proper looking after the children is done. We are particularly well off in Liverpool in that way and the Liverpool suburbs. In Bootle, where I live, we have very large open air spaces and large parks and there is every inducement given to the youngsters for physical exercise. With regard to Dr. Fraser of Wolverhampton, I was surprised to find that he noticed a great improvement because I did not think Wolverhampton would be so good. With regard to Dr. Hall, I am not certain whether you have come across his work at Leeds. I have a very important letter from him and also a pamphlet in which he has shown in a very strong and striking way the different effects of feeding.

2083. I think we have copies of that pamphlet?—Yes. The letter is as follows: "I have observed the following facts:—(1) The average boy and girl between thirteen and sixteen years of age is undersized and poorly developed in stature, muscle and bone, and presents a marked contrast in these respects, as compared with young persons of like ages of the more opulent classes. The average boy of fifteen in the factory class is about the same size and weight of a boy of thirteen in the classes above them. (2) The prevalence of dirty and decayed teeth. It is exceedingly rare for me to find a sound permanent molar. I have made a point of frequently comparing the birth certificates with the dentition of the young person on examination, and very often finding the second permanent molars uncut at fourteen or fifteen years of age. I have been particularly struck with the fine clean and undecayed which the Jewish children generally have. (3) The prevalence of rickets, about 15 to 20 per cent., I should guess it at. It appears to be more common among the girls than boys. The rickety dwarf with bow legs, narrow pelvis and big head, is no very uncommon object among girls, but rare among boys." That is his observation in Leeds, and he is certainly a most observing man. But, in contrast to that, in Liverpool I did not get such a quantity of rickets. We are not so crowded and I think that really, perhaps, on the whole the people in Liverpool are better fed, but I do not notice that prevalence amongst the children of rickets.

2084. We have it that the condition of things in Leeds in infinitely better than in Manchester?—I should say it was from Dr. Watson's letter. Dr. Watson is in central Manchester. The overcrowding is very much more. We were very much worse some years ago in Liverpool, but since we got that insanitary house property Act our corporation have been particularly active, and they have destroyed an enormous amount of insanitary property and they have built up in many places very healthy sanitary houses for the people. They have got the public baths where they can go and bathe for nothing, and there is every facility given to the people to wash themselves. In all the small houses now the rents are still a great deal too high and there is a necessity to many of the people to have lodgers, but then we again look after them with our nuisance inspector who makes periodic night visits to all these. Every lodging house has to be licensed and our inspector makes surprise visits and we very severely fine any of these people who are licensed lodging house keepers, if we find them with a greater number of people than we allow. *Dr. Young.*

2085. There is a prescribed maximum?—Yes, per cubic foot. The rooms are all measured up and there are a certain number allowed to each room and if there is a larger number in the house we fine them.

2086. That is by the municipal bye-laws?—Yes, "I have no facts proving physical deterioration of the factory class during my tenure of office, but can only say that my impression is that, if anything, there is now a slight improvement in the average physique as compared with my early experience."

2087. He is a certifying surgeon?—Yes. Dr. Browne of Preston says there is a gradually improving condition.

2088. Preston has rather a bad record for mortality?—Yes; but they have wakened up to the necessity of doing something, and they are certainly doing an enormous amount now, both public and municipal. I have one or two extracts here. He says, "I believe that instead of deterioration a gradual improvement is taking place. When I was appointed in 1863, a child could commence work at eight years of age; now it cannot do so until it is twelve. There has been an improvement in the ventilation of factories and workshops; in the amount of moisture allowed in weaving sheds and in the water closet and urinal arrangements, but as regards the last mentioned, by no means to the extent which is desirable. In 1874 a medical officer of health was appointed. There are now five male and two female sanitary inspectors, whose duties consist in ascertaining the causes of disease and endeavouring to remove them. Cellar dwellings and back to back houses are no longer allowed." That has been an enormous source of trouble in the past, those back to back houses; you have them with the old open privy at the back, most intolerable. In Liverpool we have practically done away with them altogether. I do not know that there are any left at all. In other towns they are doing away with them: "Cookery and laundry classes have been established, the Food Adulteration Act has come into force, there is now compulsory military drill at all the national schools, and this cannot fail to exercise a beneficial effect on the physical development of children. The Inebriates Act has already done much good by checking the tendency to intemperance. A committee of ladies was formed, nearly twelve months ago, for the purpose of visiting the houses of the poorest and most neglected people. Five ladies are told off to each ward in the town, and they visit the worst houses in the worst streets, give advice and instruction in matters which relate to health, and either themselves give lectures in the cottages or streets, or obtain the services, for that purpose, of some medical man who is willing to undertake such work. The restriction imposed on married women in reference to the period of pregnancy at which they must leave the factory, and the date after confinement, at which they may return to it." Those are very important matters; that is in Preston. Those are all matters which have been taken into urgent consideration in Preston, and which are now in full swing there. I wish to bring those matters forward to show that there is a divergence in the opinions of many of the doctors and certifying surgeons as to there being no deterioration and as to there being great deterioration.

2089. But the general effect of what you have read to us is favourable?—It is so.

2090. That is your own impression?—Yes.

2091. (*Colonel Onslow.*) The deterioration is marked in some of the places and not in others?—Yes, according to circumstances.

2092. (*Chairman.*) They are waking up in Manchester?—Yes, they are doing a great deal in Manchester just now, but still there is a great deal to be done there. Dr. Purdon, of Belfast, is a very painstaking and thoughtful man. His father wrote a paper some years ago on the question which is before us at the present time, and really he might have

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written it just for the present time. He goes in a good deal more for the effects on the constitution of the people there of the flax work and the different branches of the flax work. I think that the Ventilation Committee which has been appointed and which went so very carefully into the question of ventilation and the conditions surrounding it, has done a good deal of good. I do not think there is very much in Dr. Purdon's father's paper, but Dr. Purdon himself draws a strong and striking line between country-bred children and town-bred children in Belfast. Belfast has rather an unenviable notoriety for its insanitary conditions. There is a great deal of typhoid fever, scarlet fever, and diptheria there. Dr. Purdon says: "As far as my observations go, I would say that the children of the respectable artisan class, such as mechanics, carpenters, shipwrights, etc., have not deteriorated. On the other hand, the city-bred and city-reared children of the factory and labouring class have deteriorated very much in physical development. However, for the last four or five years I think we are at as low a condition as possible and at a standstill. Country-bred children coming into town with their parents are well developed. I attribute the want of physique, etc., in our town children to (1) weakly parents who have deteriorated; (2) to whisky and intemperance in parents; (3) to insufficient food and clothing in winter." I have noticed that myself. It is quite natural that the growth of children who have insufficient clothing and insufficient food must be arrested. It must arrest their development, and if they do not die off, they grow up weeds.

2093. (*Dr. Tatham.*) What town is that you are speaking of?—Belfast. In Liverpool I have noticed the same thing, of course. Our police have a supply of clothing, which they give as far as they will go to the street children, who are certificated now for trading in the streets, and they look after the feeding a little bit as well. Dr. Purdon draws attention to what I think is a very important point in the matter, and that is that these people are living so much on tea and white bread and jam, instead of oatmeal and milk. They are using these cheap jams, and there is the white bread which is supplied so cheaply, which does not contain all the elements of nutrition. In former times the children used to live on oatmeal and butter milk and potatoes, and the country children still live on that, but the town children live more on tea, and this white bread and jam. Dr. Purdon considers—and I quite agree with him—that that has a very decidedly deteriorating influence.

2094. (*Chairman.*) Tea drinking is especially so to the young, is it not?—I am very much inclined to think that bread, jam and tea, are the source of a great amount of anæmia. I have under my care the Diamond Match Works of Messrs. Bryant & May. Messrs. Bryant & May have laid themselves out particularly to consider the physical welfare of their employees. They have the most up-to-date works that it is possible to have both in ventilation and general hygienic arrangements. Further than that, when the employees come in the morning, before they go into the works, they supply them with hot tea or coffee; at luncheon time, three days a week, they give them rice and milk, and the other three days they give them soup free. Besides that they have a perfect kitchen there, and an excellent cook, and they give them a good plate of meat and vegetables for 3d., so that the employees could not be in a better or more sanitary condition than they are at Bryant & May's.

2095. (*Mr. Legge.*) That place was built by an American company?—Yes. But it is Bryant and May's now It was American machinery.

2096. And it was an American company first of all?—Yes, that is so. The American company introduced this Diamond match machinery, but Bryant and May have bought it up.

2097. The sanitary conditions of the American company were very good?—Oh yes.

2098. You are acquainted, no doubt, with Ogden's factory in Liverpool?—No, they are in the south district; they do not come under me.

2099. (*Chairman.*) Do you know Port Sunlight?—Yes, it is on the Cheshire side.

2100. That is a very elaborate place?—Yes.

2101. And a highly organised industrial place?—Yes-very highly organised, and Mr. Lever has bought a large amount of sanitary cottages for his employees, where they are well housed at a moderate cost.

2102. Do you think that his type of organisation might be developed?—With great benefit.

2103. With ease —Yes, I do not think there would be any difficulty. The towns are being so built up now with warehouse property—I am speaking more particularly of Liverpool—that they will have to build more in the out districts, and are doing so at the present moment. North of Liverpool they have built a great number of works where there would be great facilities in the way of acquiring the land moderately cheaply for building workmen's cottages. The one matter in connection with this, that I think has had a very great influence on the health of the people, both in Hudson's Soap Works and in the Diamond Match Works, has been the appointment of lady superintendents to look after their welfare. They have been trained as nurses, and can look after their minor injuries, and besides that they are ladies and have good business capacity. It is very much better, more humanising and more educational to have these women brought into contact with the women than to have them brought into contact simply with the foreman. The foreman looks after the work, and has only to do directly with the work, and all other matters are carried out by these lady superintendents. I think it has a distinctly elevating influence on the girls, and I am quite sure that both in Hudson's and the Diamond Match Works the improvement that has taken place there is great. Of course the Diamond Match Works have been only there eight years, but I have been going to Hudson's for twenty-five years. Unless you had seen it you could not realise it. There is another thing which has assisted in the larger towns—I know it has assisted with us. I have been surgeon of one of the Liverpool Military Corps for twenty-six years, and I am perfectly satisfied that the volunteer movement has had a very great influence in improving the physique of the people. It gives them an occupation for the mind. They are not very inventive in the way of finding occupations for themselves and if they have not got something to do they generally get into trouble, but the volunteering occupies their minds and keeps them in healthy pursuits, and they are brought into contact with others who help them.

2104. That does not affect any large proportion of the population?—We have 750,000 people in Liverpool. I should say, and we have some 6,000 or 7,000 volunteers.

2105. (*Colonel Onslow.*) I think Liverpool has a larger proportion of volunteers than any other town in the Kingdom?—I think we have.

2106. (*Colonel Fox.*) Then there are the lads' brigades?—I am not speaking of them. We have those over and above.

2107. They keep them out of mischief too?—Yes, that is the time when most of the trouble comes in young people, the time when they leave school at fourteen. In Liverpool that is the great trouble, when they leave school at fourteen years of age. They then throw off all parental authority. They get congregating about street corners at night time. I do not think our technical system is altogether really what it ought to be. Of course to a certain extent, not being compulsory, it is at a disadvantage.

2108. You mean the evening classes?—Yes. I think the evening classes want altering altogether to suit the requirements of the people. We do not get so many people to them as we should like, but it is at the age of fourteen that all our youngsters gravitate into evil and become what we call "corner boys," and get drunken habits. They get round the corner of streets; they chew tobacco and smoke, and their highest ambition is to get drunk. Even with regard to girls, I have been on the Bootle Bench for some fifteen or sixteen years, and although we do not find so many cases of youthful drunkenness, even yet we have girls of fifteen and sixteen years of age brought up for being drunk. I think something should be done for the young people. The highest idea would be the compulsory continuation of their education after fourteen, allowing them to learn the work and compelling the continuation classes up to the technical schools. That I think would be the method. Over and above

that there should be some form of compulsory disciplinary service. Our young people have no idea of discipline or subordination. They would not subordinate themselves to anybody. That is, I think, a very great evil.

2109. Do you not find that is carried out in the schools ?—Not so much It is up to fourteen.

2110. When I went there I was very much struck with Liverpool. I thought they were exceptionally good ?—You mean our schools ?

2111. Yes; and the whole town—I was struck with it. It is such a progressive go-ahead town ?—Oh, very. At Liverpool to-day our schools are excellent. I do not think any schools can beat them.

2112. They are magnificent ?—The only thing which beats us is the Manchester Technical School. In the Liverpool Technical School they spent an enormous sum of money on the fabric and in furnishing it. I think it has cost about £150,000. But there is nothing like the facilities for educational purposes that Manchester gives. In fact, if young people want to get technical education that Manchester gives they have to go to the University for it. Then I have made a summary, what I consider to be an epitome not only of my own ideas of the cause of deterioration which has been and which still continues in some places, but also of the other doctors to whom I have written.

2113. Will you give us that ?—Coming of weakly stock—that is, of course, town-bred children—drunken parents, overcrowding, deficiency of food and warm clothing in the young, insanitary houses, early marriages, cellar dwellings. We have done away with all our cellar dwellings altogether, but in time past when I was a young practitioner there were streets and streets of horses with an underground cellar where no daylight could get in at all, and there could be no possible ventilation at all.

2114. All that must make for great improvement, surely ?—Yes. That is why Liverpool shows so favourably.

2115. Do cellar dwellings exist in many towns ?—There are a good many cellar dwellings still. Of course, there are certain trades which tend to deteriorate—miners, stone-masons, and steel grinders.

2116. (*Colonel Onslow.*) In what way are the miners deteriorated ?—The coal miners on account of the dust; they are so liable to get it in the chest. Dr. Carter, of Cork, wished to draw attention to phthisis in millinery establishments. He has paid very special attention to that, and he says he finds that one source of the spreading of phthisis is a girl getting into a millinery establishment where there is no ventilation; that will cause phthisis to spread all over the place. Dr. Prosser White has drawn attention to the working in dark damp cellars. He is in Wigan. He is certifying surgeon there, and has a great number of cotton factories. There are some processes of the cotton factories which he thinks more particularly seem to produce deterioration than others. Perhaps those more particularly are working in cellars in which the moisture is kept out—working in dark damp cellars with no light.

2117. (*Chairman.*) That is the home industry, not the factory ?—No, this is the factory. These are the weaving places, not in their own homes. But there are certain processes in the factory. It is rather too long to read you the whole, but I can get you out some parts of it:—

"I find that the commonest causes complained of for employees changing their occupation (excluding of course such instances as increased payment, cruelty of the mistress overlooker, change of residence, &c.) are general weakness, headache, malaise, anæmia, &c., brought on they think by their work, and that these changes are more common, from my general observation, in certain rooms, such as the spinning department amongst the girls and in the twist cellars amongst the lads in cotton operatives, and in the pressing rooms in cloth workers. . . . . The physical condition of the individual depends upon three things—(1) constitution, that is, the resultant of the inherited tendencies; (2) the home standard, that is, feeding, clothing, housing, education, &c.; (3) the industrial standard, depending upon, pollution of air, the continuousness and ardousness of the work, the amount of light, exceptional heat and moisture, &c. . . . . If the same lad be employed in a vitiated atmosphere, such as exists in a sunless and damp twist cellar or an overheated spinning room, the effect must be most serious, and *vice versa*. . . . . I am doubtful whether the industrial standard is the main or only cause of the physical deterioriation of the young people—presuming they are deteriorating, of which I have my doubts—though no doubt in certain instances the industrial standard requires to be vastly improved. The same remarks apply in my opinion to the home standard." *Dr. Young.*

I have also a letter from Dr. Edjinton, of Birmingham, and from Dr. Bryant, of Leicester.

Dr. Edjinton writes, "I should not say that the young persons employed in factories in Birmingham have materially deteriorated during the last ten years, in fact, I do not find it necessary to reject so many now as I did in the past."

Dr. Bryant writes, "Leicester, as a manufacturing town, stands very high, as the death rate is exceedingly low, and I am quite sure that the children and young persons whom I pass during the year are of better physique than formerly."

Of course that is so, because they make the things more sanitary, and the people do not suffer so much. When they begin to find themselves bad they change and go to something else. With regard to the working in cellars without light, and with an excessive amount of moisture in the air which is necessary for the processes, when they have to go there it makes them feel bad, and they give it up. Dr. Watson has drawn attention to one point which I should like to emphasise very much, and that is with regard to the artificial feeding of infants—adults' tea, white bread and jam, overcrowding of houses, and absence of suitable physical exercise. I can show you here, by the kindness of the dental hospital, some of the arrangements they have for lecturing to show the different deformities which take place, which are really evidence of deterioration. (*The Witness exhibited some plaster casts of mouths.*) We have here a typical healthy jaw. You will notice the perfect equality of all the teeth. Then the point of the greatest importance is the breadth of the arch, and the height it is *there*. I would like to contrast that with the arch of this one, and the irregular irruption of the teeth *here*. This jaw is like a sheep's mouth—this is the upper jaw. Dr. Watson is inclined to put that down to artificial feeding, but I am perfectly certain of one thing—that that arching would not be brought on by artificial feeding alone. Artificial feeding, improper feeding, first of all, produced a softened bone which leads up to the condition, but I am perfectly satisfied that that condition is produced by the mothers everlastingly giving their children the teat to suck, a little rubber teat to keep the child quiet. Young children have this thing in their mouth, it forms a vacuum in the back of the mouth which causes this arched condition, and the muscular contraction of the walls biting on the softened bone drives that in. The next direct result is that, the floor of the nose being the other side of the roof of the mouth, this encroaches on the air passages of the nose and interferes with the breathing space; and when they get that interfered with they cannot sleep. At night time this soft palate falls down, and all the time there is a snoring noise made. It injures them; they become mouth-breathers. The original source of that in a large number of cases is due to the everlasting sucking of the teat. The mothers do not nurse their children: that is where trouble begins, that is the case among the wealthier classes and also among the poorer people. In the town they cannot get good milk, and even good milk is not so good for the child as mother's milk.

2118. Would not the mothers who do not go to factories be just as reluctant to nurse their children ?—Yes, they are just as reluctant. Many of them get other employment besides that. They go out charing and get offices to clean, and that kind of thing, and they do not nurse their children. Some of the working class people will nurse their children up to nine or twelve months, because they think it prevents them getting any more babies. Otherwise they do not bother. At one time in Bootle there was one part where our proportion of infantile deaths was 75 per cent. of all the children born—75 per

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cent. died within the first twelve months but that is very much improved now with the alteration of the people. *Here* is a bad mouth. This one not only shows the high arched condition, but it also shows hereditary syphilis. The teeth are shaped in a way which is a peculiar characteristic of hereditary syphilis—what are called Hutchison's teeth. That has been a great source of deterioration amongst our people in Liverpool, but I am sure that it is less than it was. I do not see the number of marked Hutchison's teeth amongst the factory employees now that I used to see.

2119. Is the seafaring population of Liverpool a healthy class or otherwise?—Fairly healthy.

2120. You do not see the signs of deterioration amongst them which you have observed amongst others?—No. Most of the seafaring people that we have really now belong to the large ships, the large steamers, and they get fairly good wages and are fairly steady men because they are kept on them. The sailing vessels are mostly foreigners sailing vessels; the timber ships are mostly Norwegian, Scandinavian, and German. We do not have very much to do with them; we do not have much opportunity; but the engineers there are all well-to-do and well educated men and there is a large number of the other men there who are really steady, sober men, and it pays them to stay on such lines as the White Star, the Cunard, the Inman, and Leylands. It pays these men to keep on as permanent hands. You see a marked degeneration of the past generation in one thing. I am sorry I could not get you photographs. At the time of taking on of dock hands the usual mode is this: the time-keeper and his clerk comes out in front of the dock say of the Cunard or the White Star, and all the dockmen are hanging round and as soon as they come out they all form up into a circle. Then the time-keeper calls out the different men that he knows who are good workmen whom they keep on as constantly as they possibly can. If there is more work than they can do he picks out others, and then the others who are not called simply disperse. The number of undersized men that you could see there, from eighteen to thirty and forty and fifty years of age, show in a very marked fashion the deterioration of the people of the last generation, those people that I used to pass as young boys at the factories and who at that time would come with bare feet, ignorant, illiterate, dirty and mentally deficient. I do not say in any sense that they are idiots or lunatics, but without the brightness and quickness of intellect you find in young people now.

2121. They have drifted into the ranks of casual labour?—Yes. I would like to draw your attention just as a contrast between the feeding and the non-feeding to the photographs of Dr. Hall.

2122. We have seen them?—Would you just look at the child No. 1, ten years old, and the child No. six in the Christian group. Out of the whole of them there are only two who show really good mental capacity. They are not very well fed and they are undersized; they are below the height; but they are mentally bright. No. 4 is approaching the hydrocephalic child. It looks almost as if there were water on the brain there. I think they are most telling photographs of the effect of feeding and non-feeding. Dr. Crosby Wright, of Halifax, emphasises also the difference between children when they get food, and children when they are not fed, the effect which is shown on them in the results. Dr. Bates, the medical officer of health for the Metropolitan Borough of Bethnal Green, wants to draw the attention of the Committee to this. He says he does not find any great falling off but he says "I do notice that more female young persons are employed in rough trades, such as fire-wood cutting, laying-on at printing machines, box making etc., and I think some steps should be taken to limit the association of young girls with grown men in those places." That is more with regard to moral influence than physical deterioration, but I thought it was just as well to tell the Committee that. Dr. Foker, of Staffordshire, draws attention to the ignorance of the poor people of cooking so that they cannot even get the benefit from good food. He said "I think the volunteer movement did a great deal to improve the men, but the women on the contrary have not improved. Their houses are dirty and neglected; they do not know how to cook and their children are sadly neglected and dirty, which together with very early marriages accounts for this state of things." I will just point out what I have noticed myself as conditions which have helped to do away with the deterioration condition which came within my own observation. First of all I have put down the Education Act as being the starting of the doing away with the deteriorate condition of the people and I think by the time we have another generation our people will be as good as any other, being a good deal better than any other poor people in the world, the Americans not excluded. Next to the Education Act I am satisfied I have seen the direct result of the Factory Acts, the factory surgeons, I am speaking impersonally. They do an enormous amount of good not only in simply rejecting the cases that are not fit for employment, but they have a moral influence as well on the people. Because we do not simply tie ourselves down to passing a case for one kind of work, and another case for another kind of work, and so on. We note everything in the shape of want of cleanliness, want of morale and general appearance about the children. We have a considerable amount of influence and we always get what we want. We never allow anything in the shape of ragged dresses or dirty teeth or anything of that kind. I am quite certain that Bryant & Mays have caused an enormous amount of moral improvement in Liverpool, not simply confined to their factories, because the number of hands who pass through there have their teeth put in perfect order and are taught to keep their teeth washed every morning. They are supplied with tooth powder and brushes free. Getting them into one tidy habit alone has caused them to take a little pride in their personal appearance. One great defect in our people is the want of pride in personal appearance. I try if possible in every way to impress upon the youngsters as they come before me the necessity there is for them showing a little more care about themselves, and getting them to take care of themselves. Next to the Factory Acts I think the doing away with insanitary houses and the Lodging House Acts come in; and then there are the municipal people who have made open-air spaces and have encouraged the games of football and cricket. But there is one important point in Liverpool which I do not know is followed in any other place and that is the supply of sterilised milk to poor people at a nominal price.

2123. It is done at the expense of the municipality practically?—Yes, it is.

2124. (*Mr. Legge.*) Have they power to take money out of the rates to do that or is it done by voluntary agency?—It is done by the municipal authorities. They have a case of six bottles and bring that down, and as the empty case is returned another one is handed to them of sterilised milk. There is enough in each bottle to last for a feed for a baby. If they leave them open at all, they are so careless that the whole of the good of the sterilisation will be done away with in those dirty, filthy houses. But each bottle contains a feed for the child so that when they open it they have enough. That has reduced our infantile mortality from diarrhœa in the summer very largely, and one can easily see how the better feeding of the children at that young age must tend to the building up of their constitution.

2125. (*Chairman.*) Do parents avail themselves of the opportunity of obtaining this?—Oh, yes.

2126. They come for it?—Oh, yes.

2127. (*Colonel Fox.*) I suppose they have depôts?—Yes, in different places they have depôts for the supply of it. We have also done a good deal with district nurses and the public baths. With regard to the evidence of deterioration, we find there is rickets, malformed heads, muscular atrophy, malformed mouths, imperfect dentition, facial appearance of age instead of youth, and decrease in the population. There is one point I noticed very distinctly, which I really look upon as a sign of deterioration, and that is barrenness in the women. I do not speak of the cases in which owing to the exigencies and the difficulties of procuring a livelihood they take means to prevent themselves having children.

2128. (*Chairman.*) You are speaking of increase of sterility?—Yes, those who are sterile, who are desirous of having children but cannot have them.

2129. Not from any malformation?—No. When I was in full practice I used to do a good deal of gynæcology

and a large number of women of every class presented themselves to see if there was any reason why they should not have children. That is still the condition, that there are a large number of sterile women. I cannot help but think it is a sign of deterioration.

2130. Does it not supply a corrective to what otherwise might be a transmitted deterioration ?—I should hardly think so. It is evidence of neurosis, a disease of the nervous condition which I should class with deteriorated nerve centres. There is no malformation to be found. Of course it is unnecessary for me to talk of the increase of lunacy, which is a very serious matter, and the increase of cancer. We are tackling that now considerably.

2131. Is the cancer due to deterioration ?—I think it must be deterioration.

2132. It is more prevalent among the richer classes than among the poorer ?—There is deterioration of tissue.

2133. (*Colonel Ogilvie.*) Is the increase of lunacy a sign of deterioration ?—I should say so—of loss of nerve power. Cancer is very largely on the increase with us.

2134. (*Mr. Legge.*) Amongst both sexes ?—Yes.

2135. But it is more markedly among the females is it not ?—There is a great deal of cancer in the rectum in the males now. Cancer in the rectum used to be fairly exceptional, but it has very much increased.

2136. (*Dr. Tatham.*) I wish to ask you one or two questions with regard to physical deterioration, although you do not believe there is evidence of general physical deterioration—I think you said that ?—I think there is rather an improvement.

2137. I understood you to say that in certain cases amongst the lower classes there may be and probably is deterioration ?—Yes.

2138. According to your professional experience generally and your experience as a factory surgeon do you trace any degree of deterioration to alien immigration ?—We have not so many of the aliens with us.

2139. Not in Liverpool ?—No, and the aliens we have are rather of the better class. We have a considerable number of Poles who are really well educated people; we have a considerable number of Germans, but certainly in my district they are the only ones. They are engaged in sugar refineries and they are fairly well educated and clean living people.

2140. Amongst the dock labourers have you met with a large contingent of aliens ?—We have not so many; we have a few here and there; we have not large masses of them.

2141. Speaking of your examination of factory workers I should like to ask you how you ascertain the age. By certificates ?—According to the last Factory Act, the Factory Act of about fourteen years ago, each child under sixteen years of age is compelled to supply a birth certificate. It is supplied at a nominal cost—sixpence. They get a certificate for sixpence and they produce that birth certificate.

2142. You were speaking just now of the prevalence of rickets amongst young children: you said you observed it in a much smaller proportion of cases now than a great many years ago ?—That is so.

2143. In what form do you find rickets ?—There is the malformed head, the bony malformation, and the bow legs, but they are not so well marked with us, and then there are the enlarged joints; they are not so marked; they are not a striking feature by any means with me now.

2144. So far as that is concerned there is no evidence of deterioration but rather the reverse ?—Yes, rather the reverse. There is another point too which I have noticed rather a diminution in, and that is the tubercular disease of the joints.

2145. I was going to ask you about tuberculosis ?—While you have a very large proportion still of tubercular disease of the lungs, you have not the amount of tubercular disease of the joints that I used to meet with thirty years ago.

2146. And as regards the prevalence of phthisis; do you think that factories contribute to the increase of phthisis ?—I am sure they do. There is one feature about that which presents difficulties. Some two years ago I was asked by one of the factory employers to see one of their women. She did not come under the Factories Act; she was outside the age. This was a woman who had been brought up very well, a nicely educated woman who had been in very different circumstances, but owing to the unexpected death of her husband she was left to educate and bring up two children. She got work in this confectionary place and she was so clever that in a very short time she was earning 25s. a week, which was very small and very different to the condition she had been educated and brought up to, but still it enabled her to live very comfortably and bring up her two children. Her employer asked me to see her and I found she was suffering from phthisis. I wrote to the Medical Officer of Health for Liverpool asking what was to be done under the circumstances. He said "Send her to the workhouse." I could not take it upon myself. It was not my business to do that. She was able to educate her children, and for a theoretical injury, for a theoretical possibility it was outside my business to do that, and I was very thankful to leave it outside my business. I think that is a class of case that ought to be legislated for, because where it is for the good of a community that a woman should be taken away from educating her children and keeping herself and her children, I think it is extremely hard that she should be sent to the workhouse. *Dr. Young.*

2147. Do you think it would be for the good of the people if the notification of phthisis were made compulsory just as in the case of other infectious diseases ?—I would make it compulsory in the case of all factories where there are large numbers of people working together in close atmospheres, but I do not think it could be made compulsory notification for general practice. I think there would be difficulties in the way. But at the same time I think that certifying surgeons ought to make this one of the cases for notification under the Factory Acts in special factories where he found it, as you have now in this millinery place which Dr. Clark, of Cork, speaks of. I have known some who have only recently come under the Factory Act because they have adopted electro-motive power for sewing machines, but they are more stuffy rooms than any I have been in. Having boys and young people there of fourteen and fifteen years of age, a phthisical person there would be very likely to spread it.

2148. You spoke just now of the presence of ophthalmia. Do you mean granular lids ?—You get that, but you also get different forms of eye disease—shortness of sight and loss of sight generally. Of course, granular lids you do not get so very much amongst the youngsters; you get them more in the industrial schools. They get them there very badly

2149. (*Mr. Legge.*) Do you mean the industrial schools ?—Yes.

2150. Are not you thinking of the Poor Law schools ?—We have what we call industrial schools.

2151. I happen to inspect the industrial schools under the Home Office, and it is certainly not true of them ?—The industrial schools that I speak of are schools that are used for drafting off the children from the Liverpool workhouse.

2152. Those are called Poor Law schools ?—We call them the industrial schools. At these industrial schools there was so much granular lids that the surgeon there refused to take any more from the workhouse. He sent them all back to the workhouse hospital, because the first thing he had to do with them when they came down there, was to turn them all into the infirmary where he had the treatment of them.

2153. I should like to ask you your opinion as to the value of a more codified scheme of physical statistics. I suppose you would be in favour of that if it could be secured ?—I think there would be an enormous amount of useful information got from it.

2154. I suppose, for instance, the certifying surgeons could be of great use ?—They could. The certifying surgeons, I think, would perhaps have more facilities for it than anybody else.

Dr. Young.

2155. So far as the working-class population of all ages is concerned?—Yes.

2156. When you examined children and young persons, for instance, at such examination, part of the certifying surgeon's duty might be to take certain particulars?—Yes.

2157. What is the smallest amount of detail which you think they might go into with advantage—height?—There is height, weight, and chest measurement. I do not know that the weight would be absolutely necessary, because if you get chest measurement and the height you can form a very good estimate of muscular development.

2158. You would be satisfied with the chest measurements in the rough, with the tape?—Yes.

2159. You would not want calipers?—No, that would not be necessary.

2160. Do you attach any importance to testing the reactionary movement?—I think if you get good muscular development, that is sufficient. Our tactile development is such that we can get hold of an arm or leg and get the muscular resistance.

2161. I suppose a certain remuneration would have to be attached to work of that sort—the certifying surgeons are paid a fee for every examination?—Yes. Sometimes they contract with the employers for so much to be paid for doing their work.

2162. There is another kind of statistics, no doubt, which you would also favour—I mean special inquiries into particular trades and industries?—Oh, yes.

2163. And localities?—And localities.

2164. Would you like to have the problem really solved, for instance, as to the actual physical measurements of town-bred and country-bred children?—Yes; it would be very necessary to draw a distinction between them.

2165. You are satisfied that the social legislation and administration in a particular form of it, the factories and workshops legislation and administration, is having a certain effect?—I am quite certain it is.

2166. And you would be prepared to see extensions on similar lines of the powers already granted by the Legislature? Extensions of the factory powers?—Yes.

2167. Yes, and what extensions?—I think it would be a very important matter. I think the certifying surgeons ought to be given the power of a medical officer of health in regard to factories, because there are certain conditions which one sees when going round. I wrote a little while ago to the employer of a factory, calling his attention to the disgraceful condition of the urinal there, and he very nicely said they would have it looked after, and it has been attended to.

2168. (*Chairman.*) That is outside your duty altogether?—Yes.

2169. (*Mr. Legge.*) Then one detail about the married women after childbirth; would you go for an extension of the period within which they must not return to work?—Yes, I would. I do not think any woman after her confinement should attempt to work again for three months.

2170. Would you go so far as to say that when a woman becomes pregnant she should leaveoff working in a factory?—I do not think that would be necessary. If you take such work as that of a woman at the pit brow, there is tremendously hard work there, but a good deal of work a woman can do easily up to the end of the sixth month. In some works they could even still continue it to the end of the seventh, but I would stop them after that.

2171. And for three months afterwards?—Yes.

2172. Then you spoke of continuation classes?—Yes.

2173. And you spoke of their being specially adapted for a class of the population who are rather at a loose end?—Yes.

2174. They require a special curriculum?—Yes.

2175. You are aware that the Liverpool educational authorities are already considering a scheme for such a night school in connection with one of their day industrial schools?—Yes.

2176. Would you approve of that?—I strongly approve of that.

2177. And you would go further and say that as regards the ordinary day schools for the poorer parts of the town a special school might be established with a curriculum adapted to the particular class living in that district?—I think that I would go even further than that. I would have what the Americans call "mucker" schools. They have a class of schools there which they put down in the lower slums of the town. They put all the dirty children into them, and have special masters and a special curriculum.

2178. Do you know the Bootle day industrial school?—Yes.

2179. Do you think schools with a curriculum such as that would answer?—I cannot say the curriculum they have got.

2180. A sort of half-day schooling and half-day light occupation and manual instruction?—I think that is a very necessary thing.

2181. And a good deal of drill?—I would make drill compulsory.

FIFTH DAY.

Monday, 25th January, 1904

PRESENT.

Mr. ALMERIC W. FITZ ROY (*in the Chair.*)

Colonel G. M. FOX.
Mr. J. G. LEGGE.
Mr. H. M. LINDSELL.
Colonel GEORGE T. ONSLOW.
Mr. JOHN STRUTHERS.
Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary*).

Dr. D. J. CUNNINGHAM, M.D., LL.D., D.Sc., D.C.L. Oxon., F.R.S., called; and Examined.

Prof. Cunningham

2182. (*Chairman.*) You are Professor of Anatomy of the University of Edinburgh and Chairman of the Anthropometric Committee of the British Association?—Yes.

2183. Do you think there is any evidence of general deterioration?—I do not. Of course, one may have impressions, but so far as solid fact goes I do not think that there is evidence of any serious deterioration.

2184. Have you any impression that there is?—I have, in Ireland.

2185. We will come to that later. But of course you will admit that the influx of rural population into the towns is detrimental to national physique?—Most distinctly so. It is true that, owing to agricultural depression and other causes, there has, during the last half of the century, been a great movement of the people of Great Britain from the country districts into the towns. It is calculated that the rural districts have been depleted in this way to the extent of 27 per cent. of their population; and as all authorities—both anthropological and medical—agree that urban life tends to lower the physical standard of the people, it is reasonable to suppose that this migration has not been unattended by some such effect. The marked reduction of the death-rate in the majority of cities, however, points to the fact that the deteriorating influence of overcrowding and poverty has in some degree been counteracted, and that through the efforts of philanthropists and also through useful legislative measures, the national health has in a large measure been preserved.

2186. What evidence do you think there is available in regard to the national standard of physique?—I am afraid that there is not very much evidence. At the present moment what evidence there is upon the physical condition of the people is founded first, upon statistical records of recruits who present themselves for admission into the army.

2187. You do not think that this goes far?—I do not. And second, upon the anthropometrical data which have been from time to time obtained by anthropologists and also by educationalists who are interested in the growth of the schoolboy. In no case are these sufficient to give an absolutely satisfactory idea of the national physical standard; and much less are they capable of affording unimpeachable evidence of any general deterioration of the race.

2188. What reason have you for saying that evidence derived from the statistics of recruiting is unreliable?—Because the class from which recruits are derived varies from time to time with the condition of the labour market. When trade is good and employment plentiful it is only from the lowest stratum of the people that the army receives its supply of men; when, on the other hand, trade is bad, a better class of recruit is available. Consequently the records of the recruiting department of the army do not deal with a homogeneous sample of the people taken from one distinct class. I may mention that a still better answer than I have given to this question is contained in the admirable reports which have been submitted to the Home Office by the Royal College of Physicians and the Royal College of Surgeons.

2189. We have those reports?—They are very admirable reports.

2190. There is some information from the report of the Anthropometric Committee of the British Association on this question?—Oh, yes; most valuable information. You refer, of course, to the reports of the years 1878 to 1883?

2191. Just so?—That really is the most valuable information we have upon the national physique. But these data were obtained more than twenty years ago, and there is really very little information of a similar kind which has been acquired either before or since that, with which these data can be compared. All other anthropometrical details which have been gathered since these Reports were published have been the result of private enterprise on the part of anthropologists or of educationalists who have interested themselves in the growth of school-children or of university students; and private effort is not capable of collecting the mass of facts which are required to enable us to pass a judgment upon so large a question as the standard national physique. Further—and this, I think, is rather an important point in this matter—owing to the divergency of methods employed by different enquirers, data obtained in this way do not possess the same value as those that are collected by a central body which controls and regulates the manner in which the work is carried out.

2192. You think it is essential that the inquiry should be conducted on those lines?—It is absolutely essential, and instances could be given of the great divergency of results which are occasionally obtained by independent workers—workers whose only desire is to obtain uniform results, and yet they obtain by the adoption of different methods very different results. I saw in the *British Medical Journal* a few weeks ago a very striking statement bearing upon this point. It referred to an inquiry which had been started independently in different European countries, in regard to the hearing of school children, and the results obtained showed marked discrepancies, owing apparently to the different standards adopted in each case. The result was as follows: In St. Petersburg, in 1888, 280 children were examined, and 14 per cent. were found to have defects in hearing. In Kreise more than 7,000 children were examined, and there were 28 per cent. with defects in hearing. In London the number examined was not given, but Dr. Cheadle found that in 1902 there were 43 per cent. with defective hearing, and in Grossvartenburg, out of 700 examined, 15 per cent. were found defective. No one I think would come to the conclusion in looking at these results that they represent the true state of affairs. Anyone who has been accustomed to investigation of this kind would at once say: Well these men are trying to get a uniform result, but they have not done so, owing to the different methods which they have adopted; and in consequence I would very strongly urge upon the committee this fact, that if uniform results are to be obtained they can only be obtained by workers, all working under one central controlling body.

2193. Upon uniform methods I suppose?—Yes. That is the only way in which uniform results can be obtained.

Prof. Cunningham

2194. Have you formed any opinion upon the influence of environment on the development and physique of the people?—Every anthropologist has considered this question, and this point is very fully and admirably brought out in the Report of the *British Association* to which you have referred. One point which is established beyond all question is the remarkable influence which environment and nurture exercise upon the development and growth of the child as well as upon the standard of physical excellence attained by the adult. This is brought out most clearly in the tables given by the Anthropometric Committee of the British Association (1883), and it has recently received striking corroboration at the hands of Professor Matthew Hay and Dr. Leslie Mackenzie, in the Report of the Royal Commission on Physical Training. According to the statistics supplied by the British Association Committee (1883) children vary to the extent of five inches in stature, and adults to the extent of three and a half inches in stature, according as the circumstances under which they are reared are favourable, or otherwise. In the selection of officers and recruits this is a matter which is fully recognised at the War Office. The physical equivalents required in the case of a young man seeking a commission are of an altogether higher standard than those required in the case of a private. In the report of the Committee (1901) appointed by the Secretary of State for War "to enquire into the regulations under which candidates for commissions in the Army as well as recruits are physically examined" (a Committee on which I had the honour to serve) it is stated that the Committee consider "it is unnecessary to retain the weight test for recruits of sixteen years and under, for the reason that these lads in most cases, on offering for enlistment are underfed and that they speedily put on flesh in the barracks." In the case of candidates for commissions, however, it was unanimously recommended "that the weight test should be retained for all ages, the same reason not existing as with recruits." That is the Report of this Government Committee and I have received the permission of Sir Edward Ward to refer to it. This is the only copy that I have.

2195. (*Chairman.*) We shall be able to get copies of it?—I do not say that there is anything in it that is valuable for your purpose, but it is of interest, as it represents the minimum in the way of physique that this Committee considered it safe to adopt in the selection of officers and recruits. So sensitive, indeed, are the laws of growth to the influence of the surroundings amidst which an individual is placed that, quite apart from racial distinctions, it has been shown that people who live in the more elevated and bracing districts, where there is a freer circulation of air, are physically superior to those reared in the alluvial plains. That was a point brought out in the British Association Report. A pure atmosphere and proper food are the chief essentials for the building up of a good physique.

2196. Have you any opinion as to the period of early life which is most sensitive to the influences of environment? Is it the first few years of life, or is it later?—It depends very much upon circumstances, but the most important periods of life, in so far as growth is concerned, are the early years and also the period of puberty.

2197. Would you say the first five years?—Yes. One can see that by the statistics of mortality of infants. The statistics of mortality of very young infants are shocking.

2198. They have undergone no diminution, you think, during all these recent years when such advance has been made otherwise?—I cannot see how that could be the case, seeing that in large part the heavy mortality during infancy is accounted for by the fact that a child is now-a-days seldom fed from the breast.

2199. You think it is largely due to that?—I am certain of it. They are fed upon skimmed milk, and starchy trash, and all sorts of abominations. It is not perhaps that the parents are not able to get better food, but it is owing to the absolute ignorance of the parent of the proper kind of food to give. That you will find to be an opinion almost universal amongst those who have any knowledge of this subject.

2200. Have you formed any opinion as to the effect of the lowering of the death rate on the national physique?—Yes, I have considered that point. Of course during the last fifty years the conditions of life have changed so much that it is reasonable to suppose that some disturbance of the physical standard of the nation, either for better or for worse, has taken place. I have referred to the lowering of the death rate, chiefly through improved hygienic measures. Through this, the elimination of the weak or unfit has not been so complete in recent years as it formerly was, and there can be little doubt that the addition of these to the population must have tended to lower the general physical average of the people of these countries. But, on the other hand, the same hygienic measures have, at the same time, improved the conditions of living of the general mass of the people, and acted in such a way upon the average standard of physique as to counter-balance the lowering effect produced by the survival of a greater number of the weaker members of society. It is very difficult—in fact, it is impossible—for one to say which of these two influences has acted to the greater extent; but I should imagine that they very nearly counter-balance each other; that we have obtained a better and higher physique by improved hygienic measures, whilst at the same time a very considerable number of the weaklings, who would otherwise have succumbed, have been able to live.

2201. You have formed some special opinion with re-hard to Ireland, have you not, in the course of your investigations?—Yes, I think that the conditions of Ireland are such as to require separate consideration. If there is any part of the United Kingdom in which physical deterioration is to be expected more than another it is in Ireland.

2202. Yet we have been told by one or two witnesses that particularly hard kinds of work are done by Irishmen, who are very often the best workmen?—That may be so. Of course, the labouring population in Ireland is relatively more numerous, I should imagine, than it is in these countries, and these men are trained to that particular kind of work.

2203. They were picked men, you think?—I should not say that, but they are men who are trained to it. Here, the labourer is a man very often who has come down from a higher condition, and he is absolutely unfit for the work he undertakes.

2204. That no doubt is the case?—Yes. For many years there has been a constant outflow of the people from Ireland by emigration, and it is the young, the strong, and the enterprising members of the population that have gone. I can testify to that from observation—have seen them go.

2205. You have made some investigations in Connemara, I think?—I have made no investigations which directly bear upon this point, but I have been able to see the character of the people who have gone out of Ireland. I know Ireland very well. I have been all through it, more so than Scotland, and I have taken a great interest in the people, and I have often been made very sad to see the best of the people go out of Ireland, and to compare those with the people that have been left. So that this is really an important matter in connection with your inquiry in so far as Ireland is concerned. Still, it must be admitted that there is no absolute evidence available that deterioration has taken place in the physique of the Irish people. This is an impression, I wish to say, because I have got no evidence of it. For ten years systematic measurements of the people have been undertaken as part of the work of the Anthropometric Laboratory in my former department in Trinity College, Dublin, and yearly reports have been published by Dr. C. A. Browne of the results obtained. But I wish it to be understood that these observations are not of such a kind as to throw any light on the general question at issue. They were undertaken entirely from the ethnographical point of view, and each year a small, isolated district (chosen on account of its isolation) was selected for study. In this the people were measured and their mode of life recorded. Any inferences, therefore, which may have been drawn from these reports, in regard to the deterioration of the people of Connaught, are not warranted. It might interest you to know the field over which our inquiries have extended, but I do not think that even if these reports were before you you could get any information from them that would be useful to you.

2206. You think that there would be nothing reliable?—Nothing that would be of value to you in your present inquiry. The reports include the Aran Islands, Inish-

bofin, and Inishshark, in the County of Galway; the Mullet, Inishkea Islands, and Portacloy, County Mayo; Ballycroy, County Mayo; Clare Island and Inishturk, County Mayo; Garumna and Lettermullen, Galway; Carna and Mweenish, Connemara; Dunquin, County Kerry, and Mallinmore and Malinberg, County Donegal. The investigations covered a very considerable area.

2207. You cannot say that they can be compared for our purpose with any facts collected by the Anthropometric Committee of 1883?—So far as your purposes are concerned they may be left out of account, because the end we had in view in this inquiry was a totally different one. It was an ethnological inquiry. The probability remains, however, that the people of Ireland have deteriorated in physical characters. It is not only from impressions which have forced themselves upon me during my long residence in Ireland that I am led to express this opinion, but also from the well-established fact that insanity has increased to an alarming extent. In 1851 the proportion of insanity and idiotcy to the population was 1 in 657; in 1901 the ratio was 1 in 178. These figures are taken from an instructive paper on this subject by Dr. John Macpherson (*Edinburgh Medical Journal*, May, 1903). This paper gives valuable information in regard to the relation of fertility to insanity. Perhaps I may be allowed to state the sources from which my impressions are derived. In Dublin one has particularly good opportunities of comparing the country with the town people, and of course one who has an anatomical eye like myself generally looks at these points with some little interest. In Dublin there are frequent processions in connection with certain national events, when delegates come up from all parts of the country, and you see the town contingent marching side by side with the country contingent, and you can draw a line between them.

2208. Very much in favour of the country contingent, I suppose?—Very much.

2209. There has not been any large displacement from the rural to the urban districts in Ireland, has there?—Not nearly to the same extent that there has been elsewhere. There has been in connection with Belfast, but not in connection with Dublin.

2210. Among influences that may counteract deterioration, do you attach much value to the existence of a mean physical standard of the race and the tendency of the classes which deviate from this to return, under improved conditions, to the mean standard?—Yes, I do. I would refer to the manner in which changes in the conditions of life affect the growth of an individual class, and more especially how poverty with its squalor, its bad feeding, and its attendant ignorance as to the proper nurture of the child, lowers the physical standard of the lower classes. In spite of the marked variations which are seen in the physique of the different classes of people of Great Britain, anthropologists believe, with good reason, that there is a mean physical standard which is the inheritance of the people as a whole, and that no matter how far certain sections of the people may deviate from this by deterioration (produced by the causes referred to) the tendency of the race as a whole will always be to maintain the inherited mean. In other words, those inferior bodily characters which are the result of poverty (and not vice such as syphilis and alcoholism) and which are therefore acquired during the lifetime of the individual, are not transmissible from one generation to another. To restore therefore the classes in which this inferiority exists to the mean standard of national physique, all that is required is to improve the conditions of living, and in one or two generations the ground that has been lost will be recovered.

2211. But you do not think that that is the case with the effects of alcoholism transmitted from parents?—That is a very doubtful matter. I myself, perhaps on insufficient evidence, do believe that the effect of alcohol, as seen in alcoholism, is transmitted.

2212. And that it results in the permanent disablement of the offspring?—Exactly.

2213. In successive generations?—How far it would go it is very difficult to say. I think the evidence is insufficient to form any definite opinion.

2214. But the sober son of a father who has been a soaker all his life might transmit the effects to the grandson, you think?—It is more than likely. It may skip one generation and appear again in another. I have not the slightest doubt that both in the case of syphilis and alcoholism the taint gradually would wear out if this particular stock persisted, provided there was an influx of healthy and fresh blood. *Prof. Cunningham*

2215. Have you had proof of syphilis having increased or decreased among the population?—I have had no experience of that. Although I am a medical man I have not practised.

2216. Do you know, from what you have heard of it, whether that is so or not?—Of course, every medical man considers that syphilis requires special legislation. I never met any medical man yet who did not hold that it was a monstrous thing for the State not to take measures to check this most deteriorating disease. One can hardly use words strong enough about it.

2217. You do not think that the operation of other causes has tended to check it?—I am not sure what you mean.

2218. From what you hear, would you say that there is more syphilis and that it has attained a more virulent form than it did twenty or thirty years ago?—I should imagine that it is not more virulent from what I have heard but I have no actual knowledge on this point.

2219. From your experience as an anatomist have you noted any changes in structure unfavourable to development?—No, I have not, except in the one case of the teeth. In other directions, I think I might almost say, there has been an improvement; but there is no doubt about the teeth. It is an obvious fact that the teeth of the people at the present time cannot stand comparison in point of durability with those of the earlier inhabitants of Britain. Those who have the opportunity of examining ancient skulls cannot fail to be struck with this. In such skulls it is common to notice the teeth much worn down through the coarse and gritty character of the food used in these early times, but still they are usually firmly implanted in the bony sockets of the jaws. Further there is evidence that within comparatively recent times this degeneration of the teeth has been proceeding with especial rapidity. It is a significant fact that in a table issued by the Director General of the Army Medical Department (see *British Medical Journal*, Nov. 21st, 1903, page 1339), the number of recruits rejected for defects in the teeth is shown to have increased from 10·88 per 1,000 in 1891, to 49·26 per 1,000 in 1902. Probably this increase in the number of rejections from this defect partly arises from a greater stringency in connection with this physical requirement.

2220. That is, I think, admitted by the medical authorities for the army?—But at the same time it is not all due to this. Indeed, the increased tendency in the present age to dental caries, and to early absorption of the walls of the sockets in which the jaws are implanted are matters which have recently been attracting very special attention on the part of the medical men. In connection with this question there are two other points that occur to me. The one is the feet and the other is the female chest. I think—and I think I can speak on this point with some little authority—that in both these respects during the last twenty years there has been an improvement. I do not see now (of course it is only the very low classes that I can speak of) in studying their feet the same amount of deformity that I used to see about twenty years ago. Then, with regard to the female chest, which used to be so shockingly distorted by means of the corset, not only in the upper classes but also in the lower classes, there again I do not see the same amount of distortion. It is very rare indeed to meet with a female chest which is absolutely normal. It is one of the rarest things possible; but the amount of distortion, I think, has very considerably lessened. It is really a very long time since I have seen a chest which one would say was excessively distorted from this cause.

2221. You think that ought to have a valuable effect upon the health of the women?—Most valuable. No one, except those who know the anatomy of the thoracic and abdominal cavities can realise the important effect that it must have.

2222. (*Colonel Fox.*) What do you attribute that to—the increase in physical recreation?—I think it is largely due to the improved æsthetic taste of the people.

2223. They do not tight-lace so much as they used to, you mean?—Yes. I think that the æsthetic taste is

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to some extent shocked now when one sees a spider waist in a woman.

2224. (*Chairman.*) May it be the fact that owing to the out-door exercises they indulge in now, they find the corset is an impediment to them ?—Yes, that very strongly comes in. The young women have quite a different idea in regard to athletics and exercise from what they had in the first half of the last cen ury.

2225. (*Mr. Legge.*) But that would not affect the poorer classes, on which you based most of your observations ?—I think that it would, because they follow the upper classes in matters of fashion. It was a surprise to notice how many of the lower classes had pinched-in waists. A study of the female thorax shows that it is not confined to one class but that it occurs as much in the lower classes as in the upper classes. While I state my belief that, except in the case of the teeth, there is no sign of structural deterioration in the race, I would not have it supposed that I wish to assert that no structural changes are going on in the human body. The changes to which I refer, however, are slow of progress and minute in degree, and have to do with the gradual evolution of the race. In the present enquiry, such evolutionary changes may be disregarded—not merely because they can hardly be considered germane to the subject under consideration, but also for the very cogent reason that no legislative measure, short of one devised with the view of arranging the matrimonial alliances of the nation, would have the slightest effect in retarding or accelerating their progress. Two of these evolutionary changes may be briefly referred to, seeing that they have an indirect bearing on certain points that have been raised in connection with the subject under consideration. It is probable that in civilised peoples the volume of the brain, and with it the size of the cranium, are undergoing a slight increase. Certain anthropologists believe that this is the case. For my own part I am inclined to think that whilst in all probability the head of the new-born child shows little or no increase in its dimensions, the range of growth and the period of growth of the brain and cranium after birth have both been extended. There is reason to believe that education acts as a stimulant to brain growth. It would likewise appear that, in the white races of Europe, the jaws are undergoing a slow process of shortening. The stunted character of the wisdom or back-most teeth, the small amount of space allotted to them, their variability, their late appearance and indeed their frequent failure to appear at all, bespeak this change in the jaws. Through this jaw-shortening the teeth are reduced in size in civilised races, more crowded together, and therefore more liable to disease. Indirectly, this may tend to favour the early degeneration of the teeth, which is so marked a feature of the present age ; but I take it that the real cause of this degeneration is the striking change which has taken place in the character of the food.

2226. (*Chairman.*) Has that striking change taken place in the character of the food at the early period of life, or does it apply to the food of the adult classes as well ?—All through life. Of course not during the time that the child is taking the breast, but as soon as the teeth begin to be used. There cannot be a doubt that the teeth are not so useful as a functional factor as in former times when they had hard and gritty food to masticate, and we see in those races who give greater employment to their teeth that the teeth have not undergone so great a change as in the civilised races. This is no doubt also partly due to the fact that in many of these races the jaws have more room for the implantation of the teeth. The teeth are larger and they have more room, but it is also in all probability due to the fact that these teeth get more and harder work to do.

2227. The teeth are failing because they are becoming useless, I suppose ?—Partly that.

2228. (*Mr. Struthers.*) I heard when I was down in Edinburgh last week that some of the legal students who came from the West Indies and from European races came with excellent teeth, but it is found that even in the course of their residence in Edinburgh they rapidly decayed ?—I did not know that, but I should think it is not impossible.

2229. (*Colonel Fox.*) That bears out your statement that it is due to that fact ?—In civilised races the teeth are a subsidiary matter, but also, for what reason I cannot tell, the jaws are apparently shortening.

2230. (*Chairman.*) You think that the vitality of the race goes to strengthen parts of the body whose functions are in more request at the present time than the teeth ?—Yes; in the case of the head we have got the cranium and the face. The cranium is the important part and the face is becoming a subsidiary part.

2231. (*Mr. Struthers.*) Do you think that this decay is as common among the well-to-do as among the poorer classes ?—Quite. But there is a very interesting point with regard to the teeth. Anyone who can look back twenty or twenty-five years can recall the fact that a person who had lost his teeth through decay at those times would become very early old-looking, and used to get the nut-cracker appearance of face. Now the dentist has stepped in and the parts of the face that have disappeared are built-up and the two jaws are thereby kept in a proper opposition to each other, and the angle of the lower jaw is preserved so that the youthful appearance is retained. It is an interesting point, that, owing to the dentist, you see very few old-looking people about. And that also applies in the case of the lower classes as well as the higher. You do meet more of them among the lower classes, but the lower classes are paying a great deal of attention to the matter now.

2232. (*Chairman.*) False teeth are very expensive, are they not ?—But they have dental hospitals in towns where they can get almost any attention that is required. I do not say that the aid thus rendered is sufficient. It would be better perhaps if it were more extended, but still a great deal of attention is paid to their teeth nowadays.

2233. In connection with this point I want to call your attention again to the Anthropometric Report of the Committee of the British Association of 1883. I shall quote first of all a passage from the report, and then the note. This is from the report :—" It would appear therefore that the physical (and most probably the mental) proportions of a race, and their uniformity within certain limits are largely dependent upon the size of the female pelvis, which acts as a gauge as it were of the race, and eliminates the largest infants, especially those with large heads (and presumably more brains) by preventing their survival at birth." And then there is a note attached to that :—" It is probably in this direction we must look for an explanation of the degenerative influences of town life and sedentary occupations, as they, together with the new movement for the higher education of women, favour the production of large heads and imperfectly developed bodies of women in this and other civilised countries, and a corresponding disproportion between the size of the head and the circumference of pelvis. Have you considered that ?—Yes, that is a paragraph with which I am quite familiar, and it opens up a number of very interesting points, although I may say that I do not agree with the general tenour of that paragraph at all. I have not the least alarm with regard to the deteriorating effect which it is alleged may ensue from the higher education of women—quite the reverse. There again, of course, we are dealing more or less with impressions, and therefore I would guard myself in this statement by saying that sufficient time has not elapsed to enable us to judge with any degree of certainty of the full bearing of this movement upon the national physique. Indeed the higher intellectual training of women, in so far as their bodily structure and the proper fulfilment of their physiological destiny is concerned, must still be considered to be in the experimental stage. I think, if I am not wrong, the movement towards the higher education of women only began in the early sixties ; it was not taken up with any degree of vigour, but it was about that time that secondary schools were founded. The Universities did not take up the matter until the early seventies, and at first only in a very partial manner indeed, and it is only within the last twenty years or so that this matter has been pushed with any degree of vigour at all, so that I do not think that we have got materials at the present moment to judge, and therefore we must go entirely upon impressions ; but my impressions are very strong that the whole life of the women at the present moment is ever so much more healthy than it used to be.

2234. You think that applies to all classes ?—Yes. There is more life in the open air and more exercise.

2235. Some forms of exercise, I presume, may be injurious ?—I do not think, so far as I can see at the present moment, there is any exercise that is injurious.

2236. How about bicycling in relation to child-bearing ?—I do not think that bicycling in moderation will be injurious except at particular physiological periods.

2237. Does it not tend to the rigidity of the muscles in that part of the body?—The only way in which it could affect the body would be in modifying the form of the pelvis; of course the pelvis during the period of growth is not consolidated in the same way as it is later on. It might affect the pelvis, but still, at the same time, the hereditary influences of growth in healthy people are so strongly impressed upon the different parts of their body, that I say in moderation I imagine that physically it would not be injurious.

2238. Yes, in moderation?—In moderation. Of course one could quite understand that young persons might injure themselves by excesses of any kind. I have seen the physique of young men destroyed by over-study. But these are extreme cases.

2239. But extremes are very often met with, you know?—We do meet extremes, and I have instances at the present moment.

2240. There is more immoderation among women than among men, particularly when games are taken up with all the zest of novelty?—Yes, of course it goes without saying that all systems of female education in which the marked sexual peculiarities of women, both as regards structure and function, are not considered, are bound to act perniciously on their proper development. In the British Association Note, to which you have referred, special attention is called to the pelvis in its relation to child-bearing. In dealing with this statement, I regret that it will be necessary to enter slightly into detail. The influences which regulate the growth of the pelvis in the two sexes are hereditary, and by their operation a different result is produced in each sex. During the process of parturition the child has to pass down through the bony ring which is formed by the female pelvis, and in connection with this requirement the interior of the pelvis in the well-formed female is roomier and wider than in the case of the male. So strongly are these hereditary laws of growth impressed on the individual during the course of its development that even in the unborn child or fœtus certain of the sexual characters of the pelvis are apparent. It is a very interesting matter—as well as curious—however, that after birth and in the earlier years of childhood these sexual characters would appear to disappear.

2241. With regard to the pelvis?—Yes. The later investigation of these matters shows that during the first eight years of life these differences in the sexual characters between the pelvis of the boy and the girl would appear to vanish and they become similar. In the eighth year of her life the girl enters upon her second stage of childhood, and about this time the pelvis goes along different lines from that of the boy. This deviation from the mode of growth of the pelvis peculiar to the boy is clearly preparatory to, and a necessary preliminary to, the changes which occur in the female at the period of puberty. At the time of puberty, the form of pelvis characteristic of the female is attained, and although the pelvis continues to grow in accordance with the general growth of the body, its general proportions are maintained. That is the last investigation of the matter, and it is a very curious and interesting point. Muscular action has little—if indeed it has any—influence in modelling the form of the pelvic interior and determining its relative size in the two sexes. The fact that, in the erect attitude maintained by man, the weight of the trunk is transmitted through the upper half of the pelvic ring to the lower limbs, may have some influence in modifying the pelvic form, but even this is doubtful. It is under this head that the alleged evil effects of excessive bicycling would come in, because the weight of the body in bicycling is not transmitted through the lower limbs. It is thrown on the pelvis, and through a different line, and through that there might be a certain detrimental influence upon the normal growth of the pelvis. Such being the case, it is clear that outside morbid processes (and the pelvis is very subject to morbid processes which modify its form in various ways) the degenerating influences of town life, etc. can only affect pelvic growth in the same general way that they influence the general growth of the body. But I would wish to add that no conclusions of any value can be derived from the measurements which are given in the British Association Note, to which you have referred, on this subject. It is true that, in each race, the capacity of the female pelvis and the dimensions of the fœtal head must present, within certain limits, corresponding proportions, but it is absolutely impossible to determine the correspondence, as was attempted in the course of the British Association investigation, by measuring the circumference of the pelvic ring, and comparing this with the circumference of the adult head. The circumference of the fœtal head is determined solely by the volume of the contained brain; other factors besides the volume of the brain tend to increase or diminish the circumference of the adult head. In the lower part of the forehead large air-spaces develop in the interior of the bone at the time of puberty and greatly alter the proportions of the adult head. The mean cranial capacity of the Scotch male is 1,478 cubic centimetres, whilst in the native Australian male it is only 1,293 cubic centimetres. In spite of this difference in the volume of the brain, the mean circumference of the head of the male Australian is 533·6 millimetres, as compared with 531 millimetres for the Scotch. Notwithstanding this large circumference of the Australian adult head, I suspect that if the Scottish children had to be born through the Australian pelvis there would be a rapid depletion of the Scottish population. I merely mention that to show how absurd it is to draw any inference as regards the adjustment of the female pelvis and the fœtal head from the condition of the adult head—it is absolutely impossible. The size of the fœtal head alone can give a just conception of the co-relations which exist between it and the pelvic circumference. There is absolutely no proof that the size of the fœtal head has increased, nor is there any evidence that the adjustment of the co-relations which nature has established between it and the female pelvis has in any way been interfered with. Indeed, evidence of a kind may be adduced which favours the opposite view. If any serious disturbance had taken place in the adjustment of the pelvic and fœtal proportions, the percentage of still-born children at full time would show an increase corresponding to the disparity between the fœtal head and the bony passage in the mother through which it has to pass during the process of parturition.

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2242. You are aware that there are no general statistics of still born children?—Yes.

2243. Do you think it desirable that there should be?—I do. When this matter was first brought to my notice, I found that no statistics were available which would assist me in determining the point at issue. I consequently endeavoured to obtain information from several of my friends, amongst others a professor of midwifery of Edinburgh, but above all from the man who is able to give better and more full information than any one else—that is, Dr. William Smyly, who was for many years at the head of the Rotunda Hospital in Dublin. I received some information from him on the matter, but the information was not of such a kind that you could absolutely answer the question one way or the other. Apparently the proportion of children who die during parturition at full time has not increased. That is the general impression. But of course there are also other factors—very many factors to be taken into account in connection with this matter. Of course nature has a way of her own in adjusting the proportions between the fœtal head and the female pelvis so as to maintain the proper balance. Women with narrow pelves have more difficult labours; the child runs greater risks at the time of birth, and thus the tendency is for this character (that is the narrow pelvis) to be eliminated, and for the women with roomy pelves to transmit this character to a greater number of female children.

2244. Have you any opinion as to the advantages to be derived from an extended enquiry into the physical characteristics of the nation?—I have long had very strong views on that point, and I was very much struck with a sentence which occurred in the Report of the Royal College of Physicians of England to the Home Office. They say: "Could an enquiry be made into the present physical condition of the nation, it is self-evident that it would be of great value; but one dealing with a portion only of the population would be likely to lead to error." With this view I most fully concur, but I would go further and insist that for the purpose of the present enquiry it would be necessary that this examination into the physical characters of the people should be continuous and carried out on a permanent basis. It is only by such a measure that statistics could be accumulated which would enable us to note the upward or downward tendency of the national physique. Valuable as the results of the British Association Committee of 1878-1883 are, it is no disparagement

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of its work to say that these results are admittedly incomplete. In its final Report the Committee itself alludes to this, and expresses regret that the time and funds at its disposal are not sufficient to enable it to prosecute its enquiries to the end it had in view. Indeed, all the Committee claims to have done is to have laid a substantial foundation for a further and more exhaustive study of the physical condition of the people. That the time has come when this more extended inquiry is urgently called for is self-evident, and it is with this end in view that I would press upon the Committee the importance of recommending the establishment of a Central Anthropometric Bureau supported by Government and commissioned to carry out this work.

2245. You have been good enough to sketch out a scheme of such a Bureau; will you kindly explain it in brief?—Yes. I think, the skeleton of such a Bureau might be the following:—1. The formation of a Consultative Committee; 2. The Bureau itself; and 3. the employment of Surveyors or Measurers. I think that the Consultative Committee would be important for the purpose of obtaining absolute uniformity in the methods of procedure in the three countries.

2246. The point you referred to before?—Yes. This Committee, I think, should consist of three members, one from each of the three kingdoms. These appointments should be honorary, but the ordinary allowances for travelling expenses should be granted. The members of this Committee should be anthropologists of acknowledged reputation who are acquainted with the structure of the human body and the laws which regulate its development and growth. They should be likewise men of weight and influence. It might be possible to carry out the work in England and Scotland without such local representatives, but I do not think that it would be possible to do so in Ireland; and indeed I consider that in each of the three countries the enquiry could be much more advantageously prosecuted by having a Committee of this kind co-operating with the permanent officials of the Bureau. Then I would propose that the duties of the Committee would be:—1. To determine the measurements and observations to be made; 2. To determine the instruments to be employed; 3. To construct, in connection with the Director of the Central Bureau, the form of card by which the observations are to be recorded; and then, lastly; 4. Each in his own country to do what he could to assist the permanent officers, and, above all, to induce the people to take an interest in the work. Then the Central Bureau, that of course should be established in London, and I think it should be organised somewhat upon the same plan as the Geological Survey Office. It would probably be necessary to appoint a Director and Deputy Director. One of these should be an anthropologist acquainted with the anatomy and development of the human body, and with experience in anthropometrical work; the other should be a statistician trained in the methods of Professor Karl Pearson. A statistical Department would also require to be organised in the Bureau. The work carried out in this office would be the following: 1. To keep the standard instruments and issue all the instruments required in the enquiry; 2. To issue the cards on which the observations are to be recorded to those engaged in the measuring, etc.; 3. To arrange surprise visits at intervals to different schools, etc., with the view of determining whether the surveyors were obtaining accurate results; 4. To receive the cards after they have been filled up, to classify them, to prepare the requisite statistical tables, and publish a yearly report; 5 To form in London a centre where the different classes of the people may be measured, and a centre also where the surveyors or measurers may be instructed in the methods of making their observations, and in those anatomical details which are requisite for the acquisition of accurate results; and lastly; 6. to disseminate information on anthropometrical work and create an interest in the public in regard to the importance of maintaining the national physique. Then with regard to the surveyors or measurers, I believe that it is here that the real difficulty comes in in devising a working scheme. If the labours of the Bureau were to be confined to school children, the matter would be easy enough. All that would be necessary would be that one teacher in each school (or, in the case of schools where there are boys and girls, a male and a female teacher) should be instructed in the methods and made responsible to return at stated periods the cards which they have filled up. Such a limited conception of the functions of the Bureau, however, could not be entertained. If the full measure of good is to be obtained, and if precise information is to be attained regarding the national physique and its tendencies, it will certainly be necessary to measure and test large samples of the adult people of defined districts every ten years or so. This renders it essential that a staff of surveyors or measurers should be maintained. It is needless to conceal the fact that in all probability it will not be easy to induce the people of all classes to submit to the investigation. In the work which was carried out in Ireland this was a constant source of trouble, and in many cases, even with the assistance of the parish priest, it was only possible to obtain a comparatively small number of observations. Still, were the Bureau established and the Government thereby to indicate its interest in the work, the investigation (in England and Scotland at least) would be placed upon a more favourable footing. Further, the operations in the schools would familiarise the people with the methods, while the example shown by the better educated classes would conduce to remove prejudice on this matter. One point would certainly require to be attended to, viz., that an equal number of male and female surveyors be appointed, so that both in schools and in the adult survey each sex might be measured by surveyors of a corresponding sex. I am afraid to hazard an opinion upon the number of surveyors that would be required. Mr. Gray has gone into this matter very carefully and I should prefer that you should get the information from him. I have not the necessary amount of information.

2247. What particular classes would be subject to these measurements?—Sufficient samples from all classes should be examined.

2248. Would you state briefly the facts which it would be expedient to know and classify?—That is a very difficult matter to do offhand. The Committee of the British Association is, I may say, reconstituted very largely for the purpose of endeavouring to get at the essential points, but I have jotted down some points, and further if you would kindly accept them I would like to show you the cards that we worked with in Dublin.

2249. That is in reference to Connemara is it not?—Yes; and also to the work carried on in my own laboratory. (*handing in the document*). This is the survey sheet that we had; and it worked very well from the ethnographical point of view For the purpose in view in connection with the enquiry at present under consideration, I would try as far as possible to make the observations as few as possible and as simple as possible so that the examination of any one particular individual should not be prolonged. I think further that a certain amount of interest might be given to the investigation if certain points were introduced which perhaps are not very valuable in themselves, but which might interest the people. In our work at Trinity College we introduced at the beginning a number of tests such as relative strength of the two hands. We did that believing that it would lead to important results, but we found that it did not, but it was most useful to retain it on account of the interest to those who were examined. Again, another matter, speed of blow and a number of things of that kind, which may be looked upon as absolutely useless, well we retained them simply because in this way we could gather a crowd into a laboratory, and having them there, then we proceeded to take the more essential details.

As I have said the measurements and tests in the proposed inquiry would require to be selected with very great care and judgment, and they should not be too numerous. Probably the following would be sufficient, but should the project which I recommend be carried out this matter might advantageously be relegated to the consultative committee.

1. Height.
2. Chest girth—(*a*) maximum.
   (*b*) minimum.
   This gives the range or thoracic play which is important.
3. Weight.
4. Cranium—(*a*) length.
   (*b*) breadth.
   (*c*) height.
5. Breadth of shoulders (callipers).
6. Breadth of hips (callipers).

7. Vision—(*a*) tested by Snellen's types.
(*b*) tested by different colours.
8. Degree of pigmentation.

Information regarding parentage, district of birth, and conditions of living, &c., should be obtained.

2250. As regards chest measurement, you mean the inspiration and expiration?—Yes. I put no stress on the spirometer. We worked with one in our laboratory, and it is largely a matter of trick in getting various results.

2251. This is mentioned in the Report of the British Associations of 1893?—At one time everybody believed in it. Then weight, head (and speaking of head I mean the cranium) the length, breadth and height.

2252. You think that is essential?—I think that it is very important. In connection with many of these questions which you have raised since I came into this room, several of them could be answered if these points were gradually recorded, especially in the young.

2253. (*Colonel Fox.*) I see in that card, it deals with the measurement of the face as well as the cranium?—Yes. Of course you understand that the card was drawn up chiefly from the ethnological point of view.

2254. You do not believe in that?—Yes, from that point of view, but not from the point of view of testing the physical standard of the people. I hope that face-measurements will find a place in the card, but I understood that I was only to deal with those points which were considered essential in connection with the subject before us.

2255. As this is a matter of health, do not you think that a strong well-formed face denotes health, and therefore do not you think that the measurements are useful?—No I can hardly say that I would agree with that. You will find that many people have fine types of face who are in very bad health. I should say so.

2256. There is another thing I wanted to ask you. You spoke just now of the spirometer, which is really to get the mobility or the cubic capacity of the lungs, but the difference between the full and empty chest also denotes the capacity as also the mobility of the chest, does it not?—It does.

2257. Do not you think that the spirometer would be useful? In measuring the chest, does it not often happen that people who have not been accustomed to breathe properly have but little mobility of the chest walls, whereas after a certain amount of practice the mobility is greatly increased?—Yes.

2258. So that if you deal with people untrained, those two measurements merely show the mobility of the chest?—Perhaps it might merely show the mobility of the chest at one particular time, but it would show that the chest required development in a young person, which is very valuable information.

2259. When you take the full chest and the empty chest with people unaccustomed to use their lungs much, you will find very little difference between the two measurements; it is almost a fixed chest. Therefore it is hardly a guide with the large mass of people?—It would be a valuable guide in the young, because it would show serious defects in chest mobility in the child; and then if, as I propose in the further remarks I have to make, for the establishment of carrying out this work there should be repeated examinations of the child, we would have a record of the advance which is made in this extremely interesting point of pulmonary play. I look upon this pulmonary play as one of the most essential points with regard to health. The important part which fresh air plays is universally recognised, and in order to take advantage of that fresh air one must have pulmonary play. Then breadth of shoulders, the breadth of the hips, the vision tested by Snellen's type.

2260. (*Chairman.*) Is that with reference to acuteness of vision?—Yes. Then testing by different colours, and the degreeof pigmentation. There are many other things that it would be difficult to get accurately. I thought for a considerable time about hearing. I do not think that the ordinary surveyor would have sufficient knowledge to test hearing. You have to consider the agents who will be employed. Information with regard to parentage, district of birth, and conditions of living, etc., should be obtained. Then I really do most sincerely trust that if an investigation of this kind should be instituted the Government will not lose sight of the very important scientific matters which could be gathered with very great ease through the medium of such a Bureau. I have not put down any of these, but the Committee may judge the anxiety of anthropologists and others to obtain this information by just looking at the individual efforts which have been made in different directions, and not only in this country but over the whole world. How men have spent money, and time, and labour, in trying to get information with regard to many points of the utmost anthropological value in connection with the people. I have not mentioned one of these, but I take some credit for restraining myself, and I sincerely trust if the Government should think of carrying out this very desirable work some opportunity would be afforded of extending the investigations.

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2261. If you have further information on this point you could furnish us with some memorandum and we might put it into the appendix, because it is germane to the subject of our investigation, and it would be well to have it?—Yes, I could give it more weight because I could speak for the Committee of the British Association.

2262. You think that results of scientific value, apart from the question of national physique, might be derived from the establishment of such a bureau?—Yes. In schools I would consider it essential to undertake periodic—say six-monthly—examinations of the children. Only in this way could we obtain data in regard to individual growth and improvement. That is the point that Colonel Fox referred to, I think. These re-measurements could be undertaken by the teachers if they were properly instructed by the surveyors.

2263. You feel no doubt upon that point?—I do not. There is another point, too, that I might add to strengthen what I say here. It is a very extraordinary thing, but there is no certain evidence at the present moment as to when growth stops. The anatomist will tell you that after twenty-five years of age there is no possibility of growth, and yet if you look at statistical tables you see it going on till thirty and even beyond that age. And there cannot be a doubt that this apparent growth after twenty-three and twenty-five—because I look upon it merely as an apparent growth—is owing to the fact that the weaker and shorter members have died out in the later years. It is a fallacy in the statistical tables. But still in all ethnological teaching it is a matter which is dealt with, and there is always some difficulty in stating the precise age at which the growth of the individual stops

2264. Will you state your reasons for saying the country has suffered from the lack of information on matters touching the physical development of the people?—I think a sufficient answer is to be found in the fact that at the present time, when the subject of the supposed deterioration of the race is engaging the attention of Parliament and the public generally, there are no available data by which a satisfactory decision on this matter in all its bearings is rendered possible.

2265. You are familiar with Professor Karl Pearson's investigations as to the correspondence between psychical and physical characters inherited from parents?—Yes, I think it may be assumed that the results which are obtained in moulding the character by the influence of home environment and of education are not transmitted from one generation to another. The investigations of Professor Karl Pearson render it probable that the degree in which psychical characters are inherited from parents corresponds more or less closely with the degree in which the physical characters are inherited. In collecting the data on which this conclusion is based Professor Karl Pearson has found it impossible to obtain "a quantitative measure of the resemblance in moral and mental characters between parents and offspring." He has therefore confined his attention to fraternal resemblance, and he considers that should this be "less than, equal to, or greater than the fraternal resemblance in physical characters we may surely argue that parental inheritance for the former set of characters is less than, equal to, or greater than that for the latter set of characters." On this matter I speak with some little hesitation, because it is one in which I have not done any work, but I must say that it would have been more satisfactory to me if at the same time he had gauged the extent of these resemblances by estimating

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the resemblance between individuals who are not brothers and sisters but who were grouped at random as if they were, and examined in the same way.

2266. You mean the accidental resemblance?—Yes, because unless we know that we cannot estimate the full value of his investigations.

2267. Do you think that the better stocks as represented in the upper and middle classes, are not reproducing themselves at the same rate as formerly?—There is a very general impression with regard to that point, that they are not. I do not think that this is due to any loss of inherent fertility in those better classes, but it would rather appear to result in large measure from a love of luxury, and ease and a desire to keep free from the pains, cares, and restrictions which are imposed by motherhood, and from the obligations which attend fatherhood. Artificial restraints upon fertility constitute a predominant cause of this deficiency in the reproductive properties of these classes. It is generally understood that in the United Kingdom such restraints are less employed than in the Continental countries and in America. There is no cause to believe that in England and Scotland the birth-rate of the intelligent classes has reached a lower level than in other civilised races—indeed it is rather the reverse—but we have not the information. Another condition which may tend to lessen the fertility of these classes is the postponement of marriage to a later period of life owing to the greater struggle for existence which is a character of the age, and also to the higher requirements in the way of living which are characteristic of the present generation.

2268. Do you agree with Professor Karl Pearson that an inquiry into the relative fertility of the different classes of the community would be most desirable?—Most certainly I do. I think it would be a most important piece of information to get, and all the more so if statistics of a similar kind for previous generations could be obtained with which these could be compared.

2269. I am afraid there are none?—I am afraid that is so.

2270. Have you considered the statement with which Professor Pearson concludes the Huxley lecture for 1903. He states that there "does exist a lack of leaders of the highest intelligence in science, in the Arts, in trade, even in politics," and that there is "a want of intelligence in the British merchant, in the British professional man, and in the British workman" as compared with fifty or a hundred years ago. And there is a further statement which he makes that "we stand I venture to think at the commencement of an epoch which will be marked by a great dearth of ability." Do you think he has any reason for these statements?—I think that the statement is a pure assumption. I do not know how we can possibly measure this supposed loss of inherited intelligence—we are dealing with inherited intelligence because all his remarks refer to inherited intelligence—and I do not think there is a single solid fact in support of such a view. I am astonished that one for whom I entertain so high an admiration as Professor Pearson should have put forward such a statement, and more especially to claim for it, as he does, that it emerges from the "calm atmosphere" which is supposed to surround the anthropologist.

2271. Have you anything further to say upon that?—Not upon that point. It is not necessary to follow it out any further. There are one or two other points in connection with this. It should be borne in mind that it is stocks and not classes which breed men of intellect. These intellectual stocks are found in all classes, high and low. No class can claim intellect as its special perquisite. This is a fortunate circumstance seeing that the conditions which affect the degree of fertility in the higher classes are not as a rule present in the lower classes. The conditions under which genius or outstanding ability appears are peculiar and very little understood. It likewise has a residence I believe in no special class and very probably in no special stock. It is not improbable that the physical conditions upon which genius depends may not, in certain cases, be far removed from the domain of pathology.

2272. Genius, then, is a form of disease?—I mean certain incipient pathological conditions which have occurred during the growth period of the brain, and which produce certain physical states of the brain, which curiously enough have tended to develope this outstanding mental condition. I may mention that in an exceedingly interesting paper which was written upon the brain of Helmholtz it is stated that certain appearances suggested the presence of incipient hydro-cephalus in early life.

2273. (*Dr. Tatham.*) The very carefully reasoned and very complete character of the evidence you have given us covers the ground so thoroughly that really one has not many questions to ask you, but I should like to put to you, almost by way of summarising what you have said, this question: Has your experience led you to the belief that, speaking generally, there is or there is not progressive physical degeneration among the people?—Speaking generally, I do not think that there is any progressive physical deterioration of the people. I clearly say there is no evidence of it.

2274. You spoke just now in the course of your evidence on the question of mortality?—Yes.

2275. I think I gathered from you that whilst the mortality amongst people of all ages has decreased, mortality amongst infants has not decreased at all?—So far as I know it has not decreased. There is some very interesting information on that particular point referring to infantile mortality in the towns. I think it has been proved in the town of Sheffield by Mrs. Greenwood that 21 per cent. die under two years of age.

2276. What you say is in accordance with the well-established fact as gathered from the Registrar-General's returns?—Yes, under two years.

2277. That the mortality under one year has not decreased materially?—Yes.

2278. Whereas the general mortality of persons of all ages has considerably decreased, say, within the last quarter of a century?—Quite so, that was my impression.

2279. With regard to emigration you, in your evidence, say that "The conditions of Ireland are such that its people require separate consideration. If there is any part of the United Kingdom in which physical deterioration is to be expected more than another it is in Ireland. For many years there has been a constant outflow of the people by emigration, and it is the young, the strong, and the enterprising members of the population that have gone. It is distressing to think that during the twenty years ending in March, 1901, close upon two millions of people have left Ireland." Still it must be admitted that there is no absolute evidence available that deterioration has taken place in the physique of the Irish people?—No.

2280. Do you think that the same statement may be made with regard to other parts of the Kingdom, so far as your experience goes, that it is the young, the strong, and the robust who emigrate, and the weaklings are left behind?—I do not think quite so much so in the case of Scotland and England, because the conditions of life are so totally different. Those who emigrate from England and Scotland are led away more by family ties. It is the pressure of absolute want that is the cause of emigration in Ireland, and a different state of affairs absolutely, the lack of employment and the means of gaining a living; that is the pressure which has pushed out the people from Ireland—not so much now, I hope, but it has been so in the past.

2281. You speak of the well-established fact that insanity has increased to an alarming extent—that is in Ireland?—Yes.

2282. Have you any knowledge as to whether the same obtains in England, at the present time?—I believe there has been an increase but not to the same extent, but this is a point I do not know.

2283. The assumption suggests a very important question with regard to insanity and it is this: Do you think that the increase of insanity in Ireland, which has been established, is the result really of the fact that more cases of insanity are brought to light now than used to be the case—is it not more apparent than real?—I think there is something of that in it, but unquestionably it is a real increase.

2284. You think it is real?—Yes, unquestionably. It is explained in the paper to which I referred, by the fact that the marriage age has been so greatly increased as to affect the fertility of the people and at the same time the bodily characters of the people.

2285. And it is also your opinion that the effects of inherited syphilis are handed down from parent to offspring?—There cannot be the slightest doubt about that.

2286. And you expressed the strongest opinion that the State ought to interfere to take some steps, if possible, to reduce the evil ?—I hold the strongest views on that point—that the State is incurring at the present moment a great responsibility in not taking measures in this direction.

2287. And what measures would you suggest ?—Of course everyone knows that measures were adopted or proposed to be adopted, and these were put a stop to by a sentimental outcry which occurred at the time. But unquestionably there should be some supervision exercised in connection with the unfortunate class of women through whom the disease is propagated.

2288. You think that there should be some legislative provision ?—Yes, in connection with this unfortunate class who hire themselves out for immoral purposes.

2289. You think if legislative pressure were brought to bear it would be possible to diminish the present evil effects produced by syphilis ?—Most unquestionably I do. We know perfectly well that one person affected may spread the disease far and wide—one affected person; and not only to those who are infected immediately, whom we might not be inclined to let our sympathy go out to, but we may consider what happens to those whom they marry and the children that they breed. It is there, of course, that the real pinch comes in.

2290. You spoke also in the course of your evidence of the possible evil effects from over-bicycle riding ?—Yes.

2291. Have you had it in your mind to compare the effect of excessive bicycling with excessive horse riding ?—I think that that would affect persons in much the same way, because the weight of the body is transmitted down through the same pelvic bones.

2292. (*Chairman.*) There is a bigger buffer in the case of the horse saddle than in the bicycle saddle ?—I think that it comes to the same thing, because the points of the bony pelvis through which the pressure is transmitted to the seat are very small. They are padded by nature to look large, but in reality they are quite small.

2293. (*Mr. Lindsell.*) One question with regard to the matter of still-birth. Do you think from your experience that the time has really come now when still-births should be compulsorily registered in Great Britain and Ireland ?—Most unquestionably.

2294. Do you think that great advantage and safety to the public would arise ?—Most unquestionably.

2295. (*Dr. Tatham.*) With regard to insanity which you mentioned just now, do you trace any connection between the increase of insanity and the increase of the excessive consumption of very strong tea among the lower classes in Ireland ?—It is a well-known fact that the habit of tea drinking in Ireland has grown to an enormous extent, and further that a very large amount of money of the poorer classes is expended on high qualities of tea, but I have no way of judging the effect that that has had with regard to insanity.

2296. The tea being kept all the deleterious elements are gradually extracted from it ?—I do not think that those materials which are extracted by prolonged infusion would have effect upon the brain so much as on the stomach.

2297. It is stated that tea has an effect upon the brain, a very marked effect ?—So it has, but the constituents of the tea which have this effect I think are extracted early—in the first ten minutes or so of infusion.

2298. Do you agree that very black tea might tend to anæmia and perhaps neurosis ?—I think it would, through affecting the stomach. I do not know that it would have much effect upon the nervous system.

2299. You think that probably the greater abstention from the use of tea has altogether a beneficial effect ?—I should say not. I should say the use of tea is very much abused now.

2300. Does it take the place of alcohol or is it in addition to alcohol ?—I think it is merely an addition. I do not think that it has stopped the taking of alcohol.

2301. Is there a great falling off in the quality of alcohol that the lower classes in Ireland drink ?—I think that the whisky in Ireland is very much better than the whisky in Scotland.

2302. But are there not several substitutes for whisky that are more within their reach now than used to be the case; I have seen it stated that all sorts of horrible fluids are sold in grocers' shops ?—They do that everywhere.

2303. They even drink methylated spirits, I understand ?—They do not drink that more in Ireland than in this country. The people are much more unsophisticated in Ireland than in Scotland, but in certain parts of Ireland, in the north of Ireland, the habit of drinking ether became very common, and it is a most obnoxious drink.

2304. It is very obnoxious you think ?—Yes, but it was quite a limited vice. It was merely confined to a very narrow district indeed, and I question whether there is any of it now.

2305. Now of course it is a notorious fact that the percentage of the population of the British Islands in towns as compared with dwellers in the country has and is still largely increasing ?—Yes.

2306. I am not talking of slum life, but ordinary urban life has in itself a tendency to physical deterioration ?—The slum life ?

2307. In slum life there are conditions which must necessarily tend to deterioration, but ordinary urban life, under ordinary sanitary conditions, does that tend of itself to this physical deterioration in the race ?—I do not think it would be possible, even under the very best forms of town life, to produce conditions which the poor could live in which would equal those of the country.

2308. Therefore if urban life is necessarily less favourable to human development than country life, it might follow that physical deterioration is in progress because there are relatively more dwellers in towns now than there used to be ?—Of course the assumption is that this great influx of people into the town has not been unattended by a certain amount of physical deterioration—the presumption is that.

2309. That would be progressive in each generation ?—That would not be transmitted from generation to generation at all. It would merely affect those living under these conditions. But if you take the progeny of these people who are living under these unfavourable conditions and put them into favourable conditions I believe that you would restore completely any loss in the way of physique, so long as these people had abstained from the vices to which we have referred.

2310. Then the establishment of new conditions of urban life like these garden cities that they talk of, or the extension of salubrious suburbs where the working-men could dwell, and come to their work in the towns—you think that would tend to improve these conditions ?—There is no doubt about it, that urban life—the more nearly you can approach the rural life, the greater amount of certainty you will have that there will be an improvement in the physical conditions of the people.

2311. You do not think that might be discounted to a certain extent by the physical strain of going greater distances to work ?—It depends upon how this locomotion is effected.

2312. Well, the excessive daily travelling night and morning to reach their work would counteract the advantages of the better air in which they live ?—Probably there would be improved methods of locomotion, motor-cars, and so on, which would be really a healthy rather than an unhealthy experience to undergo. They would be taken into the open air, and it would be rather to their advantage, I think.

2313. (*Mr. Struthers.*) I understood you to say that the degeneracy owing to urban conditions was temporary ?—I believe so.

2314. And that they would recover from this degeneracy if they were transported to good conditions in the country, say ?—Certainly, or, at least, their children would.

2315. But there is an interesting point arising there; supposing they remain in towns and they have children, is the next generation worse than the first generation—is there reason to suppose that it would be worse ?—I should imagine that there is reason to suppose that it would be worse, not because they have inherited any worse qualities, but because most likely the power of raising healthy children would be less in the second generation than in the first.

2316. If you have them continually under unfavourable conditions in three or four generations, do you think that it would lead to some degeneration ?—Yes.

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2317. And the power of recovering under favourable conditions would be lessened ?—I would not go so far as to say that.

2318. Is the power of reproducing themselves diminished by this continued living under urban conditions ?—I do not think we have any evidence upon that.

2319. Because you have heard the statement casually made that there is no such thing as the fourth generation of Londoners ?—I do not know that it is founded upon fact, and I do not think so myself. With reference to what you have mentioned, there is an extremely interesting point in natural history, which bears upon this, because every question upon life and reproduction has a direct bearing upon what we are considering. I remember in Belfast, at the meeting of the British Association there, Professor Weldon, who is a well-known authority upon heredity, gave a lecture to the people, and he mentioned a very astounding fact in regard to the water-flea. He told us, as we all knew, of course, that this water-flea has the power of reproducing itself in broods, and if you kept it in fresh water those broods went on increasing and increasing, and in physical characters everyone was similar to the one before, and each one had the short but very conspicuous tail. If, however, you took a certain number of those water-fleas and put them into impure water, the next generation of tail was shorter, and if you kept them in bad water the tail actually disappeared, and in successive generations they went on breeding and breeding, the tail always absent, until you took a certain number of them and put them into fresh and pure water under better sanitary conditions, and the tail reappeared. I think that is a most distinct analogy, because the laws of life are the same in the water-flea as in ourselves.

2320. That is very hopeful for the future ?—Yes, but it does not lessen the responsibility of the State one single bit.

2321. (*Dr. Tatham.*) Do you consider that there is any direct connection between size and health ?—I certainly think that a race during the time that it was placed under unfavourable circumstances would diminish both in stature and in weight, but most likely if those unfavourable conditions were removed, I say they would regain what they lost.

2322. Have you noticed at all that the female is improving disproportionately to the male in modern life ; that the physical development of the female is progressing while that of the male is stationary ?—I do not think so.

2323. It is said so ?—I know.

2324. It is quoted as a sign of degeneration ?—But there is absolutely no proof that that is the case. I think that the female did fall off very much indeed, as I was saying, in the first half of the last century, when her great beauty was considered to consist in her languishing ways, but I think she has improved tremendously during the last half-century. I do not think that the male has fallen off.

2325. It is said so ?—Yes, but many of those statements have no foundation in fact whatever.

2326. (*Mr. Legge.*) We had a Witness who stated that he had a suspicion that the lower forms in a race die out, not through sterility, but because their offspring are too feeble to survive—is there any physiological truth in that ?—I do not think there is any evidence of it, but I think that it is very likely ; there is a sort of flavour of likelihood about it.

2327. And now for a question or two about this scheme which you have described so well. The part that seems to give rise to some difficulty is from the administrative point of view, the measurers and the surveyors—is not that so ?—Yes.

2328. No doubt you are aware that in connection with the Home Office there is a vast staff of certifying surgeons throughout the country, some 2,000 of them ?—Yes

2329. And it is the duty of those men to examine children who work in factories, to ascertain their fitness, and at a later stage to examine young persons with the same view ?—Yes.

2330. Now, would it not be possible for these certifying surgeons to act as surveyors, and when they are making examination for the purpose of the Factory Department make it also for the purpose of any Anthropometrical Bureau ?—I am quite satisfied that they could not carry out that work, and for this reason, that I believe that their work is quite hard enough already without adding so largely to it. To make an effective survey Mr. Gray has calculated that it would be necessary to examine (I would rather leave him to explain it because the figures are not quite clearly in my mind), but it is perfectly clear to my mind, from figures which he has supplied, that it would take the whole time each day of many surveyors to cope with the large amount of work which would be required. Then there is another point, too, that the work which you would have to ask these medical men to undertake would be work which would require to be paid at a much higher rate than work carried out by surveyors who are only trained up to this one point, the Anthropometrical point. You could get them at a much smaller salary, but if you employ medical men it would be necessary to pay them on a higher scale. Perhaps the work might be done better in the end if it were done in that way, but I think it would break down through the large amount of money which you would require to carry it through.

2331. Of course you in your scheme desiderate a very much smaller number of surveyors giving up their whole time than the total number of certifying surgeons who, it is suggested, could give each a little of their time ?—It might be carried out.

2332. We might put this question to Mr. Gray, you think ?—Yes, because he has gone very carefully into the statistics of this matter. But still I do hold that the fewer surveyors you have got the better ; you will get more uniform results ; you will have them more completely under the control of the central body. Although in the case of medical men you would be dealing with men who would naturally have a much better idea of the points to look for, yet I think that that advantage would be counteracted by the greater uniformity of results by taking regular paid surveyors.

2333. Of course the Factory Department would have to go on using these certifying surgeons for getting statistical facts for its own purposes, and even so, would you think it well that the Factory Department or any Government Department carrying out a special inquiry of this sort should consult any Anthropometrical Bureau that might be established ?—I would.

2334. So as to see that their terminology corresponded with the generally accepted terms ?—I think that would be an advantage. Of course, you will understand, in recommending the bureau, I am not in any way recommending a scheme which would replace medical supervision over schools, or children or factory hands —the two things are totally distinct.

2335. But you do not see your way as to how they could be dove-tailed into one another ?—No, I think that the scheme I have suggested would work better.

2336. As regards these facts which you have set out as being the topics on which it is desirable to get information these, I take it, form the minimum of information you desire ?—Yes, that is what I intended.

2337. You are not prepared to cut out weight in the case of the children ?—No.

2338. The object of the information to be acquired from such an inquiry as this leaves the individual out of account. We do not care whether any particular individual goes up or down, therefore, if it is generally found that the man's weight follows height with a curious regularity you would not, for that reason, omit weight ?—No, because one knows that weight and stature do not exactly follow each other with any degree of regularity.

2339. Not in children ?—I am doubtful if it does.

2340. Why do you attach importance to the degree of pigmentation ?—I think in investigations of this kind one must make some attempt to separate the different racial elements (it is difficult to do that, I know), but the race comes in in a very awkward manner in inquiries of this kind, and I think that pigmentation is one of the most important means that we have of determining this matter.

2341. I should like to ask one question as to the measures to combat syphilis : Do you think that there is anything like adequate hospital provision for the treatment of syphilis in the country ?—So far as I have seen there is.

2342. So that you do not think much improvement is necessary in that way ?—I do not.

2343. In measures for the cure?—Those are not the measures that I referred to at all. I think that the Government has done a great deal in the way of hospital accommodation for syphilitic patients. I should, perhaps, add that I speak merely from my experience in Dublin.

2344. And local authorities, what about them—have they played their part too?—I cannot tell.

2345. Have you any views—it seems a small point, but is one which, in many people's eyes, is an important one—namely, tobacco?—I have; I think every one has.

2346. What is your view about juvenile smoking?—I think it is most deleterious. I think that every one who knows the effect which smoking has upon children must be shocked to see how this habit is growing. I had it in my mind to speak about this, but it escaped my memory. But since I have gone to Scotland I have made one or two inquiries with regard to the prevalence of smoking in schools. I do not refer to public schools where the boys are under proper supervision.

2347. You mean public schools in the Scotch sense?—I mean schools where children go as day scholars, where they are immediately under supervision during the day, and then disperse to their homes. I understand from questioning boys attending these schools that I can trust, that more than half the boys smoke. I asked where did they get the tobacco from, and it seems there is a regular trade now in cheap cigarettes.

2348. (*Chairman.*) At sweet shops?—Yes; and at shops where other things are sold to children. It is not at orthodox tobacco shops. I am informed that they can get cigarettes in packets of five for a penny. But I was told also that some of the girls were following suit, and there was a school mentioned to me (I do not like to mention it, because it is a school with a deservedly high reputation) in which one or two girls had actually been caught in the passage of the school smoking.

2349. (*Mr. Legge.*) Then would you be prepared to approve legislation which prohibited the selling or giving of tobacco to children of certain age?—I would most undoubtedly, and I think one might go even further, and I think that it might be possible in some way or other to check the habit in children of tender age. They do it perfectly openly, and generally when they do it they are not under the control of their parents. I think that it might be possible to introduce some preventive measure.

2350. (*Colonel Onslow.*) You say that while the results of poverty, not vice, which are acquired during the life time of the individual are not transmissible from generation to generation, unfortunately not only alcohol but also syphilis and many other diseases which may be attributable either to excess or vice are transmissible?—We believe so, but syphilis and alcohol are the worst.

2351. The father, for instance, has syphilis or any venereal disease badly in his system, and he is almost certain to transmit it to his child?—Yes.

2352. It does not matter how many years have passed, does it?—The danger becomes less and less then.

2353. But it will come out in various forms?—Yes.

2354. In one form does it not come out and show its effect on the teeth?—That is merely one sign.

2355. But it is rather a prevalent sign, is it not?—It is.

2356. That would account for such a very large proportion of young boys, such as are recruited for the navy, who come from a decidedly superior class to the ordinary recruit, being rejected for defective teeth?—I think only to a small degree. I have no doubt that some have been rejected for that reason, but I do not think that the majority have been so rejected.

2357. From the ages that they are enlisted, from fifteen to sixteen and three-quarters, the proportion that are rejected by not only the medical examiner but by recruiters is very large; do you know that?—Yes.

2358. Two hundred and nine out of 2,000 are rejected by medical examiners, but heaps of others have been through the hands of recruiters and have been rejected, are you aware of that?—Yes.

2359. At that age one would have thought that the teeth would not decay from causes such as want of care, etc.?—One's experience nowadays of the teeth is that they require to be attended to from the earliest ages, and even the milk teeth require to be looked after.

2360. You think it is attributable to all sorts of causes?—I have not the least doubt that syphilis works to some extent. *Prof. Cunningham*

2361. I have this in mind, because many of these boys are the sons of men who were in the army or navy, and we know that there has been a considerable amount of syphilis prevalent in the army and navy from men being abroad very much in other countries, and so on, and it would occur to one that that may be one of the causes?—I have no doubt of it.

2362. Especially as those lads have been well attended to as far as their feed and bringing up is concerned, and they have not come from the slums?—Yes. At the same time I do not think that this degeneration of the teeth is confined to any one class, it is all over.

2363. (*Mr. Struthers.*) Do you think that the degeneration in the teeth in all classes is due to some extent to the character of the food?—I think so.

2364. What is the nature of the change?—The teeth are not used so much as they were formerly.

2365. What sort of food would you say was good for preserving the teeth, or preventing the decay, or what was likely to lead to decay?—I am not prepared to specify any particular foods.

2366. Could you not give us the general characteristic food?—Yes, the food that will give the teeth good and proper play, and bring them into healthy and active opposition the one side with the other.

2367. You could not specify any food distinctly of that character which is in common use?—I suppose that our ancestors used very largely farinaceous foods baked rather hard and perhaps mixed a good deal with the debris of the stones between which they were ground, and so on.

2368. Such food as oat cakes for instance?—Yes.

2369. Then about tobacco smoking and its deleterious effects upon children. There is no doubt as to the increase of the habit, and I have no doubt that we are all agreed that it is bad for the children, but what direct evidence is there that it is bad for the children, because in this Committee, even in your own experience of this morning, we have come across so many popular opinions that there is no evidence in support of. Is there any evidence that we can put before the public to show that tobacco smoking is proved to have had a bad effect?—I do not think that there is any direct evidence, unfortunately. But in lecturing upon this very question, so firmly am I convinced that smoking is deleterious that I mentioned it as one of the causes of physical deterioration, but you may take that for what it is worth.

2370. You do not have any personal experience to go upon?—No, beyond this, that we know tobacco has a powerful action on the nervous system.

2371. Your opinion is that tobacco smoking is worse for the children than for adults?—Unquestionably.

2372. But there is no actual evidence of it?—That is so.

2373. (*Mr. Legge.*) Would not you take as actual and direct evidence the undoubted fact that when a boy or young man or a grown up prize-fighter goes into training to get fit he drops smoking as the first thing; is not that evidence?—That is evidence of a kind.

2374. (*Mr. Struthers.*) But is not that kind of unfitness produced by smoking one of a passive and temporary kind; that is to say, that it does not affect the man permanently. He goes back to his smoking later on and is none the worse for it?—It keeps him at a permanently lower condition of life—less fit—if he finds it necessary to cease to indulge in tobacco on special occasions.

2375. But it is a common experience that an athlete is a smoker, and during his period of training he gives up smoking and then resumes it afterwards. Is there evidence to show that he is worse than if he had never smoked?—I do not think that smoking is deleterious in adult life. I am a smoker myself, but I do object to children smoking when the whole of the growth processes are full of activity, and when the nervous system, which unquestionably the smoking affects, is so sensitive to injurious influences.

2376. It certainly offends the moral sense of the grown-up person?—Certainly.

Prof. Cunningham

2377. (*Colonel Fox.*) One continually meets with people who say that cigarette smoking especially is far more injurious than pipe smoking?—So I am told.

2378 You also inhale the smoke with the cigarette but not with the pipe?—Yes.

2379. If it is bad for a grown-up man is it not evidently a great handicap for a young boy who requires all his vitality when growing?—No doubt.

2380. So that cigarette smoking for young boys is not only injurious, but it tends to stunt their growth?—I am quite of your view.

2381. (*Mr. Struthers.*) Then as to a point somewhat of the same kind. I think you have a pretty strong opinion that the urban conditions of life are unfavourable as compared with the country?—Yes.

2382. Of course that is an opinion we all hold; but there has been no investigation made into the point, has there?—I think those reports of the British Association are pretty clear upon that point—I think they are very clear and convincing.

2383. You know the island of Lewis?—No, I do not know it.

2384. That is a large island with a large population centred on the seaboard, living in excellent air, no doubt in somewhat insanitary houses, and with almost a minimum of food. The impression that one gets from seeing them is that they are above the average in physique. Their food is much worse than would be taken by the slum dweller, being inferior in amount, but still their physique is splendid—that would be a point rather in favour of the country than the town?—It would. Fresh air is most essential.

2385. That is the sort of thing which would be brought out in any well organised system of collecting statistics such as you mentioned?—Yes, on this point.

2386. And it would be very important to have this brought out before we begin to dogmatise?—I think that it is absolutely essential. I do not think that anyone can proceed to combat the evils of poverty without these statistics and we have not got them.

2387. There are one or two very small matters. You have seen Dr. Mackenzie's Report on the examination of school children in Edinburgh and the corresponding one at Aberdeen?—Yes.

2388. Do you think that the basis of examination was sufficiently wide to form a very definite opinion as to the conditions of life in Aberdeen and Edinburgh?—No. But I think that it brought out this main, broad point, that children living under favourable circumstances show a much better development and growth than children under unfavourable conditions. That is brought out very prominently from their investigations, but I would not follow them into details, and in many points I would not follow their mode of work. But still the investigations were of very great value.

2389. Do you think that the facts of the Report on Edinburgh are a justification for the health of children in Edinburgh as compared with other towns?—No, I do not think so.

2390. One of the measurements taken for example was the power of grasp. Do you think that is important?—No. I have had a large experience in measurements. That is a measurement that we adopted rather by way of attracting people than as being of any value.

2391. Very much as you use the spirometer?—Yes.

2392. It depends on dexterity does it not?—Yes.

2393. (*Colonel Onslow.*) It is more or less a trick, is it not?—Yes.

2394. (*Mr. Struthers.*) Do you consider that skipping is a dangerous exercise?—No, I think it is an admirable exercise.

2395. You do not see any physical danger in any reasonable amount of skipping?—I am in favour of exercise in reason, and I think that skipping is an admirable form of exercise if reasonably indulged in.

2396. I understand that you lay considerable stress, at any rate to an extent that has not been done by previous Witnesses, upon the influence of race, of stock, as against conditions of environment, variations in food and conditions of life?—I do. I think the question of race is unquestionably a very important one. Considering the fact that we in these countries have inherited such magnificent racial characters, I think it is highly important that we should do everything to maintain them. Do you wish me to enter into this question, and to explain what I mean?

2397. I think it is rather important to have your views upon this point, because we have not had it brought forward before to my knowledge?—Of course all questions of race must be dealt with with some degree of caution. We cannot speak with any great degree of certainty, but so far as we know, the race in which we are at present interested is one which began with the influx of people from the northern part of Africa, the Iberian race, not a particularly fine race. The substratum I should say upon which our racial characters are founded is not a particularly high class one, that is, the Iberian race. It represents the very early period in Britain, the Neolithic. Then we had the influx of people to whom we owe many of our good racial characters—we had the Gael and the early Britons probably from mid-Europe. That was a very fine race, but still better was the influx we had of the Teutons, the Angles, and the Jutes, forming the Anglo-Saxon race. And then of course we had the Norman influx, also good, and the Scandinavian influx, represented by the Danes, and men from Norway and so on. I may say it is very questionable indeed if any country can boast of such magnificent racial elements as we in this country can, and of course we have been able to preserve these qualities intact to a greater extent perhaps than many other countries owing to our insular position.

2398. It would be important, I suppose, in any statistics which might be got together, for the purpose of ascertaining what the physique of the nation was from time to time, that account should be taken of any variations in the race stock that can be ascertained?—As far as possible, I think, the race question should be taken into account. I think it would be necessary to take it into account so far as we are able to do so, because it certainly does affect the question of physique.

2399. (*Chairman.*) That, I understand, is the value of the element of pigmentation, that you have referred to in your heads of evidence?—Yes, I put that in my scheme very largely from that point of view.

2400. I mean it is not purely ethnological; the facts under that head might serve to correct erroneous impressions derived, say, from a stature below the normal?—Certainly.

2401. Because of the presence of some racial peculiarities in that part of the United Kingdom?—I did not put it in on account of its scientific interest at all, but merely to check our physical results.

2402. (*Mr. Struthers.*) Does that affect such a matter as the colour of the hair and eyes?—Yes.

2403. These are important things to be brought out as checking other influences, such as environment and amount of food?—I consider so, because if you look at these very valuable statistics, which we have had so frequently to refer to—the statistics of the British Association—you will find that the physical characters of what we call our four great stocks—English, Scotch, Irish and Welsh—are very considerably different. Sir William Aitken, who wrote upon the question of recruiting for the Army, says that we should have a different set of physical equivalents for those different districts of the country, and I think there is a good deal in that. The Scotch are the tallest, the Irish come next, the English next, and the Welsh are the shortest. That is pretty well-established. But when you come to weight you find that you get a different result, because, although the Scotch still keeps to the top, I think the Welsh come second, then the English, and the Irish are at the foot of the scale.

2404. Is there any value in weight divided by height as an indication of physical fitness?—I would very much rather judge of the two qualities separately from each other.

2405. (*Colonel Fox.*) You mentioned just now that insanity was on the increase?—In Ireland, yes.

2406. And you said that you did not consider that the excess of tea-drinking had anything to do with it. But

is it not a fact that the drinking of alcohol is a general cause of insanity?—I think the absolutely certain end of any man who goes on soaking himself in alcohol is a species of insanity.

2407. Is not insanity as a rule due to over-drinking?—I do not think so.

2408. Excessive drinking?—Yes. Of course we all know that a man who goes in for continuous and excessive drinking ends more or less in a state of madness.

2409. Do you consider that the physical training that is now in vogue in schools, a well-thought out system, tends to improve the physique of the children of the country and the race in general?—Most unquestionably, especially if that physical training be done in the open air, and if the very young children are allowed, under a certain amount of proper guidance, as much freedom as possible, and the means of enjoying themselves as much as possible in their own way, shouting, dancing, and jumping, and doing everything that annoys their seniors.

2410. (*Mr. Struthers.*) Like students at a graduation ceremony?—I think that is going a little too far.

2411. (*Colonel Fox.*) We have been attaching a great deal of value of late to what we call respiratory exercises, breathing exercises, always done in the course of the ordinary physical training: do you think that would do much good?—I do. I think it is very valuable. I think I mentioned before that seeing that fresh air is probably one of the most important elements that we have to consider in connection with a good physique, one must have proper pulmonary play.

2412. In addition to that, we insist upon its always being nasal breathing, especially in these exercises—the mouth shut and the whole breathing done through the nose?—That is the proper way of doing it, but I think when a person is undergoing more or less excessive exertion——

2413. These are not excessive exercises, but gentle exercises, purposely devised for what we call deep breathing—taking in full inspirations?—In natural exercise, in the ordinary easy exercise, the natural form of breathing is through the nose, and if the nasal passages are healthy, there should be no difficulty in breathing properly and sufficiently through the nose.

2414. (*Dr. Tatham.*) In your answer to Mr. Legge this morning, you spoke of the practice of juvenile smoking of tobacco?—Yes.

2415. And you said that, as far as you knew, there was no actual evidence of mischief accruing from that practice?—We are all perfectly certain in our own minds that mischief does accrue from it, but I would not like to state dogmatically that I have seen anything definitely detrimental. *Prof. Cunningham*

2416. No documentary evidence?—There may be documentary evidence.

2417. Does not that rather point in your mind to the desirability that, in the interests of the public health and the public safety, we should have in Great Britain and Ireland a registration of sickness as well as of death, in order to provide the very evidence which you say we lack now?—It would be extremely important if its carrying out was at all feasible. It would be a very large order.

2418. Do you think it is practicable, assuming that sufficient interest were attached to it?—I would like to think it was practicable.

2419. So far as regards the public institutions, do you think anything of the kind could be done?—I think it could be done in the public institutions most certainly; I do not know whether it could be done in connection with the public at large, because it would be an investigation of such a vast extent.

2420. So far as it could be got, you think it would be desirable?—Unquestionably.

2421. And it would probably enable you and other investigators to answer satisfactorily to yourselves such a question as the one put to you?—Exactly so.

2422. With regard to the question of smoking being harmful to persons undergoing physical training, such, for instance, as would be required for rowing, you know, I daresay, that at universities men who are training are not allowed to smoke?—Yes.

2423. Does not that go some distance at least to prove that it is considered detrimental?—I think it goes a great distance.

2424. And proved to be?—Yes, and proved to be, because when persons wish to put themselves in the fittest possible condition they find it absolutely necessary to stop smoking. I am a smoker myself, and that is what I always do; naturally and instinctively I drop smoking if I have to do anything which requires special care and attention.

Sir LAUDER BRUNTON, M.D., D.Sc., L.L.D., F.R.C.P., F.R.S., called; and Examined.

2425. (*Chairman.*) You are physician to St. Bartholomew's Hospital, Foreign Honorary Member of the American Academy of Arts and Sciences, and Correspondent of the Academy of the Natural Sciences, Philadelphia?—Yes

2426. Will you give us the evidence you have prepared?—First of all, perhaps, I may be allowed to remark that I think that the term "physical degeneration" is unfortunate, because it involves a comparison in the physique of the British people at the present time and at a former period. What we really want to know is first, whether the physique is satisfactory, and if not, then, secondly, what are the causes of its deficiences, and, thirdly, how are they to be remedied. Probably some sections of the people have improved in physique, as is shown by athletic records being constantly broken, and by the pages of *Punch*, which show a very definite increase in the size of women within the last forty years. But there can be no doubt, from recruiting returns, as well as from an examination of the slums of large towns, that the physique of a large number of people is unsatisfactory. The reasons for this are probably numerous—greater accumulation of people in towns, where there is more crowding; less exercise; early marriages; and unsuitable food in infancy, childhood, and adolescence. It may be worth inquiry to ascertain how far compulsory attendance at school has interfered with the growth of the body, for it has been shown by Professor Angelo Mosso that mental exertion lessens muscular power, and it may well be that greater mental exertion tends to increase the deteriorating effect of insufficient food upon the growth of the body. As Professor Angelo Mosso's books may not be accessible I have taken the privilege of bringing with me some copies of a paper by myself in which I have quoted his observations, reproduced his diagrams, and given the reference to his original papers. (*Copies were handed to the Chairman.*) It is not unlikely that increase of sanitary science, by preserving many children who would otherwise have died, tends to lower the general average of physique while increasing the average length of life. In addition to general want of stamina, recruits were found by Sir Frederick Maurice to fail in regard to their teeth and their feet. Flat feet may be regarded as a local evidence of weak physique due to feebleness of the ligaments, and of those muscles whose tendons act like a string to a bow in maintaining the proper arch of the foot. The decay of teeth is ascribed by dentists to erosion by acid formed by decomposition of particles of food, and it is also on evidence of an imperfect supply of lime salts. I may perhaps be allowed to quote a very instructive case which came under my own observation. While a mother was nursing a child it began to show symptoms of rickets. I gave to the mother phosphate of lime along with her salt and in a very short time all the symptoms of rickets disappeared in the child whom she was nursing. Shortly afterwards she began to complain of toothache, and, thinking that this might be due to loss of lime salts from her own teeth, to supply the drain upon her system I gave her phosphate of lime, and the toothache disappeared. It is well known that during pregnancy women's teeth are apt to decay, and this decay is, I think, due to the lime being abstracted from the teeth to supply the bones of the offspring. I am inclined to think that another cause of deficient teeth is absence of lime salts, due to the more common use of fine white bread. In the process of preparing fine flour the outer part of the wheat which contains most of the salts is removed, and without lime salts an animal can no more form bone than a hen *Sir L. Brunton.*

Sir L. Brunton.

can lay an egg with a shell unless lime salts be supplied to form it. Another question arises in regard to the decay of teeth, namely, that some children have well developed bones and yet have decayed teeth. The enamel of teeth differs from ordinary bone in containing fluorine, and it might help to elucidate the causation of decayed teeth if inquiries were made as to the condition of teeth in Derbyshire, where fluorine may be present in the water from the fluor-spar so common in that country. There can be no doubt that caries is frequently due to fragments of food lodging between the teeth becoming decomposed, and generating acid which will erode the teeth. It is quite impossible for poor people to provide toothbrushes for their children, but the teeth may be perfectly well cleaned with lucifer matches that have already been used to strike a light, and are therefore of little or no value. One end of this cut into the shape of a wedge can be used, not only to remove from between the teeth particles of food that are lodging there, but also any tartar that may accumulate round the gums. If children were instructed in the dangers of neglecting the teeth, and were shown how easily they could protect themselves from toothache by the use of old matches, aided when necessary by a little prepared chalk, or the ordinary whitening which is used for walls, they might save themselves a great deal of pain, and it would also be useful to teach them that toothache may very frequently be removed when present by simply washing out the mouth with a little bicarbonate of soda in warm water. Another cause of decayed teeth may be the quantity of sugar in the form of sweets or jam that is now used. There is no doubt that sugar is an excellent food, and it has the advantage of being cheap. When taken only at meals it will probably do no harm. Sugar is an excellent food for minute organisms as well as for larger animals, and if it is constantly present in the mouth, and especially if fragments of other kind of food have lodged between the teeth, it may increase the growth of those organisms which produce the acid which erode the teeth. I believe that in the West Indies, where sugar cane is sometimes chewed the whole day long by negroes, their teeth are exceedingly good, but chewing sugar will have the same effect as constant brushing, and the result will be very different from that produced by little shreds of butcher's meat impregnated with sugar, and sticking between the teeth for hours together. During the day the movements of the tongue and lips tend to keep the teeth clean, but during the night any food that is lying between the teeth has ample time to undergo decomposition, and this should be taught to the children at school. It would be a most useful thing if the teeth of children in school were examined from time to time. In addition to the care of the teeth, children should be instructed in the necessity of attending to the bowels, and the closets attached to the schools should be scrupulously clean so that delicate children should not be deterred from making use of them on account of their dirty condition. While I think that instruction should be given to children in some of the elementary laws of health I think this should be given in place of, not in addition to, the instruction they already get. I believe that the hours that children have to work at school are much too long, and it is recognised in Germany and in Switzerland that there ought to be a break between each successive hour of study. During this break, in Switzerland, the children are turned out of the class-rooms into the corridor, and all the windows are opened so that the class-rooms are thoroughly ventilated before the children return. During the break the children should be allowed to play, and I feel very strongly that any physical training such as drill should not be superadded to mental training, but the time employed in it should be deducted from mental work. Physical exercises should be looked upon by the child as an employment and should on no account be taken from the time which would be devoted to play. In considering the physical exercises which a child should undergo we must remember that there are three parts to be developed, the muscles, the nervous system, and the heart and lungs. For developing the muscles simple exercises of bending and stretching, either with or without weights, and simple exercises with gymnastic apparatus are what are required. For the development of the nervous system, exercises are needed which involve co-ordinated movements, and the best of these are marching to words of command, games of balls in all their different forms, skipping fencing, and some exercises on the horizontal bars. For the training of the heart and lungs running is required, and here again games of ball cannot be surpassed. In order that the weaker children, who require physical training more than the others, should not be neglected, the games in Switzerland are considered as part of the school training, and are supervised by masters. In the small book I have here, *Turnschule für den militärischen Vorunterricht der Schweizerischen Jugend* there are rules that no scholar shall be left out of play. All must take part, and the teachers are instructed to see that this is so.

2427. (*Colonel Fox.*) Is that a Swiss book ?—Yes.

2428. I have another one which they have now in all the schools for scholars up to sixteen years of age ; this is in French ?—Most of the Swiss publications for schools are in the two languages ; the French are for the southern cantons, where French is generally spoken, and the German are for the northern cantons. Probably this supervision of the play, instead of being done by masters, would be still better done by making the bigger boys in every batch responsible for the supervision of the smaller ones. But exercises of all sorts in rooms are apt to raise dust, and they should, if possible, be performed out of doors, either completely in the open air, or under a roof protected from rain, but without any side walls. I may say a question has now been raised amongst the authorities on education in Germany and in Switzerland as to whether physical exercises should be performed at all in closed rooms, on account of the possibility of the dust in these rooms containing germs, which would be raised by the shuffling of the feet. This would be inhaled by the children and might thus cause disease, either in the form of sore throat, bronchitis, or even phthisis. In relation to this the question of nasal breathing is of very great importance. In my lectures at St. Bartholomew's Hospital I used to put it to the students very simply. I said to them that in the Book of Genesis we are told that "God breathed into man's nostrils the breath of life, and man became a living soul." Man forgets to breathe through his nostrils ; he breathes through his mouth, and he dies. In the nose there is an arrangement for killing all the microbes, and thus preventing the entrance of infective disease germs into the deeper air passages, and there is also an arrangement in the mucous membrane for thoroughly warming the air before it is inspired. These two things, taken together, very greatly lessen the chance of a child getting any pulmonary mischief so long as it inspires through the nose. It may expire either through the nose or mouth. The chief objections to cricket and football as agents for the physical training of children in towns is the very large space required for a very small number of players. Baseball in various modifications lends itself better to exercise for a large number in a limited space. In the little Swiss handbook to which I have referred a number of exercises are given, and the plays in which the players take part, in which a great deal of exercise can be obtained by each scholar without the necessity for having large playgrounds. I feel quite certain that all physical exercise should have as much as possible the aspect of games, and that drill, which might otherwise be monotonous, should be so varied as to make it a game, at least in great part. Some of it might be regarded as a lesson in simply learning to obey sharply at the word of command, but where the attention of the children is thus strained it must be recognised that physical exercise is no longer a purely physical exercise, but is really a severe mental exercise, and the strain should not be kept up long, as it is much more exhausting than when they simply march to the sound of music. I have lately been in Switzerland, and through the kindness of my friend Professor Kronecker in Berne, from whom I obtained much information regarding physical exercises in Swiss schools, I have here various books and papers bearing on the subject, should the members of the Committee wish to consult them. Every boy in the Swiss schools must learn gymnastics unless he has a certificate from his doctor and signed by his parents that he is unfit. The gymnastics consist of movements with and without instruments, exercises on the horizontal and parallel bars, etc. But it is useless to give children training, either mental or bodily, if they are badly fed, and it may be necessary to provide food at schools, and this could probably be done at a considerably less price than the parents could do it at home. In cases where the parents are absolutely unable to pay, food might be provided out of the poor rates. The

preparation of a quantity of food at the school would also give the girls more opportunity of learning how to cook than they might otherwise be able to get, and such teaching in cookery I regard as a most important factor in tending to lessen the drinking customs of the nation generally. I may mention in this respect that some observations made years ago as to the comparative amount of drinking and eating that were carried on in some of the Swiss cantons, and it was found that where the cookery was good and the people ate well, they did not drink nearly so much alcohol.

2429. (*Chairman.*) Do not you think that gluttony may be as dangerous as drunkenness?—I do not think it is. I grant that in the upper classes gluttony is of course a danger, but gluttony brings about, as a rule, its own punishment sooner than drinking does. A man may continue to drink for very many years, and in fact he may render himself a useless citizen all his life by drinking, but if a man over-eats himself everyday of his life he generally pays the penalty in a much shorter time, and is unable to continue. At the same time I think that a glutton suffers more in himself and does not do much harm to other people.

2430. (*Colonel Fox.*) Do you think that drinking when one does not eat means that the stomach requires bulk? If it get bulk in the way of food it is satisfied, but if it cannot get that bulk in that way it wants to be filled up with something else, and it takes fluid?—I think it is not the quantity of fluid. I believe that you are right in the sensations, but it is not exactly bulk that you want, because when a man has taken an insufficient quantity of food he feels a craving, but that craving may be gratified by taking a small quantity of neat liquor. It is a chemical stimulus. You can sometimes also satisfy that craving without giving much more food by giving something very savoury at the end of the meal. For example, if a person has had an insufficient meal, and you give him some sweet preserves or some strong-tasting cheese, that gives the necessary fillip, and he feels satisfied without having any more bulk. But there is no doubt whatever that when all the food is much concentrated, bulk is wanted, so that in cases of scarcity, when there has been very little food, people who have been half starved make up the bulk with indigestible matter, innutritious matter, such as some kind of sand, siliceous earth, and the bark of trees, containing bulk in itself, but containing almost no nutriment at all. After leaving school many youths have no proper opportunities for using their spare time, and they become loafers or hooligans, and being thrown much together with girls in the same predicament they contract early marriages which are productive of misery in themselves and injury to their progeny. To prevent this, lectures, entertainments, gymnasia, and drill halls throughout all large towns, and all associations which tend to afford at the same time amusement, instruction, or physical training should be encouraged. More especially I think the volunteers should be encouraged instead of being neglected, for even leaving out of account the utility of the force in defending the country, the occupation and training, both mental and physical which it offers, are of the utmost utility. Associations should be formed for teaching mothers how to feed their children, and how to manage their houses, and this would probably do much to lessen the consumption of drink, for a clean fireside and a well-cooked evening meal might keep many a man at home who would otherwise go to the public house. I feel sure from cases I have seen at the hospital that some men are induced to drink because when they go home, instead of finding some well cooked food, as a French workman would do when he went home, they find that it is washing day, the whole room is filled with steam, the clothes are hanging up to dry across the room, there is nothing that they can eat, there is no place where they can sit down in comfort, and so naturally they go to the public house. The problem of physical education is an enormous one, and involves not only the health of the body but the health and strength of the mind, for unless the body be fairly strong and healthy much mental education will tend to render the children nervous and irritable, and to increase the growth of the malady which has only within recent years come to have a name, namely, neurasthenia. It is evident that while the present Committee, as well as the Royal Commission, which has already sat in Scotland, may do much in collecting information as to the best methods of increasing the physique of the population of this country, an enormous organisation will be required to carry into effect any recommendations that may be made. Although this organisation is at present in embryo, it is, I believe, an open secret that it is in process of formation, and already almost all the presidents and ex-presidents of the most important medical bodies in the three kingdoms have united to form a National League for Physical Education and Improvement, which, if carried out in its entirety, will probably have an almost incalculable influence for good upon the whole country.

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2431. (*Dr. Tatham.*) I noticed in the opening part of your evidence you seemed to object to the term "progressive physical deterioration," for reasons which you give?—My reason is this, that, while the question of whether the physique of the nation is improving or not is a very interesting one, by raising that question one is apt to draw attention away from the point that is of most importance to one that is of minor importance, to fritter away energy in discussing whether physical deterioration exists or not, when what is of the greatest practical importance now to decide is: Is the physique of the nation quite satisfactory, and, if not, why is it not so?

2432. Would you oblige the Committee by saying whether, in your judgment, there is actual progressive physical deterioration amongst the people generally?—I wrote a letter to the *Lancet* on February 14th of last year, a letter which, I believe, to a great extent started this question, because in it I asked for the appointment of a Commission, and I know that this letter was seen by Sir William Taylor because he quoted it. Here are some copies of it. (*Copies were handed to the Chairman.*) I have pointed out in that, that to discuss the question of physical deterioration in the country generally is an exceedingly difficult thing, because while one or more classes have gone up, I think others have gone down. I believe that the better classes, perhaps a large proportion of the population, have improved in physique, as is shown at the universities by the records of running, jumping, cycling, and races being beaten again and again, and especially swimming, perhaps. This shows a progressive improvement in the physique of certain classes. Yet at the same time I think it is highly probable that there is perhaps a larger proportion of physical insufficiency than there was at previous times, my reason being that while in many respects the provision for the poor of this country is better than it was, we preserve now a number of the weakest. The increase of sanitary science enables men to preserve a number of weakly lives that would formerly have been lost. These, instead of dying off in infancy, grow up, but they remain weak. That is one cause, I think. Another is that it is well-known that, as a rule, the physical size and stature of the country populations is better than that of the slum population in the town. The slum population tends to increase. We must distinguish, in regard to town population, very carefully between slum population and population of the better parts of the town, because I believe that records of policemen show that the best members of that force, both in regard to physique and intelligence, come from small provincial towns; that they neither belong to the absolute country, where the peasantry are rather slow-witted, nor the slums of the big towns, where the physique is insufficient, but rather from the small country towns. The same class of people exists largely in the suburbs of the cities, and I doubt if you would find very much better people anywhere than in some of the suburbs of London—either physically or mentally.

2433. You say that there can be no doubt, from recruiting returns as well as from an examination of the slums of large towns, that the physique of a large number of people is unsatisfactory; with what standard do you compare them?—The standard that I had in my mind was partly an ideal one and partly a standard of the recruiting in France and Germany. The ideal one is this: Is it satisfactory, and is it a condition that we are quite pleased with and think we have nothing to improve upon, if we find that out of every five recruits who have, first of all, been sifted by the recruiting-sergeant and afterwards by the inspecting examiner, and have been admitted as recruits into His Majesty's Army, that out of these five selected recruits two only at the end of two years are found fit for service? It seems to me that such a condition as this in the physique of the country is not one where we can sit down and say we are perfectly satisfied with things as they are. I take that statement about the conditions of recruits after service from Sir Frederick Maurice's essay.

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2434. (*Chairman.*) It was not those that were rejected by the doctors and those turned out of the service, I think, from which Sir Frederick made up his figures ?—Two out of five remained, I understand.

2435. He included an estimate of the rejections of the recruiters as well, I think, of which there is no definite knowledge ?—In that case, I have made a mistake.

2436. (*Colonel Onslow.*) Two out of five was the record at Woolwich, who were discharged after some time in the service ?—That is what I understood.

2437. That is only at Woolwich and he said that was a special case. To begin with, you are speaking of those men who enlist in the army. Do you consider that those represent the type of the nation ? It is generally considered that those men who enlist in the army are men who cannot get on in civil life, and they have to fall back on the army for a living ?—Yes.

2438. So that you may almost call those men, not exactly the scum of the country, but at any rate they are not the representative men of the nation ?—It was precisely to avoid that difficulty that I began as I did. The whole of those questions are open to discussion. To settle these questions would require a very long investigation, and you might at the end of this investigation have more than one apparent answer. It might be decided one way or another. But to avoid that, I say that this may or may not be so. What we are really concerned with now is, I think, the existence of a large substratum of unsatisfactory physique. We have to deal with a large substratum. How did it come there and how are we to get rid of it ?

2439. (*Dr. Tatham.*) I follow you quite ; but I should like to put it to you that the initial difficulty of this Committee is that we want to fix the standard with which the condition of the so-called labouring classes might be compared. That is a very great difficulty with us, and it is in order to arrive at that standard that I am putting these questions ?—May I suggest, then, that probably as one of our problems nowadays is the commercial competition, especially with Germany, the Committee might find out what is the general average of the German recruit, taken as he is from all classes of the population ? They take them in without any exception, barring that of actual disease. That would give the standard with which our population might be compared, although, no doubt, one might say there is the racial element to be taken into consideration. Still, it would give a certain amount of standard by which we could compare our own population with the German population.

2440. Do you not think that the conditions obtaining in Germany are so essentially different from those in this country—the conditions, I mean, with regard to compulsory service in Germany which do not exist in this country—that that would almost vitiate the German returns for comparative purposes with ours ?—I do not think it would, because what we want to do is this : If we find, taking the German statistics, that the general standard of our population is below it, or if we even find that there is a large class of our population which is so low down that it is not represented by a similar stratum in Germany, I should say "Let us at once set about finding out why this stratum exists and how are we to put it right."

2441. With regard to Sir Frederick Maurice's essay, you have said, in addition to the general want of stamina, the recruits are found by Sir Frederick Maurice to fail in regard to their teeth and feet. Were you quite satisfied with the evidence which Sir Frederick Maurice produced in his essay ?—Do you think he proved his case by the evidence he produced ?—It is such a large question that I could not go into the evidence myself. I accepted his statements without going into them, because I had not the time or the ability to do so ; but I think they are corroborated, from what I have heard about the difficulty that some of our men have had with hard biscuit in the Transvaal. I think it is a common observation that the teeth of the present population are not so good as they used to be. That, again, of course is a thing that is very difficult to prove. It is a general impression that teeth are failing now at an earlier age than they used to, that there is a more rapid decay of the teeth of children.

2442. You are aware, of course, that there is a very satisfactory decrease in the prevalence of, and in the mortality from, pulmonary tuberculosis, amongst other diseases, as compared with the state of things twenty years ago ?—Oh, yes ; and, with proper care, in thirty years pulmonary tuberculosis should be as rare as leprosy.

2443. In the course of your evidence you speak as one who thinks that improvement may be effected in the teaching to which the children in our public schools are subjected ?—Yes.

2444. Do you think there is probably too much book-work ?—Yes, a great deal too much—too much book-work and too many subjects.

2445. I am sure the Committee will be glad to hear your view as to how that may be improved ? —I should cut down the hours of work and should have a break between every two hours.

2446. As they do in Switzerland ?—Yes, as they do in Switzerland. A small break seems to be useful. Too long a break, for instance a break of half-an-hour when the children run about and get excited, seems rather to interfere with the next lesson, because the attention of the children has been distracted by the play and they find a little difficulty in concentrating themselves again ; but a short break seems to do them good.

2447. In what direction do you think the influence of excessive book-work at school may be traced—in connection with what diseases ?—Not so much with diseases ; I think it is a more general lowering of the physique.

2448. Not in regard to diseases of the nervous system ? —Yes, that has been said, but you will be able to get definite evidence on that subject from nerve specialists. I do not know whether you have had Sir James Crichton Browne or Dr. Jones, of Claybury, before you.

2449. We have not yet had them ?—I cannot give any definite information about that, but you will be able to get it quite readily from them I think.

2450. Now you speak of the uselessness of giving to children training, either mental or bodily, if they are badly fed, and you follow that up with a recommendation that it may be necessary to provide food at schools ?—Yes.

2451. This may be done at considerably less cost than could be done by the parents at home ?—Yes.

2452. Do you think there is any danger of pauperising the people by a suggestion of that kind ?—It has been suggested that it would have that effect, as I daresay you know ?—I do not think that it would, because there is no more danger in feeding children physically than there is in feeding them mentally. We insist that they shall have mental pabulum, and I think we might come down upon the parents to pay for the physical pabulum. If the children were inspected, and if it were found that they are deficient in their physical power or in their mental power, the inspector should be able to see how they are fed, and should insist upon their being fed by the parents. If the parents do not feed them properly, the food should be provided at the school and the parents charged for it ; and if the parents do not pay, the law should be brought to bear upon them if they are able to pay. If they are not able to pay, then the food could be supplied either by a charitable organisation or out of the rates. In Switzerland apparently there are very few poor people. Some of the communes instead of having to pay poor rates, or rates of any kind, actually receive every year a benefit from the commune. The sale of the timber, which belongs to the commune, more than supplies the rates of every kind, and leaves a balance over for the people to receive. In Berne the great majority of the children are children of well to do parents ; at least they are fairly well to do, and they can feed them properly. But there are a few who are not able to be well fed, and these are generally supplied with food by charitable organisations. They get one good meal a day, which is supplied by this charitable organisation. This might be carried out in this country, but I think that every effort must be made to avoid doing that, and rather to force the parents to pay properly for the food. Make them feed their children, and if they do not do it at home, supply the children with the food and then charge them for it.

2453. Towards the end of your evidence you speak of the enormous organisation that would be required to carry into effect any recommendation which may be made by this Committee. Will you kindly give the Committee a definite idea of what you mean by that ?—The causes of deficient physique are very numerous. First of all we may

take it that before a child is born the mother sometimes is not very well fed, that she is working at the time when she ought to be resting, that if the child is born she is too weak to suckle it, and it is fed upon various foods, excellent perhaps of their kind but not suitable for the child. A little later in infancy it is still badly fed, and so through adolescence, and even in cases where the father is making a good income, he spends a good deal of it in drink, his wife whom he has married early, and who has had no training whatever in the management of a house, keeps the house in any kind of way; she does not know how to cook, and so the poor child is badly fed throughout. It is very likely that in order to eke out the scanty earnings of the father and mother the child is sent, out of school hours, to earn a penny or two, and so it comes to school wearied out in body by having had to work early in the morning, exhausted by not having had food, and then is set to learn. Well, it cannot learn. Then in school, as I have said, I think there is room for improvement in the teaching, in the exercise, and especially in the play. For that one would require alterations in the rules of the school, one would require larger playgrounds, and these are expensive. We want girls' clubs and so on, to teach girls cookery, to keep them employed, to keep them out of the public house, and we want various clubs and agencies to keep young men employed—rifle clubs, volunteer clubs, cricket clubs, football clubs, and all the rest of them. In order to do this we want a very large organisation which should be divided in two ways.

2454. A state organisation?—No, a voluntary organisation. It should be divided first of all into districts territorially. You would have in every parish, in every village, in every county, an organisation—small village ones, large parochial ones, larger still in districts, and then counties, and then a general organisation throughout the whole country. Then in every village you would have people to undertake various duties. First of all, we want to get the parson to superintend and to take an interest in the children generally, and in the schools we want a schoolmaster who should be educated in physical training. He ought to know enough about it to have a general idea whether the children were being overtaxed, and should, if possible, know how to train them physically as well as mentally. I think that in the Swiss Rules the teachers are obliged to know this, or if they do not know it themselves they are obliged to get somebody to supplement it. Then we want the ladies of the district to take it up and to teach the mothers how to cook, how to feed their children, and how to manage their houses. We want to get lawyers and statesmen to work so that where it is necessary to have laws they should be passed. For example, if it is necessary to pass a law forbidding a woman to work in the last month or two of pregnancy a law should be passed. Although it interferes with the liberty of the subject, it is passing a law for the good of the people, in the same way as one interferes with the liberty of the subject in passing a law that a child shall not work more than a certain number of hours. Then the children should not be forced to work, to do things out of school hours. If the State is paying for their schooling they should be in such a physical condition as to be able to make use of the teaching, so that we want to get all classes. I think I might as well say that we are getting all classes. The League is not quite ready. It has not got all the names it wants by any means. We have a number yet to be applied to, and before bringing it before the public naturally everyone wishes to get it very fully supported, but at present I may say that Sir William Turner, the President of the General Medical Council, has given a great deal of time and attention to it, and has been exceedingly good in helping to get it on its feet. Now nearly all the presidents and ex-presidents of the medical corporations have signified their approval of it and their willingness to act as vice-presidents. It has been felt that its being to a great extent a question of health upon which medical men might be qualified to give a better opinion than others, it was advisable before proceeding to other classes of the community to get the approval of medical men, so that we are trying first of all to get a large number of medical men to show that the thing has been thoroughly considered from the medical aspect, and then when that is done other classes of the community will be approached, their names will be got, and I think that in a very short time the League will be made public.

2455. Have you followed up the question so far as to be able to suggest the machinery by which such an organisation should work: you speak of a voluntary association?—Yes.

2456. You mean an entirely voluntary one?—Yes.

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2457. Have you thought out for yourself what machinery could be used for giving effect to it?—I am practically acting as unofficial secretary to this league, because it is not yet in a position to have a secretary, so that it is advisable not to have it published until the whole of the members or at least the Committee has been duly formed; but I can send down a number of copies of the draft scheme which is under consideration by the medical men who have already given their names, and which will be amended by them. I can send down any number of copies.

2458. You have a scheme formulated?—Yes. It is under consideration by the medical men now. I will send ten copies

2459. (*Mr. Lindsell.*) You said you attributed the decay of teeth at the present time very much to external causes?—Partly to external and partly to internal causes.

2460. Would you think that the present decay of teeth which we know has been detected, to a great extent is a proof of physical decay generally?—No.

2461. A person might have very bad teeth, and yet be a healthy and strong man?—Yes. The cause of decay of teeth is attributed by the Americans to the acuteness of the American intellect in making fine machines. It is said that the American dentist is the best in the world, because the Americans have the worst teeth, and so the dentist has the most practice. It is said that the teeth of the Americans are exceedingly bad, because they have made the most perfect rolling machines in the world, and are able to separate the fine flour in the interior of the grain more perfectly from the outer than any other nation. It might be a question for consideration by this Committee as to how far the teeth are beginning to decay in consequence of the substitution of steel rollers for old fashioned grind-stones. There is another question which might come in incidentally as a question of physical degeneration, and more especially as one involving a risk to the health of soldiers, and that is the increase of appendicitis. It has undoubtedly increased, but the question would arise how far the introduction of the steel rolling machinery, has caused this disease. Many years ago I came in contact with a man who had been, I think, a commissioner to the Red Indians on the Reservation. He took a great interest in the Red Indians and he said that they were dying off in consequence of three things—whisky, syphilis, and fine flour. Syphilis and whisky one could understand, but I said, "Why should they die of fine flour"? He said "I do not know, but they are very fond of it, and it kills them. How it kills them I do not know." They are co-incident, I think, anyhow—the increase of the finer qualities of flour in use, and the increase of appendicitis.

2462. The last Witness said that it might possibly be that the decay in teeth at the present day was part of an evolution; that in consequence of the cessation of the use of articles of food which require good mastication, there was less use for the teeth than there used to be, and that therefore nature was adopting this means of reducing the power of the teeth, and also that the area of the jaw was diminishing?—That is quite possible, but there may be also another reason, that the softer foods are more apt to leave particles behind. If you get a good hard food, the mere mastication of it tends to clear away a lot of the organisms. One sees that very markedly on the tongue in a case where a patient has been fed for some days upon milk. The tongue, mouth and lips are very apt to get crusted, to get disagreeable, covered with a thick white mucus, whereas if the same patient gets hard toast and chews it, after two or three times, the tongue and the teeth become clean.

2463. (*Colonel Fox.*) You were saying just now that acids had a very great effect upon the teeth?—Yes.

2464. Take the case of farinaceous foods, take a biscuit or a crust, before you swallow that you have to masticate it very fully and it becomes mixed with saliva, which causes a chemical change and converts the starch into sugar; that is the first process of digestion?—Yes.

2465. And that is all the digestion that farinaceous food goes through. When it arrives in the stomach it is already digested. But, on the other hand—take the case of these people who get pulpy food and wash it down with tea, the starch which ought to have undergone a chemical change has never undergone it, and it reaches the stomach in an

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undigested form, and then acidity takes place in the stomach which affects the teeth, does it not?—It does, but the acidity that I am speaking of was formed in a different way. In circumstances such as you have detailed the formation of the acidity and of gas occurs in the stomach from the starchy food by the bacteria present there; the acid which affects the teeth is generated between the teeth in somewhat the same way, but by other bacteria.

2466. By the lodgment of the food?—Yes, there is a local formation of acid betwen the teeth, just as there is a general formation of acid in the stomach in the case you describe.

2467. Do you not think that when a man had hard food to bite and his teeth performed their proper function—he had to bite and chew—the whole process of digestion went on thoroughly before it arrived in the stomach in the case of farinaceous food, biscuits and hard bread, and so on?—Yes, that is so.

2468. That does not exist now, they generally take things which are easily bolted; slops and things?—Yes.

2469. That must affect the whole system, surely?—Surely it does. There one gets into a vicious circle, because taking that kind of food, I think, affects the teeth, and when the teeth become affected they try to get soft foods to avoid the pain caused by masticating the hard food. When the Roman soldiers were in Great Britain and they had to grind out their own meal every day before baking it, I do not suppose many of them had bad teeth.

2470. (*Mr. Lindsell.*) You said, I think, that the long school hours which school children have to go through now is possibly a cause of deterioration in health?—Yes.

2471. And you said that all school meetings ought to have a break in them?—Yes.

2472. I suppose that you are aware that in the rules for governing elementary schools in England there is that rule in force at present, that every school meeting of two hours or more must include an interval for recreation of not less than ten minutes?—Yes.

2473. That would meet your point, would it not?—Not quite. Every school meeting of two hours or more would include recreation for ten minutes, but then you see you may have one of three or one of four.

2474. No, because the meeting is not more than three hours at the outside, and there they would have an interval of fifteen minutes?—It should be stated, as it is either in this Swiss hand-book or some of the others, that every hour should be followed by a break.

2475. The time would come in the middle?—But it would be better to have it definitely stated that after every two consecutive hours there should be a break.

2476. Then you have said that physical training ought to form a part of the regular school hours and not be made an extra?—Yes.

2477. That is the case now in the English schools, that part of the time given to physical training may be included in the two hours of the school meeting: do you consider that the State ought to make the provision of playgrounds in all schools compulsory?—Yes.

2478. (*Mr. Struthers.*) Is it your proposal that this voluntary association which you spoke of should set itself to provide playgrounds?—Yes; it is perhaps easier to get that done than to get the State to do it. The State as a rule shunts everything upon voluntary work that can be shunted. But the necessity for having playgrounds is very great, and I think we should get playgrounds provided as soon as possible. If these things cannot be done voluntarily then we must get the State to do it; we must have compulsory powers.

2479. (*Mr. Lindsell.*) I think you mentioned that one of the very worst causes was that children in actual attendance at school work before and after school time?—Yes.

2480. You are aware that in consequence of the report of a Committee like this on which I served two years ago an Act was passed last session, which has now come into operation, which allows all local authorities to regulate and prohibit the employment out of school hours of children who are in attendance at school during those hours?—It was in consequence of evidence given when that Act was being brought forward that I spoke of this. I knew the Act was passed and I was anxious to draw attention to it in order that care should be taken that the Act was carried out.

2481. (*Mr. Legge.*) You agree it is not an absolute essential to secure the preservation of teeth that all children in the country should be forced to use tooth-brushes?—You cannot do it.

2482. You agree that that is impossible?—Quite impossible.

2483. And that it would be far better to urge them to take care of their teeth even though they simply used their finger nails?—Certainly.

2484. It would be better to do that than to try to force an artificial scheme of universal tooth-brushes for every child in the country?—Yes. If one considers that parents may have only 18s. a week and have half a dozen children, it is impossible.

2485. And the curiously instinctive reluctance which exists in the child against any act of cleanliness is also a factor to be considered?—There is one reason which is often not taken into consideration, I think—namely, that the children's skin and mucous membrane are excessively tender, that what to a grown up person would cause no pain and no inconvenience may cause a child a good deal of pain and discomfort. The child does not like a hard tooth-brush rubbed against its gums, but it would not mind a piece of stick, like soft pine. One sees in India how carefully the people keep their teeth. Of course, this is a mere general impression, but looking at people in India one gets the idea that their teeth are very much better than ours, and all they use is a little bit of stick.

2486. You will agree that a dirty tooth-brush is a very insanitary thing?—Certainly.

2487. You go further, and say that it would be a useful thing if the teeth of children in the school were examined from time to time?—Yes.

2488. Would you extend that to further medical examination of the school children as a regular hard and fast system?—I certainly should; that is being done in Germany. This is a copy of the schedule which is used in Frankfort for the notification of the condition of the child in regard to the number of diseases and conditions at the various periods of school life. (*The document was handed to Mr. Legge.*)

2489. You further said that you would like instruction given to children in some of the elementary laws of health, care being taken that this was not an additional subject. You are aware, no doubt, that in many of the elementary schools of the present day there is some such instruction attempted?—Yes.

2490. You are perhaps not quite satisfied with the method?—I do not think the instruction in this country is equal to what it is abroad.

2491. You know, no doubt, also that there are cookery classes quite common under our leading educational authorities. Have you been able to form any judgment as to the value of the instruction given in those?—No, I have not been able to give time to the inspection of those.

2492. Do you think that the sort of instruction given in those classes should be of a severely practical kind, and the dishes prepared suitable for a working class household, or that they should insist on the chemistry of food, and instruction in preparing all kinds of pastry and made dishes?—They should have some instruction in the chemistry of food, but I think I could perfectly well give all that is necessary in ten minutes at the beginning of the course.

2493. That is the amount of chemistry of food that you consider necessary for them to know?—Yes. The remainder should be entirely practical instruction in the preparation of foods suitable for working people.

2494. Do you think it would be better that such instruction should be given to girls of, say, twelve years of age, or that it should be concentrated in the last six months of their school life?—I do not know which would be the best. I have not sufficient practical knowledge.

2495. Would you like to see special schools established for special districts, the slum districts in big towns, with a curriculum something like that of the day industrial schools, that is to say short hours, three hours book work, two hours or so manual occupation and instruction of various kinds, and considerable extension of the ordinary time

allowed to drill and physical exercises?—Yes, I think that would be the sort of thing.

2496. As regards this question of doing physical exercises indoors and the dangers of dust and so on, of course you would agree that the arguments against carrying on physical exercises indoors in the case of school rooms would not apply in the case of a special room, namely, the gymnasium itself?—No, they would not apply to the same extent. At the same time in such a country as Switzerland, which I again take as an example, they are very strong on the advisability of all these things being carried on out of doors.

2497. As far as possible?—As far as possible.

2498. That is to say weather permitting?—Yes.

2499. Weather not always permitting open air exercise in this country, at any rate, one must have one's gymnasium indoors?—It is preferable, instead of having a building with walls, to have an open space with a covering to it—simply a protection from the weather.

2500. Taking your interesting remarks on hooligans, I wonder whether you have seen the recommendations of the Royal Commission on Physical Training in Scotland? Yes.

2501. They recommend the compulsory attendance at continuation classes and further, in default of such attenddance, possible incarceration for a short time in a sort of senior truant school: do you agree with those recommendations?—With these or with an alternative. I believe there are a number of those who turn out Hooligans who have no faculty for learning book work, and continuation classes would simply be a pain and a labour to them, and that you would have to compel them to come in; whereas if you could get something that would interest them and take its place, such as volunteering, I think that would be just as good for them.

2502. These evening continuation classes which the Commission had in its mind were classes with a very special curriculum in which gymnastics for instance would find a place?—In that case——

2503. Your objection would disappear?—Yes.

2504. Then as regards this organisation of yours?—May I put in a *caveat* there? It should not be called *my* organisation.

2505. I mean the one which you referred to. You are aware, of course, that there are one or two Leagues covering some part of this field, such as the British Empire League and the Boy's Brigades. Is it the view of the Association to absorb those?—The view of this League is that it should not supplant them in any way, but that it should co-ordinate them, and as a preliminary step Mr. Loch, of the Charity Organisation Society, has kindly made a list of all those Associations to which you refer and those are now printed. I shall send you a copy of this list also. This list is at present only a preliminary one, but it will form the nucleus of a larger one presently.

2506. Though this organisation is to be a purely voluntary one in its nature, I hope it will have no objection to trying to work through officials if it thinks their assistance may be of any service?—It will be glad to get assistance of every sort.

2507. I mean it will bring its influence to bear, I suppose, on the Departments very much as the Navy League sticks pins into the Admiralty?—Yes, certainly.

2508. As one definite sphere of operations I daresay it will help in carrying out another recommendation of the Royal Commission in Scotland, namely, the formation of Games' Committees and Sports' Committees in every school district in the whole of the country?—Yes, that is certainly one of the objects. I may say that in the formation of this League Sir Henry Craik has taken a very active part, and I think I may say that Colonel Fox also very kindly took part in the very initiation of it.

2509. I hope this League will also have two or three active inspectors to keep it informed as to how things are going on?—If it is not asking too much I would ask you to do this. I will send down duplicate copies of the draft scheme. The League is simply in its infancy. All suggestions are welcome just now. If you would not mind the trouble of putting in these suggestions in the proof which I will send down, then they could be submitted to my committee and incorporated.

2510. (*Colonel Onslow.*) You have referred to the recruiting returns as being an example showing the physique in a large number of people is unsatisfactory; do you think the tests of recruiting returns adopted for the Army and Navy are a very good guide?—Tney are a guide to the physique of a certain stratum. *Sir L. Brunton.*

2511. To what stratum?—That I cannot say

2512. Is there any particular stratum from which the two services, the Army and the Navy, are recruited?—That I cannot answer.

2513. In reference to Sir Frederick Maurice's remarks that at the end of two years only two out of five men remain in the army, do you know how he made up his numbers?—No.

2514. Do you know that he first calculated so many per cent., a figure which was never ascertained, rejected by the recruiting sergeants, then so many per cent. rejected by the doctors, and that the remainder were rejected at the end of or at any time within the two years' service, so that after all only a certain proportion of those were men who were unfit before they entered the Army; the others were unfit, perhaps, but after a very severe test, a far severer test than the ordinary civilian would undergo. You have not ascertained that?—No, I confess that I have not.

2515. Then with regard to flat feet, I think you say they may be regarded as a local evidence of weak physique, but are they not attributable to other causes, sometimes, as for instance, soil and the nature of the work?—That may be, that wherever you get either from the nature of the employment or the nature of the soil, a greater strain laid upon the foot than it can bear, you are likely to get it.

2516. In some cases would it be a guide to show inferior physique? For instance, from the recruiting point of view I happen to know that in the County of Lincolnshire, which is a heavy soil, and in Devon, which is also a heavy soil, flat feet are very prevalent. That does not necessarily show bad physique in individuals, because it is good there. The farm labourers of Lincolnshire are notoriously flat footed. I know that when the arch is right down on the soil, it is bad; but flat feet are not a true guide to bad physique, are they?—No, certainly not.

2517. Our rejections for flat feet are enormous: they would not prove bad physique?—No, but it is evidence of a local weakness. To a great extent I believe it is due not merely to the giving of the ligaments but of the tendons—some of the muscles which pass along the heels and fasten to the front of the foot so that it maintains the arch. To show that is so I think one may point to the fact that you may get rid of flat feet to a great extent by proper exercises. Give a child a bar and let him work himself up and down with his toes.

2518. If you take it in time it can be remedied?—Yes. Colonel Fox knows much more about that than I do.

2519. (*Colonel Fox.*) I have had a great many cases sent to Aldershot of what they call flat feet, but when I examined the feet they were not only flat but they were badly formed feet as well. It was not simply the flatness, the instep being flattened out, but the toes were all bent under—dreadfully crooked feet. I do not think the flat foot would have mattered so much. When a man marches with a flat foot he does not use his calf, he walks from his thigh; the thigh takes up the work?—Of all that I was ignorant.

2520. (*Colonel Onslow.*) As regards the cleaning of the teeth you have mentioned that the natives of India were always using some sort of stick, but is it not the fact that the natives of India and the Arabs and other dark races have very different food to Englishmen?—Oh, yes.

2521. It is food which is not liable to cause decay of the teeth?—That is so. The Arabs have almost entirely dates,

2522. Yes, and the others grain?—Yes.

2523. (*Mr. Struthers.*) Oat cake would be a good thing for cleaning the teeth, would it not?—Yes, very good.

2524. You do not regard bad teeth as an indication of weak physique any more than flat feet are?—No; it is a local weakness, but a weakness that has to be guarded against as far as regards the efficiency of the man in work sometimes.

2525. No doubt, but it is no more an indication of weak physique in one class than it is in another?—No.

Sir L. Brunton.

2526. You may have it in the comparatively well-to-do classes as well as in the slums?—Surely.

2527. So that when we have brought to us statistics of the number of men in South Africa who were useless for want of teeth, that was no indication of weak physique in the nation?—No. One sometimes gets very much the same results from too much riches as from poverty. One of my old teachers, Professor Hughes Bennett, said that he regarded two of the chief causes of phthisis as being the abundance of pastrycooks and the dearness of butter. The rich girls went in for pastry at various times of the day and disordered their digestions and in consequence they got phthisis; and the poor children could not get butter or fat of any kind, because that is a dear food, and in consequence their nutrition suffered and they got phthisis.

2528. But it lies neither in the quality of poverty nor of riches: it is also found in middle class people?—Yes, in all classes.

2529. You spoke of the schools in Switzerland and contrasted them with the schools in this country; were you speaking from personal knowledge of the schools in Switzerland?—Yes. I went to Berne last August to have a look at the schools.

2530. Were the schools in session then?—I went first of all in August and they were not in session. Then I went to Grindelwald and when I came back they were in session.

2531. In September, I suppose?—I think it was. Then Professor Kronecker very kindly took me round and introduced me to all the men who he thought would give me information. I found them very kind. They said they would give me any information I wanted, and if there were any questions that I wished answered they would furnish me with the answers as soon as they got them. So that if there is any information regarding any point in the schools in Switzerland which the Committee would like I can get it for them, if they would simply notify it to me.

2532. You do not happen to remember what the length of the school day in the Swiss primary schools is, I suppose?—I have it all noted, but I fear that the paper upon which I have it has been left at home. I will send that to you.

2533. Do you remember what were the subjects of the primary school?—That information is amongst the papers I have got and I will send it down.

2534. I want to know (1) the length of the day of the Swiss primary school—that is children from seven to fourteen years of age: (2) the number of subjects which form the curriculum of the primary school: (3) the proportion of the actual school day which is given to physical exercise?—Yes, I will supply that information.

2535. I suppose you have made similar visits to schools in this country—to schools in London and in the country?—No, I have not.

2536. You are only speaking of the over-crowded curriculum and the absence of a period of exercise and so on from report?—Yes.

2537. I think my colleague on the English Board of Education has stated the facts with regard to the necessary intervals in the schools day. Those also apply in Scotland. It is not merely a matter of regulation, but a matter of personal knowledge from the reports of our inspectors, that a class never lasts more than one hour without a break. I think we shall probably find that the subjects of the curriculum are not more numerous in this country than they are in Switzerland. You also heard that a law was passed last year which applied to Scotland equally with England, which enables school boards, at any rate if they care to take the trouble, to ensure that children shall not come to school in a condition which unsuits them for taking their usual school course. On all those points I fancy there is not very much for your Association to do, probably?—Perhaps not, but would it be asking too much to ask you to note these points?

2538. I shall be very glad?—The Association wishes to gather members from every class so that perhaps all those who are interested in it might be willing to join.

2539. How would the policy of the Association be decided? I suppose it is going to put forward a definite policy and carry out a propaganda?—Oh yes. I am hardly in a position to say that yet, because the whole thing is under consideration.

2540. You spoke of the lady visitors going round and instructing the people how to keep their houses clean, how to nurse the baby, and so on: you have, no doubt, considered the possibility that these lady visitors may themselves require instruction?—Oh surely. I took that for granted.

2541. You used rather a striking phrase to the effect that school feeding was necessary, physically as well as mentally, and should equally be provided?—Yes.

2542. But you know that the State compels attendance at school, and on the other hand provides education free for all who wish it free—in an ordinary elementary school the parent gets education for his children free?—Yes.

2543. You do not propose to put the free feeding on the same footing—that the child is also to be provided with food free?—No. Make the parent pay for it if possible. On no account pauperise the people.

2544. (*Colonel Onslow.*) If they cannot pay for it how would you do it?—If they were too poor I should throw it on the rates, because the rate payers would probably see that proper pressure was brought to bear upon parents who could pay.

2545. (*Chairman.*) I want to refer to the remark which Sir Frederick Maurice made with regard to two men out of five remaining in the army after two years, and the somewhat erroneous conclusion which has been drawn from it: Colonel Onslow has shown that two-fifths of the elements of Sir Frederick Maurice's calculations were purely conjectural. But granting that 60 per cent. of those who desire to become soldiers are unfit for it, we had a very competent medical witness here the other day who said this: "Having regard to the conditions under which the British Army is recruited"—that is to say, looking at the class which is supposed to supply the great body of recruits—"the fact that 40 per cent, of those that present themselves to the recruiting agencies become good soldiers is more to the credit of the physique of the British people than the fact that under a system of conscription in Germany only 16 per cent. of those liable for military service are rejected." Would you agree to that?—I do not think I have data enough to enable me to form an opinion.

2546. Supposing those facts are correct, should you agree that that condition of things, even if it is as bad as Sir Frederick Maurice describes, in this country, is more to the credit of British physique than the other fact, which is quite well ascertained, namely, that 16 per cent. of those who submit themselves for the German Army, under a system of conscription, are rejected?—One requires to find out whether the standards are quite the same in both countries before one could answer that question.

2547. The standards are directed to producing good soldiers in each case?—Yes.

SIXTH DAY.

Wednesday, 27th January, 1904.

PRESENT.

Mr. ALMERIC W. FITZ ROY (*in the Chair*).
Colonel G. M. FOX.
Mr. J. G. LEGGE.
Mr. H. M. LINDSELL.
Colonel GEORGE T. ONSLOW.
Mr. JOHN STRUTHERS.
Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary*).

Mrs. CLOSE, called; and Examined.

Mrs. Close.

2548. (*Chairman.*) You are in a position, I understand, to compare England and Scotland, town and country, with the condition of things some years ago?—Yes, forty years ago.

2549. And you are also in a position to compare the condition of this country with that of foreign countries?—Yes, many countries.

2550. At any rate to a considerable extent?—Yes.

2551. You have had great opportunities of seeing foreign countries, have you not?—I have had every opportunity.

2552. And you have pursued a method which is not exactly common?—That is so.

2553. Will you explain how you got a very intimate knowledge of the conditions under which poor people live in different countries, in other countries than England?—Yes. I have ridden on horse-back over eleven foreign countries, and I have been in the habit every night of sleeping in a cottage, never in an hotel; and the same in England. I have had a two-wheeled trap, by myself alone, and I have put up at a cottage every night for years and years. I know and I have visited the greater part of England very constantly. You have a list of most of the places I have visited abroad—Bosnia, Herzegovina, Montenegro, Italy, Austria, part of Hungary, the North of Spain and the central plains of Spain, also France, and Norway. I have ridden on horseback.

2554. Would you take this country and tell us what you remember of it forty years ago? You are under the impression, I believe, that the physique of the people is deteriorating?—Yes, undoubtedly.

2555. Deteriorating both in mental and bodily vigour?—Both mentally and bodily.

2556. And the knowledge of cookery is not what it was forth years ago?—It is not comparable with what it was forty years ago; it has gone down immensely.

2557. Have you any reasons to assign for that?—Yes. When I was a child I lived a great deal on my father's estates in Cheshire and also in Scotland, always among the poor people, having tea and breakfast and dinner with them constantly. The cooking was first rate then. The home-made food was delicious, and the cooking and everything was good.

2558. Then you consider the change is for the worse: what do you think the change is due to?—That the girls, first of all, have no sort of sense of duty; not the slightest. It is only amusement and pleasure with them. The last thing they think of is duty and, therefore, they do not take the trouble to cook or get up in the morning, and the children go to school without breakfast, because the woman is too idle to get up in the morning, and she is utterly indifferent and has no sense of duty.

2559. Do you wish to make that charge against the people as a whole?—Yes, all the young people. Of course there are exceptions, but the bulk of them have not any sense of duty as they have abroad.

2560. In regard to the comparison between food that the poorer classes obtain abroad and in this country, should you say that the English housewife is inferior both in the selection and in the preparation of food?—Absolutely in both ways. She is foolish, and she selects her food badly, and chooses badly, and cooks it infinitely worse.

2561. You admit that their monetary resources are probably better than they were forty years ago?—Much better, and far better than they are abroad.

2562. Do you know France intimately?—Yes, intimately.

2563. Do you know Auvergne?—I know the neighbouring provinces, but not Auvergne.

2564. Here is a description of the peasant life of Auvergne and I ask you whether it is much the same in France generally—"Four times a day, and five at midsummer, the farm hands take their bowl of cabbage soup, where the bacon, potatoes, black bread and cabbage make a mess so thick that the spoon stands up in it; they eat also a crumpet of buckwheat, and a noggin of Cantal cheese; and often a dish of curds and whey, when a cheese is in progress; a sausage if the pig has been lately killed; a fry of mushrooms in September; a tart of wild cherries in July; or carrots sliced and fried with snippets of bacon; sometimes a queer stew of potatoes and curds; or some other homely treat which, at mid-day, serves to mark the importance of dinner, always washed down with a glass of the strong bluish-red wine they call Limousin, brought from the neighbouring departments of the Lot and the Correze"?—That is an excellent description.

2565. Here is another of Touraine?—I do not know Touraine.

2566. "The peasants live uncommonly well in Touraine. Two or three times a day, according to the season, they have an excellent meal consisting of soup—generally cabbage soup—followed by a dish of beans and bacon, or a ragout of mutton, or a piece of braised beef, or may be a fricassee of veal or a civet of rabbit, but meat of some sort, and very seldom merely bacon; for dessert they have goats' milk cheese, for every farm has its goats, with fruit, and plenty of common red wine, for every cottage has its acre or so of vineyard"?—That is also an excellent description.

2567. Is that a truthful description?—It is an admirable description.

2568. Of course there is nothing in England at all to compare with that?—Nothing—it is miserable. My experience last year driving from Cornwall to London was literally terrible.

2569. Will you give us your experience of that?—The more remote the province is from London the better the food—that is undoubted. The nearer you come to London the more infamous the food, and the more infamous the cooking, and the only thing the women think of is luxury and pleasure and amusement. They will not give it up. They only think of theatres.

2570. Not the poorer classes, surely?—Yes, I am speaking of the lower classes.

2571. Do cottagers' wives come up to the London theatres?—Constantly. I have seen them myself.

2572. (*Mr. Struthers.*) What distances would they come?—From a place in Kent, say three-quarters of an

Mrs. Close. hour by rail. That is where I have seen greater misery than in any other part of the world, and worse physique. At Windsor itself, that was the only place in Europe where I have not been able to go into the bed, and have had to lie outside it.

2573. (*Chairman.*) What bed?—The lodgings. It was so filthy. The place had a very smart bow window over a shop, and it was in the High Street of Eton looking into the street. It was the only place in Europe where my daughter and I were unable to go into the beds, and where you could not touch the food for supper or breakfast in the morning.

2574. What sort of food was it?—It was absolutely uneatable.

2575. What was the material?—It was an excellent bit of steak, but it was rendered uneatable from the cooking. And the same in Wiltshire. There, the food was absolutely uneatable. The roast joints for the Sunday dinner were absolutely uneatable, and the farmer could not get a single slice off the joint, it was so badly cooked.

2576. Yet you would say that the facilities for cooking are better?—They are excellent.

2577. And so with regard to the modern kitchen ranges?—Yes, they are very much improved.

2578. Their mechanical arrangements were better altogether?—Yes, if you would like me to tell you what there was there, I shall do so. The gardens at the farm were over-flowing with young rhubarb, and sorrel and those sort of things, but we had nothing but tinned vegetables and tinned fruits.

2579. And do they allow those fruits to rot on the ground?—Yes, to rot rather than gather them or cook them.

2580. They do not sell them?—They do not take the trouble to sell even, but they allow them to rot. We had tinned food for breakfast, for dinner, and they were too idle to make their own cakes. They would buy all the cakes from a wholesale firm in Edinburgh.

2581. Where was this?—Didcot was the worst place. It was a farm house in the parish of Didcot—I do not like to mention names, of course, they will remember me and it would not be kind. They were civil and nice girls, but the girls think of nothing but amusement, and they are idle.

2582. Do you think that that description might fairly be made of the young women of that class all over England?—Not all over England. In Yorkshire and Lancashire they are exceedingly good.

2583. Would you say within a hundred miles of London?—Yes, in Hertfordshire and Kent, and say from Didcot on the Great Western up to London, all these people are idle, feckless and good for nothing people.

2584. These evil influences are gradually extending the further you get from London?—Yes, very much.

2585. And so that the whole of England will become contaminated?—I am afraid they will be in a state of helplessness. Yorkshire was first-rate—I have not been there for two years and therefore I do not know whether it has gone back, but the cooking there used to be admirable.

2586. The tinned foods that these people procure, are they good in themselves, so far as tinned foods can be, or are they of an indifferent quality?—They are good. The cakes are atrocious.

2587. But in regard to the class, rather below the farming class, the agricultural labouring class, have you anything to say about their dietary?—It is just the same with them. If there is an old woman about that is a different matter, in fact I choose the cottage where there is an old woman.

2588. You think that good qualities are now the exclusive property of the old people?—Yes, I am in the habit of getting up early. In my drives I put up in cottages, and I get up at six o'clock and constantly find the young women are never up until eight o'clock. The consequence is that the children are taken off to school with a scrap of bread, and milk or tea.

2589. Is not it tea without milk?—Without milk.

2590. Strong?—Yes, that depends upon circumstances. It is sometimes frightfully strong and has been standing for a long time.

2591. You think it is allowed to stand all day, and it is warmed up in the evening?—Well it is done anyhow.

2592. You have seen its effects on young children in the farmhouses?—Yes, I think that they are better brought up on beer. I have seen many brought up on beer, and they seem to be better than those brought up on tea. I have no statistics.

2593. The tea produces anæmia and forms of neurosis, does it not?—Yes, and what you call ricketty, they have no muscle and no bone. May I add, that in Bracestead, in Kent (because I know it, and I have stayed there some weeks) the mothers there were in the habit of cooking nothing at all but a mass of boiled turnips once a week and shovelling them out for dinner and supper cold. We know that boiled turnips have about 80 per cent. of water in them; it is not unwholesome, but it has less nourishment than any other English vegetable.

2594. Do not these people give their children a fair complement of bread?—They give them lumps of bread, but it is very inferior bread. I see by analysis in the Blue-book——

2595. Would you say that it is inferior in strengthening qualities?—Yes; and it does not sustain you as foreign bread does, and you cannot go very far on it. I have gone a long way on bread abroad, but you cannot go far on English bread.

2596. Do you find that they take much porridge?—No, except where you find Scotch people, and occasionally in Yorkshire. You know that it is a very troublesome thing to make porridge, and therefore this thing is only done abroad.

2597. You therefore have formed a somewhat depressing opinion of things generally?—Exceedingly depressing.

2598. But you think that it is quite capable of improvement by the adoption of simple and reasonable methods?—Yes; and by putting a sense of duty into the women. I feel it my duty to say so—they have no sense of duty at all.

2599. Well, it is a very difficult thing for men to put a sense of duty into women, is it not?—I am sorry, but you will do no good with these women until you do put a sense of duty into them; they are not like old French women, who will get up early and cook the food for the children, and who will will say, "that is why the good God puts me here."

2600. The sense of obligation has become very weak in the women near London in that class, then?—Yes; the moment they marry, if they are in the country, the wages cease. What is to make them get up? Nothing but a sense of duty.

2601. You do not think that any of them are neat and clean?—Comparatively few.

2602. The houses, you will admit, are better than you remember them forty years ago?—Yes, the houses are excellent. There is not a fault to find with the houses in the country.

2603. The women do not take any pride in them?—It is very rare. Of course, there are exceptions, but as a rule they take no pride in them. When you see behind the muslin curtains, you find the filth.

2604. Then you do not think that the teaching of the management of the household and of cookery in schools has had any effect yet?—It has hardly had time.

2605. Do you think that the methods employed could be improved?—I should like to make it obligatory.

2606. If the methods are not good the further extension of the teaching would not do much good, would it?—I should suggest very strongly that the children should cook a tangible meal and see it and eat it.

2607. Such a meal as they would eat in their own cottages?—Yes.

2608. Have you any knowledge of the teaching of household management in Sweden or anywhere else?—Yes, personal knowledge; in Sweden they spend the entire day in cooking. It is obligatory, and they spend five to six hours a day upon it.

2609. Not throughout the whole time that they are at school?—For three weeks at a time. It varies according to the health of the child.

2610. Up to what age do they stay at school?—They generally stay until they are fourteen.

2611. So that for two or three years they receive lessons in cookery and household management, to which they devote two or three weeks continually, and they go through a course?—Yes, and may I add that it is not quite as lessons—as it is here—ground into them as lessons, which, although they enjoy very much, it becomes more or less disagreeable, owing to the demonstration lectures, which are of no use whatever.

2612. You would have more practical work?—Yes, and they should cook a tangible meal, and see it, and eat it themselves. At present it is put on a shelf. In Bethnal Green, for instance, it is thrown away, because they will not eat stews.

2613. What is the prejudice against stews?—I cannot say, but they will not touch a stew.

2614. However savoury?—I have eaten it myself. I saw at Bethnal Green several dishes thrown away and nobody would buy them.

2615. It was absolutely unsaleable?—Yes.

2616. That is your practical suggestion, that the teaching of cooking should be more continuous?—Yes, more hours a day—the entire day. At present a batch goes in at nine o'clock and comes out at twelve. They do not see the result of their cooking. It is probably not half cooked. I suggest that the same children should stay in all day.

2617. And the material that they cook might be utilised for the children who are in a half fed condition?—I do not wish to see them fed free in the school, but the parents would be glad to pay 1½d. or 2d. for it.

2618. Do you think that by this system you would get a sufficiently continuous supply of food to meet the demand?—I think it would be perfectly easy. I have been down to the slums a good deal lately. I was at Whitechapel the night before last. I do not go from house to house, but I meet the people at concerts and speak to them in a friendly way, and they are all keenly in favour of more cookery being taught.

2619. On a more intelligent system I suppose?—Yes. They backed me up in having less subjects taught in the school; they want to take up domestic economy in lieu of those subjects, and they would be delighted to pay 1½d. or 2d. for a properly cooked meal in the middle of the day to be taken on the school premises.

2620. Do you think that the exodus from the rural districts to the towns might be arrested if the rural housewife made the house more attractive to the family?—Undoubtedly. The misery of their houses is beyond words—the discomfort in the home. I have seen a man constantly come home, and he has had his supper placed on the dirty breakfast plate, and he has had to eat the cold miserable food on the plate that his breakfast had been standing in on the scullery table the entire day. I have never seen such a thing abroad, and I have lived among literally beggars abroad, and stayed for days with them, but never seen such a thing.

2621. Have you anything to say about the exodus of the rural population into the towns?—Yes. It is owing to the amusements.

2622. Do you think that they lack interest in country life?—Well, I do not agree with that, because the old people were full of interest in it; but the younger children lack the interest, and they long for the amusements of the town, because they are fed on amusement.

2623. Do you think that anything could be done to interest children early in life more in rural life; do you think that the school curriculum could be adapted to it?—I think that these object lessons in nature have a very good effect and it interests them very much.

2624. Here is the opinion of a distinguished French educational authority who has gone into this subject, and he says:—"First of all, teach the children to take an interest, not only in books, but in the life of the fields. Teach them gardening, and how to keep bees, the making of cheese, and the management of a dairy. Show them the reason of these things, their cause, and the possible improvements. Above all, in educating your little rustics do not impose an ideal from without; work your reform from within. Make your scheme of education deliberately rural; be sober, just; teach them courage, and the contempt of mere ease and well being; give them a wholesome, ample way of looking at things; instil the taste for an active life, the delight in physical energy. Try and turn out, not a mandarin, but a man of the fields." Would you agree with that?—That is excellent. I would endorse every word of that. *Mrs. Close.*

2625. (*Dr. Tatham.*) I gather from what you say that you think that there is not only deterioration amongst the working classes now as compared with forty years ago, but that that deterioration is progressive and progressing?—I am afraid so, and must continue so under present conditions.

2626. Speaking from your knowledge—which is evidently very extensive—of the children in towns, as compared with the children in the country, do you think that they compare badly or well?—Do you mean in England?

2627. Yes, I restrict my observations to England?—Well, it is very much of a muchness now, barring the extreme provinces, such as Cornwall and Devonshire and Northumberland, which are far away and remote from the excitement of London. It is the excitements and amusements, and, I hope nobody minds my saying so, the excessive charities of London, that demoralise the people. They look upon charity for everything, whatever the difficulties of life.

2628. In your judgment you think that the children, say, in Cornwall, present a more healthy appearance and markedly so?—Yes, they are better fed, and the cooking is better.

2629. May we consider that the deterioration of the working classes is due to neglect and ill-treatment or improper treatment by young wives?—Not ill treatment, but thoroughly injudicious management.

2630. Speaking generally is it your experience that young children get any substantial amount of good milk to drink as a part of their diet?—No.

2631. In place of that they get tea, do they not?—Yes, and anything going.

2632. In your judgment that is deleterious?—I think so, strongly. It all comes back to the original thing, that it is the duty of the woman to go and get the milk, but she has no sense of duty and will not go and fetch it. All these farm-houses will supply it, but the women are too idle to go half a mile to fetch it.

2633. Do you think this is due to the fact that a good deal of the milk which used to be consumed in the country now goes to London?—Yes.

2634. That seems to be the general opinion?—Undoubtedly, but if the women chose to arrange with the farmers they could have it; they will not get up in the morning and there is nobody to go and fetch it. If you do not get up till eight you cannot possibly get the breakfast ready or walk even a quarter of a mile to fetch the milk.

2635. It is not poverty or ignorance?—It is ignorance and idleness, a want of sense of duty. They will not exert themselves to get up early and do their duty.

2636. Would it be correct to say that in a great many instances children are sent to school imperfectly fed?—Yes, with nothing at all but a mug of cold turnips, as I have told you. It is a common breakfast for a woman, nothing but cold boiled turnips. They are too stupid or too idle to boil the potatoes of which they have learned the analysis in the school. They have been taught the analysis but it is no more use than that paper. They are too idle to make use of it.

2637. In fact the children are half starved when they get to school?—Yes, practically, constantly half starved.

2638. And not in a fit condition to receive information?—Certainly not.

2639. (*Mr. Lindsell.*) Do you apply that argument to the children in the country as well as town children? You say they come to school half starved: do you mean in the poorer districts of the town or in the rural districts?—I am speaking of the rural districts. I do not know anything

Mrs. Close.

of the personal life of poor people in town. I am speaking of rural districts.

2640. Do you often go into rural schools?—Constantly.

2641. Do you think, if you took the rural school children, and had them stand out in the playgrounds, that, looking through them, the school as a whole at the present day would compare very unfavourably as regards physique with the same school thirty or forty years ago?—Yes, I am afraid so—very unfavourably.

2642. You are quite sure of that?—Yes, I am quite sure of that, I have no sort of doubt of it.

2643. You attribute that entirely to the change in the meantime in the food and habits of cooking of the parents?—Yes.

2644. Entirely?—Yes, I think entirely, because insanitary houses would apply only to London, not at all to the country; therefore I cannot imagine any other cause.

2645. The sanitary condition of the country cottages are probably better now than they were forty years ago?—Yes.

2646. And on the whole the material condition of the inhabitants is better?—Yes. But I think that the adulterated food which they eat in the country is pernicious—the adulterated tinned milk and the extremely bad bacon, and the extremely bad bread—baker's bread. Those three causes also contribute.

2647. Do you think they are worse than they were forty years ago?—Unquestionably; incomparably worse.

2648. Do you think that peasants could get more milk forty years ago?—Certainly.

2649. Are you sure of it?—I am sure of it, because I lived with poor people to such an extent when I was a girl.

2650. Did you see them have plenty of milk in those day days?—Any amount of it.

2651. Why do not they have it now?—Because the women are too idle to go to farmers to fetch it. The farmers cannot send it.

2652. Do not the farmers send it to the town?—Yes, but they offer to sell it. If I may quote our own place in Oxfordshire, the farmers supplied us. They assured me they were only too willing and anxious to supply the poor people. The farmers I speak of have not sufficient milk to send to London; they are all small dairy farmers. They do not keep enough cows; therefore they are only too glad to dispose of the milk, but the women will not walk a quarter of a mile to fetch it, and they do not get up early enough to send their children to fetch it.

2653. Does that statement of yours with regard to the laziness of the female members of the household apply to quite the labouring class, or the small farmer class?—The labouring class—the smallest cottagers. They are seldom up when I get in from my morning walk at eight o'clock.

2654. Through your travels in England I rather gather that the type of house you stopped at yourself was a farmhouse or a shop?—I have stopped at wretched little cottages such as over the post office, tiny little places and sometimes little roadside cottages. When I have taken my walks I have always taken great trouble to notice when the wife and mother begin to get about in the morning. I notice that half of them are not up. Their windows are not open and their doors are not open. when I come in from my walk at eight o'clock.

2655. You say that another cause is the bad bread which is now sold?—Yes.

2656. Is that more adulterated than it was?—I do not know. It has an extraordinary way of being excessively wet when the people buy it. Foreign flour takes up much more water than the English flour, and therefore it is made chiefly of foreign flour. That takes up so much water that it adds considerably to the weight of the bread, and therefore adds to the profit of the baker. The next morning the bread is practically uneatable, it is so dry. The same bread which was wet on one day is dry the following day.

2657. It is neither so nutritious nor so good as the old brown bread they used to get in former days?—It is not half so nutritious, or so satisfying. You cannot do your work upon it.

2658. (*Chairman.*) They never ask for brown bread, do they, and they would not eat it?—Not at present. I should give it entirely in the schools.

2659. (*Mr. Lindsell.*) You seem to contemplate a system of providing food in the schools for the children free?—I think it would be a good thing if that could be done, but not free. They do not appreciate a thing which is free. I should make them pay for it, but I believe they would be extremely glad to be fed; I think they would be glad of the power of letting their children dine on the school premises.

2660. You would establish these school restaurants in connection with cookery instruction in the school?—Yes. It is the simpest possible thing and would not add to the expense. There is always a covered shed in every playground where I should enable the children to take their meal and eat it. I would add nothing to the expenses, there is nothing required. There are excellent cookery centres where everything might be done by the children themselves. It would cost about penny apiece.

2661. But those centres serve a large number of schools. The selling of the food made in the board school could only apply where cookery instruction is given in the school itself?—Yes, but as far as I can see these centres are not far apart. The children would easily run a mile. It would do them a great deal of good.

2662. You are aware, of course, that there is great progress being made in establishing cookery centres?—Yes, excellent.

2663. And under the new County Councils there would probably be a great extension of them?—It is very desirable. I should earnestly ask that children might stay an entire day in the cooking classes, and I should earnestly ask that they should have a "tangible meal," cooked, as they do in Sweden.

2664. If they stay the whole day at a cookery class that can only be one day a week or so?—Very well.

2665. It could not compare with the rest of their education?—That would quite do.

2666. The food could only be prepared for sale once a week?—Yes, by that particular batch, but there are other batches of children.

2667. At the centres?—Yes.

2668. Have you looked at the provisions made in the present Education Code for cookery?—The Code here.

2669. Yes, the Code for England?—Yes.

2670. In what respects does that appear to you, as a practical person knowing what is required, deficient or otherwise—"where an inspector reports that provision is made for the practical teaching of cookery," and so on, "grants may be made on account of any girl who has attended not less than forty hours during the school year of which not more than eight hours may be in one week, or more than four hours in one day." If they are taught for a whole day you would not teach them for more than four hours, would you?—Yes, I should certainly keep them for more than four hours.

2671. That is very nearly two complete meetings of the school?—Could it be made at the discretion of the teacher as it is in Sweden, so that in hot weather they could be allowed out a little sooner. In hot weather in London it becomes stuffy and hot. In Sweden it is left to the discretion of the teacher.

2672. In any case you would not give more than five hours?—No, not more than five hours.

2673. So that a very slight alteration from that you consider sufficient?—Yes.

2674. (*Mr. Struthers.*) The four hours is four hours actual instruction, but there would be an interval between?—Yes.

2675. So that it really means a whole day of five hours kept for this kind of instruction?—Yes. I would cut out the demonstration and would absolutely cut out the analysis. It is of no earthly use teaching them the analysis of an egg, as I have found them teaching in Notting Dale, which is the worst slum in London.

2676. (*Mr. Lindsell.*) Does not that come under other heads?—I do not know which head it comes under. It is in the syllabus, and the analysis of water is the same—perfectly useless.

2677. The proportion here sketched out with regard to practical cookery and demonstration is twenty hours to fourteen hours ?—Yes.

2678. You would increase the one and diminish the other ?—"Not less than twenty hours cooking with her own hands."

2679. And "not less than fourteen hours' attendance in demonstration" ?—I should cut that fourteen hours out. It says "not less than twenty hours," and it says "not more than eight hours may be in any one week." I cannot see the use of that. Why should it be limited to eight hours in the week—"or more than four hours in one day;" I should correct that and say five hours.

2680. It would be better to have the instruction spread over a certain wider period, would it not. If you had that all in one week they would forget it almost as soon as they had learnt it ?—I do not think so. I think it would be dinned into their heads rather more. It might be left to the discretion of the teachers, because I find these children move about so very much and so constantly.

2681. You have heard it said that a great deal is left now to the discretion of teachers ?—Yes, under the eye of the inspector who would go round and see that it was not in his opinion injudicious.

2682. You have recently visited a London Board School school, I understand ?—I have seen forty or fifty in these last two months.

2683. The girls' department ?—Yes, the girls' department only.

2684. What is the impression left on your mind as to the amount of the curriculum ?—According to the standard it is perfectly reasonable and most judicious. But according to the teachers—apparently the teachers put on all those additional subjects which result in utter confusion and muddle in the children's minds.

2685. I suppose you looked at the time table of the school ?—Yes.

2686. Did you compare it with what children were actually doing at the time ?—Per day do you mean ?

2687. No, there is a time table prepared by the school authorities, and approved by the Government Inspector, according to which the teachers are bound as a rule to carry on the teaching. Did you compare what the children were doing on the particular days you were there with what was provided in the time table ?—I did not compare it with the time table, but I found out what they were doing.

2688. Did you look at the time table ?—Very often.

2689. Did it strike you as requiring too much ?—Yes, too many subjects crammed one on the top of the other.

2690. You have drawn out a list of subjects which you found being taught ?—Yes.

2691. Of course most of them are in themselves desirable, and even necesary, are they not ?—May I look at it again.

2692. Here is the list (*The list was handed to the Witness.*) That was a school, I suppose, of a somewhat higher type ?—Yes, somewhat higher.

2693. Attended by children in rather well to do circumstances in life ?—The children vary very much. Some of them I should have thought were not intended to attend a Board school—they were doctor's children, but they went down to the very lowest class, and extremely low in intellect, I should think.

2694. Was that in the neighbourhood of Shepherd's Bush ?—No, this was Wormwood Scrubbs, Oxford Gardens.

2695. Not a slum population at all ?—Not actually a slum population, but bordering on it—what Mr. Booth would paint in, not with black but dark yellow. I should have thought that drawing was superfluous, and the geography overdone.

2696. Do not you think a knowledge of geography very important ?—Not to that degree. They were teaching the central plains of England, which I think very unnecessary and perplexing. Personally, I have not the slightest idea of what are called the central plains of England.

2697. (*Mr. Struthers.*) It is very much better than getting up a list of country towns and tributaries of rivers?—I should think both are utter nonsense. Grammar I should knock out, and singing.

2698. Grammar is taught through the medium of reading lessons, is it not ?—That they would pick up by ear instead of being taught the perfect, the pluperfect, and all that bosh; they would take it up by ear. In their composition I am sure they do not write from what they think are the rules of Grammar, but from what they have picked up by ear. If you ask them a question out of school, as I have done in the playground, as to why they put a sentence in a certain form they have not the slightest idea.

2699. You looked at the children, I suppose ?—Yes.

2700. What is the general impression on your mind as to their physique, the children who were doing all this ?—I thought they were very nice, bright children.

2701. They did not look tired ?—Yes, they were.

2702. They were bright all the same ?—Yes, in fact almost too bright, too sharp, overwrought. One and all had no sort of hesitation in saying that they were perfectly certain that they would not remember anything they had learnt for six months; and the teachers were of precisely the same opinion, that they would necessarily forget it all. Physiology I should like to see cut out.

2703. Was that being taught in the school actually ?—It was in a large book which the school mistress yesterday refused to allow me to take. I was very anxious to bring it here with me, but she would not allow it out of her possession. She did not like me even to copy it down, though I got it eventually by persuasion. While my daughter talked to her I managed to get the book and copied these heads, but she was very much averse to my doing it; she would not let me have the book. I was very anxious to bring it. (*The Witness handed list to the Chairman*).

2704. (*Chairman.*) Are these physiological heads ?—Yes.

2705. You do not remember the questions ?—No. I did not want to come to blows. She was a very nice woman indeed, but she had an impression that I was asking for a certain purpose, and she was averse to my taking notes.

2706. (*Mr. Lindsell.*) Did you go at the invitation of the School Board authorities ?—No, distinctly not.

2707. (*Chairman.*) Did you go with any credentials ?—Not the slightest in the world.

2708. (*Mr. Lindsell.*) Were you admitted ? There was no opposition, was there ?—Not the slightest. They were most kind and nice and courteous wherever I have been.

2709. On what did you base your desire to go to the school ? How did you claim the right to enter the school ?—I did not claim the right at all. They were kind enough to let me go.

2710. And in every school it is the same thing ?—Yes, everywhere they are extremely nice and courteous, just as they are abroad. They allowed me to go everywhere and see everything. That is why I did not like to press that subject more yesterday.

2711. What practical remedies do you suggest for this unsatisfactory state of things, in the way of domestic life generally—there seems to be idleness, which results in bad and untidy homes ?—Yes.

2712. And bad cooking, which results in the children being imperfectly nourished ?—Yes.

2713. Have you thought out any practical means of abating these evils ? I mean those are the sort of matters which legislation can hardly touch ?—No.

2714. Except the fringe of them ?—No.

2715. Have you thought out any practical method of grappling with these evils ?—I have indeed. I have given a great deal of time and attention to it, but all I can say, is that I should simplify the general education by striking out several of the subjects which have been dumped on in excess of the standard.

2716. I quite admit that is an important point probably, but that will hardly touch the growing laziness of the young women of the present generation ?—The only possible remedy that I can suggest is that teachers should be ordered to impress upon the girls that their duty in life is to look after their homes, and to prepare themselves for becoming wives and mothers. The teachers

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must bring that before the girls throughout their education—or, as I should prefer to call it, their training.

2717. You would look to the teachers—the moral influence of the teachers in the schools in which the younger generation of mothers are growing up—as one of the best means for amending these evils?—Yes. Abroad it is brought before the children throughout their education; that point is brought before them every day.

2718. Are there any other agencies you have in your mind besides the moral teaching in the school?—Those agencies, whatever they may be, I have the greatest respect for, but I say it is better that the children should be taught in their lessons as well, because if the teachers do not impress it upon them the children think what they receive from other sources is nonsense. They take more notice of what is taught in school-hours than what is taught by voluntary agencies outside.

2719. I suppose you have hardly in your investigations seen very much about the evil effects of juvenile smoking—the girls do not indulge in that?—As far as I have seen they have not taken to smoking. I am not aware of it. I should do everything in my power to check the boys smoking. I hope something will be done.

2720. I see you refer to one of the causes as insanitary houses, but you would not deny that there is a steady improvement in that respect?—Certainly there is.

2721. That would not be the cause of any progressive deterioration at the present time?—They have gradually become insanitary owing to the utter carelessness and indifference of the women. They would make the best house in the world insanitary in a fortnight.

2722. You attribute the tendency to congregate to the centres of population as much to a desire for excitement and amusement as for getting better employment?—Yes. In fact, more so.

2723. Do you think that a young woman would prefer worse wages and greater hardships simply because she prefers living in the town?—Yes, because she gets more amusement, more excitement.

2724. (*Mr. Legge.*) I would like to get into definite shape your recommendations about cookery in schools. First of all, I gather that you are not satisfied with the present style of these lessons. You wish them to be severely practical?—Practical.

2725. And you do not attach much importance to the theoretical part, the chemistry of food?—None whatever.

2726. Then you are not satisfied with the methods in which the lessons are given, that is to say, the time at which they are given; the duration of the lesson and so forth?—So much of the lesson is taken up by demonstration which I consider useless, and by analyses which I consider pernicious.

2727. Would you think it well to concentrate the instruction in cookery to, say, the last six months of a girl's school life and give her a continuous dose of it?—No, I should strongly urge that they should be taught earlier.

2728. At what age would you like them to begin—below twelve?—Yes if possible.

2729. Below ten?—Say at eleven. The teachers are most anxious that that should be done.

2730. If they began desultory sort of lessons at eleven—because you could not expect them to give, say, even half their school time to cookery from eleven upwards—would you like them for the last six months of their time to have really concentrated domestic training?—I should ask from the educational authorities whether it would be possible to select the girls who intend to be typewriters and even governesses. I have found several of these. Would it be possible to select them and allow them to form a class by themselves?

2731. There would be no difficulty whatever?—I see no difficulty, and to allow those who have the sense to wish to learn cookery, to take a further course of ordinary practical cookery at a later stage.

2732. You mean, to allow them at an early age, at say twelve and a half, to specialise?—If possible I should like to very much; or say at thirteen.

2733. The last year of their elementary school life?—Yes; let them take all this course if they wish.

2734. A certain number of girls will never go on to the secondary course?—That is so.

2736. Those are the ones who would specialise in cookery?—Yes.

2736. The typewriter, and the governess class, and the teacher class would proceed to the secondary course?—Would they not have to pay for secondary education?

2737. No?—Would it be quite free?

2738. They can get it quite free?—Then they might be exempt from cookery.

2739. I have a further suggestion to make to you. Do you think it would be a good thing in the case of girls having a home with which the school authorities were perfectly satisfied, if these girls could be allowed after the age of twelve or twelve and a half to only keep half-time attendance at the school, and go home to work with their mothers about the house for the half-day?—I should not be in favour of that.

2740. I say where the school authority was satisfied the home was a good one?—No, I should oppose that very much.

2741. But why?—Because they are apt to get demoralised by neighbours. It is not only the home. It is impossible for mothers to keep them in the house.

2742. But supposing they are going home actually to work with the mothers. Supposing it is the mother's washing afternoon. Do you see any objection to allowing the girl to go home for the washing afternon? Or supposing it was the mother's baking afternoon—suppose she was one of those excellent mothers who bake their own bread—and she selected a particular afternoon in the week in which she could do it, would you object to the girl being allowed to go home under special licence to help her mother to bake the bread?—I should disapprove of it. I should not wish that. First of all, if I may go into my reasons, I should say it is exceedingly difficult to know the inner life of the homes of these people.

2743. You seemed to find it out very rapidly?—Not in towns. I stated that I did not speak for towns; I speak for the rural districts. Are you speaking of rural districts or towns?

2744. I am speaking of both?—In the rural districts it may be done—in really rural districts—because then you can ascertain the facts. But in school life in London, without what I call meddling with people, you cannot find it out. I think the less people are interfered with with at home, and the less they are muddled and meddled with the better. I am strongly of opinion that they ought to be left alone.

2745. You do not think it would be an inducement to a mother to keep a decent home if, having satisfied the school authority, she got her daughter's assistance during certain afternoons in the week?—No, I do not think so.

2746. Do you not think that there is some ground for supposing that this sense of duty as regards the home has been lost by girls being taken right away from the home and placed in an artificial atmosphere such as the school up to fourteen years of age?—I think their sense of duty has been weakened and lessened, not by being taken to school—because they always went to school—but by the forced education which renders them unfit to help when they get home. They sit in a state of collapsed idleness when they return from school. And again, as I say, the sense of duty is not put into them by the teachers.

2747. You have been rather severe on the teachers as regards the way in which they pile on subjects: do you think that any teacher under the London School Board or under any School Board——?—Any School Board; they are all the same.

2748. Do you think they put in subjects at their own sweet will? Are they not carrying out the instructions of the Board they are serving?—I was unable to find that out. Some told me one thing and some another.

2749. Those poor teachers are under a pretty severe despotism, are they not?—Yes.

2750. These Boards have inspectors prowling round seeing that what the Board wants is being carried out, and that what the Board has not called for is not occupying the children's time?—How do you mean?

2751. Are not the people to get at with regard to these overcrowded curricula, not the teachers, but the authorities ?—The local school authorities ?

2752. Yes ?—That I cannot ascertain. That is what I wanted to know.

2753. I think you will find that is so, that, for instance, this teacher whom you visited yesterday was only carrying out the behest of the London School Board, and as the classes you were inspecting are girls' classes, you will probably find that it is the particular wish of one or two lady members of the London School Board that that teacher was carrying out ?—Then I should say those ladies were unfit to be in the London School Board, because they are unpractical. But I may say that the head teacher yesterday who was teaching all this, who had these on her list, spoke more specially of the inspector, I understood, as encouraging this large variety of subjects.

2754. (*Mr. Struthers*). There are two inspectors: which was it ?—It was Mr. Helps.

2755. There are two sets of inspectors—the inspectors of the Department and of the London School Board ?—It was Mr. Helps, and you would know to which he belonged. I understood from her—of course I am naturally speaking under correction—that he very much encouraged this variety of subjects.

2756. (*Mr. Legge.*) Do you know Mrs. Steel ?—No; I do not.

2757. Have you read her letters to the *Saturday Review* on the training of girls, particularly in the rural districts ?—No, I have not.

2758. They coincide very much with your views ?—I have not read them.

2759. Though I think she would be willing to license girls out as I have suggested, in order to give them this practical domestic training in their own homes. I have two more questions to ask you: one is the question of providing food for children at schools. I quite understand that you are anxious to be on your guard against pauperising parents: you wish to make them pay for the food ?—Yes.

2760. But there, again, are you not in danger of going further and destroying the sense of duty about home matters if you actually get the meals provided at the schools ?—I quite agree with you that there is that risk.

2761. What home work has the mother to do with regard to her children if she has not to prepare even their meals ?—There is a great deal of risk in that, I agree. But, on the other hand, I do not quite see what meal the children who are attending the cookery classes can cook, serve, and wash up, unless we offer that on sale to the children. I do not quite see what alternative there is—what restaurant, for instance, we could supply. It seems to be difficult to manage.

2762. Are you quite satisfied that the cottages of the country generally are in a sanitary condition ?—Yes, quite.

2763. You do not think there is much in the outcry one does hear in the rural districts as to neighbouring cesspools and manure heaps ?—Oh, dear no.

2764. You don't think the old in the country suffer to an excessive degree from rheumatism ?—No.

2765. As a result of living in continual dampness ?—No, certainly not.

2766. (*Colonel Onslow.*) In your journeys through the country districts of England, in addition to this craze for excitement among the young women, did you notice any tendency to intemperance ?—No.

2767. None at all ?—No, I have not come across it.

2768. You have not been to any provincial town and studied life there much ?—No, never.

2769. But in London you have ?—No, I have never been in a poor person's house in London.

2770. You have studied the children in London a good deal ?—Yes, I have talked a great deal to the poor people.

2771. Have you been among the Jewish children ?—Yes.

2772. Have you noticed any marked difference between the Jewish children and the Gentile children ?—Yes, the Jewish children are incomparably better fed.

2773. What do you attribute that to ?—The women have a strong sense of religious duty, unquestionably. *Mrs. Close.*

2774. You cannot say that the knowledge of housewifery is less in the towns than in the country ?—No, I think the knowledge is about the same—equally bad, except remote from London.

2775. I mean the want of knowledge ?—I should say the want of knowledge is equally bad everywhere. Whatever they do know they do not care to practise; they do not take the trouble.

2776. You spoke of country people eating these tinned foods, and bread so much ?—Yes.

2777. You only mentioned milk, but you mean other tinned foods ?—Yes, lobster for instance.

2778. And salmon and that sort of thing ?—Yes, they are most pernicious.

2779. With regard to the bread, is that very highly refined ?—Yes.

2780. Made from highly-refined flour ?—Yes, extremely white.

2781. How would it be possible to carry out these cookery classes in the country districts where you have a thinly populated country and a small school. In many cases I have no doubt you have come across a small parish school where perhaps the whole of the population is only 200 or 300 ?—Yes.

2782. As a rule they are voluntary schools. Do you think the cookery could be taught there as well as in the larger board schools ?—I think it would be most difficult.

2783. And that is where it is required very much ?—Yes, but more than anything it is required in the sense that it is the woman's duty. She can do it in the country if she chooses.

2784. Could not that be instilled into them by these many voluntary agencies, for instance, the clergy, the district visitors and that sort of thing; could not they instil that into the young women ?—No.

2785. You find they will not accept it ?—They are too much bothered by the innumerable meddling people who bother them to death: that is their one complaint in Whitechapel and Notting Dale.

2786. Do you think it is the same in the country ?—The country is perfectly hopeless. You would not attempt to teach them by voluntary agencies. They would not attend.

2787. (*Mr. Struthers.*) But, after all, the sense of duty is intimately allied to religious feeling is it not ?—Yes, religious feeling of some sort. I have lived amongst Mahommedans, Jews, Roman Catholics, and members of the Greek Church—they have some sense of religion.

2788. This is allied with religious feeling ?—Yes.

2789. It does not matter what that particular form of religion may be ?—Not in the least.

2790. Would you not accept that it is particularly the business of the church, or the various churches, to recreate this sense of duty amongst English women much more than of the schools ?—No, I disagree with you. I think the beginning of everything is the school.

2791. I thought we agreed that duty was particularly allied with religious feeling ?—Yes.

2792. *Ex hypothesi*, religion is excluded from the Board school ?—Yes.

2793. And it is particularly the duty of the church to foster religious life and religious feeling in the country, and therefore the high sense of moral duty which appears to be disappearing ?—Yes.

2794. I suggest it is to the church as well as to the school that we should look for this reformation of English ideals ?—I agree with you, but I think distinctly that it is the teachers' business to instil the thought of duty into the children. They need not mention religion.

2795. Can we compromise it in this way, that the schools should do all they can, but also the church, to see that nothing is being neglected ?—Certainly; the churches in their own denominations.

2796. I listened with almost amazement to your account of the condition of the population in the rural

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districts in England, particularly to the somewhat lurid account of how even a well-to do farmer, as I understand it, puts up with inferior and unsatisfactorily cooked meat for his Sunday dinner ?—Yes.

2797. You mention a roast which you say was absolutely uneatable ?—Absolutely.

2798. Do I understand that you would have a similar roast every Sunday—absolutely uneatable ?—Yes, I generally found it so.

2799. Do you think the average English farmer would put up with that ?—They have to. The younger women will not cook.

2800. Is this vice of idleness a peculiarity of the women ?—Yes, I think so.

2801. The men are active ?—I distinctly think this—that when the men urge that their hours of work shall be limited to eight a day a woman naturally says "Why should not my day be limited to eight hours ?" And as it cannot be so limited she limits it all that she can.

2802. But the men do work and bring in their wages ?—Yes.

2803. They voluntarily acquiesce in the women's idleness ?—You cannot help it because when a man thinks that he is overworked when he lays more than 200 bricks a day the wife says "I do not see why I should wash or cook." It breeds idleness all round. The men are responsible for it a great deal.

2804. Apparently the men are to blame to some extent. I thought it was exclusively the fault of the women ?—No ; nobody asked me about the men. I am very glad you did.

2805. In the case of those children in Kent who are sent to school on cold boiled turnips and nothing else, do you suggest that is a common occurrence ?—Quite common. I do not speak only of turnips. I have seen bread soaked in water in the same way—not even in hot boiling water, but in tepid water, thrown on the crusts to make them soft enough to eat.

2806. Are the very poor starving ?—Dear me, no. The men are in receipt of 18s. and 21s. a week in Kent.

2807. Bread is an easy thing to get ?—Very.

2808. I should think that jellies of various sorts, syrups, and so on, are easy to get ?—Yes, but they are most unwholesome.

2809. They may be, but children would take them in preference to cold turnips ?—Oh, yes.

2810. What I cannot understand is why children do not insist on getting food, which may not be better for them, but at any rate is more palatable. I cannot imagine children putting up with cold boiled turnips day after day, when their parents are in receipt of good wages ?—I have no doubt that when they have pence to spare they may spend it upon luxuries, but I do not suppose children often have the pence handy to buy anything with.

2811. I think your experience is that the mode of life in rural districts improves the further you get away from London ?—Yes.

2812. And you find it better up in the North of England in Yorkshire and Northumberland and Lancashire ?—Yes.

2813. There are certain considerable towns up in Yorkshire and Lancashire ?—Yes.

2814. Which are also centres of excitement ?—Yes.

2815. Just as London is for the labouring population ?—Yes.

2816. Do not they influence the rural population in the same way ?—No, they do not—certainly not very much. I do not know why. You do not mind my adding that perhaps it is because they are not so demoralised by charity.

2817. I gather that you have some knowledge of Scotland ?—Yes, an intimate knowledge.

2818. You have visited farm houses in Scotland in the same way as in England ?—Yes, and stayed in them.

2819. Did you know them a long time ago ?—Yes, thirty-five years ago.

2820. Do you happen to know farm houses in the district of Ayrshire and Lanarkshire, the South-west of Scotland ?—I know round Inverness-shire and Sutherland, and some of the southern counties.

2821. How did you find those farm houses stood with regard to the provision of food and cooking ?—They were excellent thirty years ago ; the food was perfectly excellent.

2822. Do you find it so still ?—No, it is inferior, but not so bad. It has not gone back as England has.

2823. Because, personally, I know farm house life in the South-west of Scotland very intimately, and I should not say, from my own experience, that there was any obvious declination in the character of the food or the way it was cooked ?—No, I do not think there is very much. If you remember Scotland thirty-five years ago you will remember the delicious scones in every farm house, and barley bread.

2824. I do not think I know a single farm house where scones are not a staple article of food now ?—I am very glad.

2825. Do you know what Scotch broth is ?—Yes.

2826. You know that the cooking of the mid-day dinner—it was about eleven o'clock really— occupied the attention of the mistress of the house formerly with the assistance of one servant ?—Yes.

2827. The cooking of the broth and various other articles occupied the whole of the forenoon ?—Yes.

2828. Do you consider that a healthy state of things ?—Yes.

2829. It is not only good for dinner, and good for the health of the people but it provides occupation for the women ?—Yes, occupation and interest. Of course it is quite right.

2830. On this question of teaching cookery in schools I think I rather gathered you did favour a system by which, whatever other instruction in cookery a girl might get, she might spend a year or a year and a half before she left school very largely in preparing for and keeping a house ?—Yes.

2831. So that you would approve of such an arrangement as we have in Scotland of what we call supplementary courses. It applies to boys as well as girls ; there are several supplementary courses, but I am speaking of these for girls, called the household management course ; the arrangement is this, that when the girls are about the age of twelve and a half to thirteen and have reached a certain very moderate standard of general education—reading, writing and arithmetic—they may enter upon one of these supplementary courses, and this is a description of the work in the household management course :—"The special aim of this course should be to give the pupils an intelligent and well-grounded preparatory knowledge of the essential branches of housewifery. The course should comprise a series of carefully co-ordinated lessons in housekeeping, the care of rooms, furnishing, and clothing, marketing, and the keeping of household accounts, cookery, laundry-work and needle-work, especially mending, darning, and cutting out." I need not go through these but it is understood that practical work is to be taken right throughout, and that work of this nature may practically occupy three-quarters of the school time of the girls during that year or year and a half ?—As much as that ?

2832. Probably as much as that. They must give a certain time to reading, writing, and composition, which is an essential part, but we put no limit beyond that to the amount of time per week they may spend on domestic subjects ?—That is a very good thing.

2833. Is that an arrangement which you would approve? —Yes, I should.

2834. (*Colonel Fox.*) To what do you attribute the present absence amongst the lower classes of the sense of duty ?—I put it down distinctly to the absolutely secular training, without a mention of duty. Duty to the State and duty to humanity may be pumped into them but it is absolutely useless, it does not touch home life.

2835. How do you propose to rectify this ?—There is no drastic remedy possible, but I hold that the inspectors and teachers should be instructed to lead the children to think of duty, that when they are taught their domestic economy it should not be taught as a lesson but with a

view to preparation for home life and a good life. It is their duty to be good wives and mothers.

2836. Do you think that a teacher, especially a female teacher, one of these young ones, who gets up late in the morning herself and hurries off to school without having her own breakfast, is a suitable person to teach them a sense of duty?—I agree with you it is difficult.

2837. Because such teachers are very numerous?—Yes, they are. It is most difficult for them of course.

2838. They suffer very much in the same way as the people of whom you have been speaking, from the want of sense of duty?—Yes.

2839. I know that to be the fact?—But from those I have talked to—I have talked to some sixty or seventy lately—they all feel it is the duty of a woman, and I think the majority of them would be only too glad if they were encouraged to drill it into the girls.

2840. You spoke just now of children having too many subjects to learn. In what way does this affect them injuriously, do you think?—They are absolutely muddled.

2841. It prevents them concentrating their thoughts on any one subject properly?—Yes, precisely.

2842. You consider that prevents them from concentration of thought upon the subject they are dealing with, which is the great secret of education?—Yes.

2843. Another thing I should like to know is this—you spoke just now of typewriters, of girls being taught in the latter part of their training to be typewriters; that does not necessarily preclude them from their being later on mothers of children?—No.

2844. Why should they be exempted from cooking?—Because they have such a distinct objection to it that I think it would make them discontented, and probably worse wives and mothers in the long run: they are in a very small minority.

2845. I come across an enormous number of typewriters in the country?—So have I, but if you ask the girls, as I have asked them, in their playground, you will find there are very few, and the love of cooking is so strong in the girls that they will have no objection, or practically very few will have an objection, to being taught it.

2846. You state that in all continental nations the lower class are more thrifty, and understand the art of cooking better than we do in this country amongst the lower classes?—Yes.

2847. Do they spend as much on alcoholic drink as we do?—No, not a quarter as much.

2848. Then as regards the cause of the male population leaving the country for towns, you stated just now that it is partly owing to the want of comfort in their homes, and badly cooked food, and to love of excitement?—Yes.

2849. But do not you think that the main cause of their leaving the rural districts for the towns is that the education they receive more suits them to be clerks than to be labourers?—Yes. *Mrs. Close.*

2850. The education they receive is the great cause of their leaving the country for the town?—Yes, they are unsuited for labourers.

2851. And you consider that if the education was adapted to rural life more than to town life, that very likely might be a cause of keeping them in the country?—Yes; you are talking of boys now?

2852. I am talking of youths, young men who have hitherto been the labouring class in the country; they now will not put up with the dull life of the country; they like the excitement of music halls and all that sort of thing, and I suppose there is more amusement generally. Then you say also they have an uncomfortable home, but I should say that their homes in the country were perhaps just as comfortable as those in the towns. Do not you think that the main cause is that the education fits them better to be clerks than labourers?—Certainly, it unfits them for country life.

2853. And possibly by having some different form of education for country folk, that might be a means of making them remain in the country?—Certainly.

2854. (*Mr. Struthers.*) Do you think it is the case that the people who come from the country to the town come up in all cases to be clerks; do they not come up to be labourers at the docks, and labourers at the various railway stations, and other occupations of a labouring character?—I do not think so. I think they come up with a definite object. They do not come as ordinary riff-raff dock labourers; they come up with a definite purpose.

2855. (*Colonel Onslow.*) They want to go one better than their parents?—Yes.

8856. They go into shops and so on?—Yes.

2857. (*Mr. Struthers.*) And there is a very little supply of manual labour in large towns from the country?—Yes.

2858. (*Chairman.*) Do you think anything could be done to encourage people in rural England to keep goats, which seem to me to add very much to the comfort of the peasant abroad, especially in France?—It is impracticable in England; there is not waste land enough.

2859. There is plenty of waste land in England. The goat is very hardy and picks up an existence?—Yes. It is more difficult, but it might be done.

2860. (*Colonel Fox.*) In your experience of travelling through the largest part of England have you ever found in any of these cottages people who bake their own bread?—Never once.

2861. Not even in Yorkshire?—In Yorkshire they do not bake much household bread but oatcake.

2862. (*Mr. Struthers.*) "Flat brod"?—Yes.

Mr. J. B. Atkins, called; and Examined.

2863. (*Chairman.*) You are the London editor of the *Manchester Guardian*?—Yes.

2864. And you have been editing a series of articles upon this subject?—Yes, entitled "National Physical Training." It began with the notion of discussing the best form of physical education in schools, that is to say exercises, games and so on; and then the subject developed under discussion and went into the whole question of food, infant mortality, the better care of children and so forth.

2865. Did you take this question up as a journalist, or as an independent investigator in the first instance?—I took it up as a journalist first, for the purpose of writing about it in a paper, but the fact cuts the other way, too; I took it up because I was interested in it. It was my own idea; I was not asked to do it.

2866. And you have been able to collect the opinion of a great variety of representative persons?—I think so.

2867. As to the general question of the existence of deterioration, and by that I mean of course progressive deterioration, is there any evidence of that in your opinion?—The evidence does not go in my opinion over a large enough field, and has not been kept regularly enough for a sufficient period. *Mr. Atkins.*

2868. It has not been systematic enough?—No. One cannot prove deterioration. I started with the belief that one could prove it, and began writing on those premises, but I have had since to abandon that position.

2869. Your testimony to there being no evidence is all the stronger?—I am inclined to believe there is deterioration in certain cases, but I have quite given up the hope of proving it.

2870. And still less of proving any general deterioration?—Yes. I should like to give you two diametrically opposite statements which I think are good and able statements from the different points of view. May I first take that of the Rev. W. G. Edwards Rees, who was the Chairman of the Anthropometric Committee of the late Salford School Board?

2871. Is he a clergyman of the Church of England?—Yes. I will not read the whole of the article, but I have extracted from the article important figures. He says his first point is that up to the age of eight, children in the

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meaner Salford Schools are scarcely inferior to those in the better quarters. He deduces these results from the measurements of the Anthropometric Committee. Then he goes on to say that after the age of eight, a constantly-growing disparity is observable between the scholars in the squalid surroundings and those in the better quarters. For example, he finds that at the age of thirteen a scholar in a school in the slums is four inches shorter and 16 lbs. lighter than his fellow in a good working class neighbourhood. The improvement in physique, he finds, tends to vary directly as the distance from the centre of the town. Even the most favoured boy of the good Salford neighbourhood is slightly shorter and some pounds lighter than the British Association's normal boy of the working class at the same age; he is three quarters of an inch shorter and 10½ lbs. lighter than the average schoolboy in Boston, U.S.A., and four inches shorter and 20¼ lbs. lighter than his coeval at Rugby school—an average public school boy. In Halifax, which he takes for the purpose of comparison, he finds that the measurements are scarcely better. In Rochdale they are even worse. It would take three Rochdale school boys, he says, according to the measurements taken by Archdeacon Wilson, of Rochdale, to equal the weight of two Rugby boys. In Edinburgh at thirteen years of age the average boy in the poor parts measures 55·88 inches in height and weighs 75·61 lbs. Then he goes on to the Manchester recruit in 1899 and points out that out of 12,000 would-be recruits 8,000 were rejected as being virtually invalids and only 1,200 were accepted as being absolutely fit in all respects. And that at a time when the army standard was 5ft. 2in. in height and 33½ in. chest measurement, the lowest since Waterloo, when the drain of the French wars had made the standard terribly low. Next he makes this point, which I think is a very interesting admission, from a man who firmly believes that there is a grave deterioration. He says that he does not think that the physical standard of the slum dweller is necessarily lower than before. If you take the average measurement of the slum, he says, it is not worse than in any given year before in the same slum. But the point is that a greater proportion of persons is now falling to this level owing, as he says, to the capacious maw of the towns, which swallow up so much of the rustic population. That, he says, is really where the degeneration lies. Then if you would care to have them he gives a few figures of the measurement of the British Army in recent years and compares them with foreign measurements. In 1845, he says, the typical private soldier—that is to say 47 per cent. of those who were measured—was between 5 ft. 7 and 5ft. 8 in. in height.

2872. (*Colonel Fox.*) The British soldier?—Yes. Only 10 per cent. were between 5 ft. 6 in. and 5 ft. 7 in. That is in 1845, but when we come to 1887 the typical private, that is to say 52 per cent., is between 5 ft. 6 in. and 5 ft. 7 in.; only 16 per cent. reached the higher standard. In 1873, 412 out of every 1,000 men were under 5 ft. 7 in. in height and 608 out of every 1,000 had a chest girth of less than 37 inches. Then in 1889, 481 men out of every 1,000 were less than 5 ft. 7in. in height and 645 had a smaller chest measurement than 37 inches. In 1889, 2,351 out of every 10,000 recruits were under 130 lbs. in weight, and ten years later this proportion increased from 2,351 to 2,962. Those are the measurements he takes purely for the British Army.

2873. (*Chairman.*) Unless we know what the variations in the standard have been in the years mentioned they are not very valuable for our purpose?—From your point of view I must admit that.

2874. (*Colonel Onslow.*) The measurement of recruits is taken as they pass in, I suppose?—Yes. Some of these figures, I should like to say, are absolute measurements, and they have a value from that point of view, quite apart from variations in standard.

2875. (*Chairman.*) That I understand?—For instance, the weight seems to have increased. That is one reason why I say deterioration cannot be proved. Mr. Edwards-Rees is a very able man and has kept these figures carefully. He has not taken sufficiently into account, however, the constantly varying standards, though of course he is not ignorant of them.

2876. This is what Dr. Cunningham, who was here on Monday, said: "Perhaps the most unreliable evidence is that which is obtained from the recruiting statistics, because the class from which recruits are derived varies from time to time with the condition of the labour market. When trade is good and employment is plentiful, it is only from the lowest stratum of the people that the Army receives its supply of men; when, on the other hand, trade is bad, a better class of recruit is available. Consequently the records of the recruiting Department of the Army do not deal with a homogeneous sample of the people taken from one distinct class." You would agree with that, I suppose?—Yes.

2877. That is another difficult point?—Yes.

2878. (*Colonel Fox.*) When there is a scarcity of recruits they lower the standard?—Yes.

2879. And then you get an influx of smaller men?—Yes. Mr. Edwards-Rees has some figures here which I could give to you in a few minutes, comparative figures. He says it is not easy to get the German figures, but these he has been given for the year 1889. There is a striking parity, he remarks, between the German conscript and the average English recruit. In 1889 the English recruit averaged 5ft. 5·6in. in height and his chest measurement was 33·6 inches, and he weighed 124·5 lbs.; the German conscript was 5ft. 5·75in. in height, 33¾ inches round the chest, and 138lbs. in weight. The German superiority in weight, therefore, he says is remarkable.

2880. There is one thing about that; those are representative men of the country. They represent the whole of the country, but our men come from the lower stratum altogether?—Yes. I was going on to say that. I think that does invalidate the point. He says the German superiority in weight is remarkable, but the German conscript is, on an average, ten months older. So far, he says there is little in it between the two, but then we must consider the percentage.

2881. He is two years older; the German conscript is twenty years of age and our recruits are only eighteen?—Was that so in the year 1889?

2882. (*Mr. Legge.*) Not the average. The average is not eighteen. You take men older than eighteen.

2883. (*Colonel Fox.*) A vast number come in at eighteen, you see?—Yes. Then he goes on to the percentage of rejections, a comparison between Germany and Great Britain. He says in Germany the percentage fell steadily from 24·7 in 1878 to 16·3 in 1889. In about the same interval ours rose from 52 per cent. to 62 per cent.

2884. (*Chairman.*) That 62 per cent., you must remember, is largely based upon the conjectural estimate that something like 23 per cent. are rejected by the recruiters and never come to the medical officer at all?—Yes.

2885. Even assuming that 60 per cent. are rejected, a medical witness of very considerable competence was here the other day who said this: "Having regard to the conditions under which the British Army is recruited, the fact that 40 per cent. of those who present themselves to the recruiting agencies become good soldiers is more to the credit of the British people than the fact that under the German system of conscription only 16 per cent. of those liable for military service are rejected for physical causes"?—Yes.

2886. If that is so, it is clear that the value of these comparisons is very slight?—Yes, but you will understand my point. I was not putting this statement forward as a thing I could accept myself. I have come to the conclusion that I could not accept his proof. But it seems to me, that of all the evidence I had, this was the ablest statement from those who believe in deterioration, and I think from that point of view it is valuable. Then he goes on to the French estimate. The statistics up to 1890 tell substantially the same tale. The percentage of rejections has fallen from 9¼ per cent. in 1831 to 5 per cent., where it now stands. The increase in the average height of French soldiers has been set down at about ¼th of an inch in a period of twenty years, noticed continually between 1830 and 1890. Since then there has been a slight relapse in the French measurements, and alcoholism is a suggested cause.

2887. (*Mr. Struthers.*) Have you the absolute figures of height and weight in any given year, as in the case of the German army?—No. I have given you the only figures he supplied. He has not given them so definitely as in the case of the Germans.

2888. Because these are very interesting in the case of the German army for other purposes?—As for the Swedish army, he says that between 1841 and 1850 the rejections were 36·4 per cent.; this proportion fell in successive decades to 35·7 per cent., then to 27 per cent., then to 23 per cent., and lastly, to 20 per cent.

2889. (*Chairman.*) Do you know on what system the Swedish army is recruited?—It is a conscript army.

2890. (*Colonel Fox.*) They all have to serve?—Yes. Then he asks one to notice that this improvement is coincident with a remarkable decrease in the consumption of alcohol in Sweden under temperance laws. The Dutch army he takes next; he says the proportion of men under 5 ft. 1 in. fell from 13 per cent. in 1863 to 3 per cent. in 1899. Men between 5 ft. 1 in. and 5 ft. 3 in. fell in the same period from 15 per cent. to 8 per cent., while men of more than 5ft. 7 in. rose from 23 per cent to 37 per cent. That is the end of the figures; but he admits frankly the improvement in certain classes, and his whole point is, that there is a growing disparity between the favoured class and the highly unfavoured class, a widening of the gulf, as he says, between the giants and the pigmies, and he adds that he thinks that the sanitary statistics on which some people rely simply obscure the truth. Of course he admits that the death-rate is lower, and the expectation of life has increased. Then he searches for the cause of deterioration, and takes a most interesting view which I have never got anybody else to admit so fully; he says that drink is not the *causa causans*; it is not the specific cause, because he thinks bigger men used to be a great deal more drunk than now, and he says that some people on the Continent are actually improving in spite of a greater consumption of drink. Then he says overcrowding is not the whole cause, as the whole of Europe is overcrowded except Denmark, and the physical measurements are increasing in nearly all those countries. Then he says want of food is not the whole explanation. He says it is more abundant and distinctly better than it was sixty years ago. The thing he attributes all the evil to is the want of fresh air and the want of exercise in the towns. He says that the men of Kerry, for instance, who are notoriously badly fed, are the largest in Ireland. He takes the case of the Bedouins of the desert and says they are far finer men than the men who have congregated where food is better and cheaper in the Nile Valley.

2891. (*Mr. Struthers.*) He does not suggest that race may have something to do with a difference of that sort?—He does not suggest that. He assumes that the Bedouins in both cases are the same race.

2892. In the case of the men of Kerry it would not be a matter simply of fresh air but of race—the stock they have come from?—You mean they may be of a different tribe, as it were, preserved within the Irish race?

2893. He says the men of Kerry are tall compared with the slum population, and therefore the inference is that it is not due to the want of food, because the Kerry men are notoriously under-fed, but it may be it is due to the Kerry men being of a different stock, a stock which is naturally tall?—Oh, yes, quite so; but his point is that in spite of being notoriously under-fed they manage to remain fine figures of men.

2894. (*Chairman.*) Want of food does not depress the standard?—Yes. His point is that far too much has been made of the point of food. I have a great deal of evidence on the other side, but I thought I ought to state Mr. Rees's view, which is that that is not *per se* a specific cause.

2895. They have a sanitary society in Salford, have they not?—Yes, and a most excellent society it is, I thought probably you would hear something of it, and so I have not made any notes.

2896. They are going to be represented here. You wish to give the evidence of Dr. Newsholme, the medical officer of health of Brighton?—Yes; I should like to take his statement next, because it comes in direct contrast to that of Mr. Edwards-Rees. He is the author of a book which you may know, "Elements of Vital Statistics." It would only take a few minutes if I might read the essential part. I think it would make it clearer:—

"Before contributing my views on the importance of improved physical training of the juvenile part of the population, it appears to be necessary to consider the validity of one of the main arguments used in urging the necessity for this. We are informed by the Inspector General of Recruiting (Annual Report for the year 1902, p. 30), that 'the one subject which causes anxiety in the future'"—you will note the phrase—"'is the gradual deterioration of the physique of the working classes, from whom the bulk of the recruits must always be drawn." Then he mentions the report of the Scottish Commission on Physical Training and quotes their remark that "there exists in Scotland an undeniable degeneration of individuals of the classes where food and environment are defective." He goes on to explain his own position:—"After reading a paper at the Jubilee meeting of the Manchester and Salford Sanitary Association, April 24th, 1902, I was asked to sign a petition to the Board of Education in favour of improved physical education in schools, but was obliged to decline because by doing so I should have been committed to assertions on the question of race degeneration based on figures as to recruits which had failed to convince my judgment. It now becomes my duty, therefore, to state my reasons for the opinions that the factors at work in the community when duly appraised do not support the pessimistic view that the physique of the mass of our population has degenerated. It will be convenient to deal first with the figures as to recruits. The number of recent rejections of recruits is stated to have been exceptionally high, and particularly so in our great manufacturing centres. To argue from this fact that the average physical status has declined is most fallacious. To begin with, there has not been in the last half-century a period at which so many recruits have been required in so short a time as since the commencement of the Boer War. To supply in a given time 10,000 soldiers, with, say, 5 per cent. of rejections for physical defects, may indicate no worse a state of matters among the masses than the rejection of 10 or even 20 per cent. when 100,000 are required. Allowance must be made for the fact that in the two sets of circumstances the recruits are not necessarily drawn from the same social circles, and these circles are depleted more in one instance than in the other. The same question arose some years ago. Sir Thomas Crawford, a former head of the medical department of the army, in commenting on the fact that the rejection of recruits had increased from 37·2 per 100 applicants in 1860-64 to 41·6 per 100 in 1882-86, expressed the opinion that the increase in the rejections could be explained in one way only—'The masses from whom the army recruits are chiefly taken are of an inferior physique to what they were twenty-five years ago.' Further inquiries, however, showed that a large proportion, and probably the whole of the excess of rejections at the later period, was due to improvements in the returns, to more rigid enforcement of standards of height, girth, etc., and to other similar causes." Then he takes the case of the Royal Commission in Scotland. He says: "We come next to such figures as are contained in the Report of the Royal Commission mentioned above, and in the earlier Reports of the Anthropometrical Committee, etc. The figures of height and weight of school-children in Edinburgh and Aberdeen, for instance, show marked inferiority in the Edinburgh children; and the earlier statistics show similar differences in different social strata. Do these figures, however, justify the remark in the Report of the Royal Commission (p. 25) that 'there exists in Scotland an undeniable degeneration of individuals of the classes where food and environment are defective'? Degeneration from what? For our present purposes this statement is beside the mark. If it implies that the Edinburgh children have degenerated as compared with a past generation of Edinburgh children of the same social stratum, the statement is unsubstantiated, and this is the point with which we are concerned. To say that the poor are punier, smaller-chested, and thinner than the well-to-do is to state a sad commonplace, but it does not help us in determining whether there has been any degeneration." After mentioning the familiar case of skeletons in museums, and so on, he passes on to the urban death-rate and the expectations of life as regards their bearing on the question, whether there is physical deterioration or not. "In the last half-century, however, the urban death-rate has steadily approximated more nearly to that of rural districts. Although a higher proportion of the entire population of the country is now subjected to urban conditions of life than before, towns now have a death-rate which is lower than that of rural districts fifty years ago. The urban death-rate has declined between five and six per 1,000, while

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Mr. Atkins. the rural death-rate has only declined three to four per 1,000 of population. Thus town populations now live under conditions producing lower death-rates than those from which rural districts suffered fifty years ago. Unless it can be shown—and I know of no evidence in this direction—that the amount of non-fatal sickness is much greater now than formerly, it follows that our national statistics lend no support to the idea that our urban populations are degenerating, though they do not contradict the view that urban are still less robust than rural populations. The more accurate figures of our national life tables point to the same conclusion. Thus, while in 1851-60 the expectation of life (*i.e.* mean after lifetime) at five years of age for boys was 50·2 years; in 1881-90 it had increased to 52·7; while for girls at the same age it had increased from 50·9 to 54·7 years; and this improvement in the prospects of future life was not caused merely by a large saving of children's lives, but by an increased number of survivors right into advanced life." The chief admission which Dr. Newsholme makes is that one circumstance in the recent death-rates remains unsatisfactory—this is the infantile mortality. "It remains high, and is much higher in towns than in country districts. The artificial feeding of infants and the industrial employment of young mothers must have a detrimental effect in this direction." He goes on to some passages—which I need not read—about the different conditions of life which tend, without exact proof, to bear out his contention. Since food is cheaper, housing cheaper, and so on, he says they must have had their effect. The last point which I think I need trouble you with is how to get children fed better. "A better way, in most instances, though involving much detailed attention, would be the following. The attendance officers are familiar with the home conditions of school children, and by their means it would be practicable to bring strong pressure to bear on parents who were spending a large share of their wages in drink to compel them to do their duty to their children. If the reports of these officers were supplemented by weekly weighings at school of children who are suspected to be underfed, and if the failure, in the absence of disease, to gain weight were regarded as confirmatory evidence of neglect, much could be done to help half-fed children, without pandering to the father's dissipation by feeding his children for him. Such work would involve trouble; but does it not deserve trouble, and would not both parents and children benefit by this increased supervision of neglected children?"

2897. (*Dr. Tatham.*) Is that reprinted from the report of the Manchester and Salford Sanitary Association?—No, this was an article in the *Manchester Guardian* which Dr. Newsholme wrote at my request. It has not appeared anywhere else, but it will shortly appear. These are the proofs of a book that is shortly to be published. I am editing it myself and there are a variety of contributors.

2898. It will be possible for us to get copies?—Yes. It is called "National Physical Training." I will send a copy to the Committee.

2899. (*Chairman.*) What you have been saying points to the value of medical inspection of schools?—That is the most definite recommendation made by Dr. Newsholme.

2900. Are you familiar with the system they have in connection with the High School for Girls Company?—No.

2901. I am told that "every entrant is examined in the presence of her mother by a lady doctor, and if a cause of weakness is discovered the mother is recommended to consult a doctor. The cause of weakness, whether spinal, pulmonary, cardiac or otherwise, is carefully noted, and throughout the whole course of the child's school career her treatment is governed by conditions special to her physical disabilities." Do you think that any system of that sort would be advisable in connection with elementary schools?—Yes, I do. I have not talked to anybody who has a knowledge of schools who really thought that the system of medical inspection is adequate.

2902. There is no system at the present time?—No, a little is done here and there.

2903. Sporadically and intermittently, that is all?—Yes. I have met nobody who thought it was adequate, and I believe that is a great deal the secret of our difficulties in dealing with bad physique. A definite regularised medical inspection means, a constant check kept on the children, and that only, leads on to the next step, which is the bringing to book of parents for neglect.

2904. You have considered the subject of physical education in schools and its bearing on deterioration?—Yes. I have made a little note here, though, which I should like to mention at once. In writing to a great number of people on this subject, some of whom I corresponded with without inducing them to write, I have discovered that many of them employ this as a test question—"Is there physical deterioration or not?" and having satisfied themselves that we could not be said to be degenerating they then thought, or appeared to think, that their obligation to do anything in the matter, or to encourage other people to do anything, was gone. If I might say so, without any irrelevance or impertinence, I feel sure that a great amount of evidence will be put before your Committee—and I should think very likely has been put—showing how terribly bad the state of things is in some cases. The request for people to help in the matter ought not to be dependent upon the acceptance of this quite unprovable proposition that there is deterioration.

2905. No; bad conditions have nothing to do with whether they are worse or better than they were twenty or thirty years ago?—No, I think they are bad enough. As regards the effect of physical education in schools on deterioration, several of the articles which I have in this book deal with that question, and especially of the Model Course. I think Colonel Fox knows all about that. I do not know whether you care to have opinions upon it.

2906. It is not worth while, because I understand a new scheme is going to be produced in a very short time?—I have enough evidence to show the vast importance of a good system of physical education in schools, and I should like to make this one point. I think it would be valuable since it is quite clear that a great many people resent anything which can be said to be military in form to conciliate those people. I think they are mistaken, but it is quite clear that there are a great many who take that view.

2907. Is that opinion a strong one?—Yes, I have other articles on that point, and it apparently commands a good deal of feeling in this country.

2908. (*Colonel Fox.*) There is a strong feeling against it?—My own view is that therefore it is important in order to bring in the sympathy of these people, to have what might be called a neutral system, not definitely military either in profession or in form.

2909. (*Mr. Struthers.*) I think you will be glad to hear that there is no prospect of our having a scheme which can be properly described as military?—Yes: I am glad to hear that. Although the people who disagree and protest against it may be thought fanatics, it is useful to have fanatics on one's side; and I think it is clearly a case on which the whole country might be agreed.

2910. (*Mr. Legge.*) I should like to ask you one question on that particular point. You are aware that many of the improvements introduced into the Aldershot system by Colonel Fox and others, are based on what they have found going on in Sweden?—Yes, the Swedish system.

2911. And that was primarily a medical and a school system?—Yes.

2912. And therefore it is rather hard when we are introducing in the schools in England practices and principles, which are based on the experience of medical authorities and school authorities in Sweden, to call that introducing military drill?—Those who have objected—Dr. Macnamara and Mr. Yoxall and others who are connected with the schools—all approve of the Swedish system.

2913. But a number of the Swedish exercises they have condemned because they are carried out at Aldershot; they are held out to be a military drill and condemned because, though they are based on Swedish exercises, they happen to be carried out in the training of young soldiers?—Yes.

2914. Should not people be very much on their guard against that sort of thing?—No doubt there are extremists whom one could never hope to conciliate.

2915. Do you think that one should try to conciliate fanatics of that sort? A person capable of condemning the Swedish exercise because it is used in a military

gymnasium you would not wish to make a concession to?—I quite agree. They must have come to a conclusion of that sort absolutely without thinking. But I mean in a general sense it is possible by a middle course—you say that has been done—to command sympathy which it would be valuable to have.

2916. (*Mr. Struthers.*) I do not think there is any fear of that objection being raised against the scheme?—I am glad of that.

2917. (*Colonel Fox.*) I think you will find that Dr. Macnamara and Mr. Yoxall will be perfectly contented?—That is as far as I should wish to go, if they are satisfied. I do not accept their view myself, but I believe it is important to have an agreement on such an important question for the nation. I think whatever we call the new system it will be of the same service to the army in the long run.

2918. (*Chairman.*) We will leave the subject then of physical exercises, as we understand this new scheme is likely to be satisfactory?—There is a little point which comes next with regard to the Manchester Swimming Bath that is rather interesting. The Manchester Corporation have made the swimming baths free for the children, and in a description of it here, Mr. Broadfield, who is a magistrate in Manchester and also a member of the late School Board, says: "We ought not to overlook the benefits received by school children from the free use of the public baths provided by the corporation. The Baths Committee admit scholars—both boys and girls—over seven years of age to the baths without payment if they are in charge of a teacher or master. There are enthusiasts who maintain that no primary school will be adequately equipped which has not a swimming bath attached to it, but Manchester at any rate is well supplied with public baths, and the swimming galas which are held at almost every bath each year show how excellent an effect constant use of the baths has had upon our boys and girls."

2919. (*Mr. Struthers.*) The use of swimming baths in that way is not peculiar to Manchester. Swimming bath competitions between the schools are extremely common; a very large proportion of board school children are regularly put through their instruction in swimming?—Yes.

2920. Then if you make inquiries in other towns such as Edinburgh and Perth in Scotland, where I know it is so, to my own knowledge you find the same thing?—Yes.

2921. So that I rather suggest when a case like this is being quoted as something exceptional, to be followed by other towns, it may happen that it is a fairly widespread practice?—Yes.

2922. (*Chairman.*) I do not understand you to claim that it is confined to Manchester?—No. I said Manchester does it; I did not know whether others did it or not. I think the chief thing which Manchester sets a most excellent example in—a thing which so far as I know has only been followed in two cases—is their Ladies Public Health Committee. I shall come to that in a moment.

2923. Have you anything to say about the bad ventilation of schools as one cause of the deterioration of the health of the children?—I have spoken to Dr. Kerr on that subject.

2924. We have had him here?—I have also read all that Sir John Gorst said on the subject. They are two persons who have great opportunities of judging and they agree that the ventilation in schools is not good at all.

2925. With regard to the condition of the young, you mention here a variety of causes which depress children early in life, below the normal standard; they include the neglect of the duties of maternity?—Yes. I have before me an article by Mr. John Burns. He has described the bad conditions of life and he says: "Is it a matter for wonder that the infantile mortality in certain manufacturing districts not a thousand miles from Lancashire is sometimes 200 per thousand? At Merthyr Tydvil the death rate was 221 per thousand. Then there was an investigation made recently in Liverpool by its medical officer, and it was disclosed that in 1,082 families, 4,574 children were born, of whom 2,229 died. In 12 families 117 were born" that is in Liverpool—"and 98 of the 117 died."

2926. That was in certain areas?—Yes, Mr. Burns has taken bad cases no doubt. Then he gives some figures which show that 55 per cent. of the working class children died before five years of age as against only 18 per cent. in the upper classes. *Mr. Atkins.*

2927. Has he given any opinion as to the cause?—Yes, as one would expect, he goes a good deal into the question of factory law and drink.

2928. Does he speak of the employment of mothers shortly after children are born?—Yes.

2929. And before they are born perhaps?—Yes. He also mentions tinned foods; he says they are becoming increasingly prevalent among the working classes in order to save the trouble of cooking.

2930. Does he touch upon the difficulty of getting wholesome milk?—Yes, he does touch upon that.

2931. That is felt in a great many towns?—Yes. It led me to go into the question of the municipal supply of milk.

2932. They have that in Liverpool, I understand;—They have it in Liverpool and St. Helens. I have a list of the places.

2933. They have it in Battersea also?—Yes. I have a description of the whole system there.

2934. Will you mention the list first of all and then I will ask you about the Battersea system because I want to get evidence about that?—I have a list among my papers.

2935. Can you tell us how this system of the municipal supply of milk has worked in Battersea?—Yes. You know the district auditor surcharged the Borough Council?

2936. Yes?—It was only a nominal surcharge, I believe, to call their attention to the fact that their action was possibly *ultra vires*.

2937. But it has been done in Liverpool and St. Helens?—Yes. I have now found my list. The system has been tried in Liverpool, St. Helens, Ashton-under-Lyne, Dukinfield and Battersea. Those are the only places I know of, but I should not like to say they are all.

2938. Does it have an immediately good effect upon the health of the children so far as you know?—Here is the statement of a London Medical Officer of Health. He said that he believed that humanised milk had saved hundreds of lives and reduced, in his opinion, the infant death rate by 50 to 100 in a thousand. I may just read the description of the Battersea scheme: "When the Battersea Borough Council opened a depôt for the supply of infants' milk last June, they had about thirty babies on their list during the first month; now they feed 300 babies daily, and expect to reach 400 before twelve months are out, a number that will make the work self-supporting." When this was written it was not self-supporting.

2939. The aim is to make it self-supporting?—Yes. "Amazing as it sounds, this is at present the only depôt in London, and the numbers give some idea of the need that exists in crowded and poor districts for such organised help. The work begins at 8 a.m., and the milk is ready for distribution by 11 a.m., at which hour begins a steady stream of children bringing empty bottles for full ones. Though we have broadly divided the milk supply into two classes—the humanised and the sterilised—there are, in fact, two preparations of the former; that for infants under three months old having the larger proportions of lactine and cream added to it before it is put into the steriliser, the other, for infants from three to six months slightly less humanised; that which is little more than sterilised is for the babies from six months upwards. This last preparation can also be supplied for invalids and old people, but the babies come first. The differential treatment, however, is not only in the preparation. The day's allowance is sent out in wire baskets, framed to hold nine, eight, seven or six bottles. For children up to six months the weekly charge for this allowance is 1s. 6d., but the number of bottles varies according to the age of the child, as each bottle contains enough for one meal, and therefore the smaller the child the less in each bottle and the greater the number of bottles. Infants under two months receive nine bottles, as they require feeding less frequently. One of the strictest

Mr Atkins. rules of the depôt is that a fresh bottle must be opened for each meal; if children are sent for the milk they are specially warned not to tamper with the stoppers; and every mother is warned that a bottle must not be opened until the infant is ready to be fed. Thus every safeguard against contamination is at least attempted. For babies from six to eight months the weekly charge is 1s. 9d., and for older children 2s. per week, or 4d. per day. What the mothers gain is, in the broadest way, that they have prepared milk for their children which they could not afford to buy from a dairy, the gain in a more particular way may be judged by an instance—for 1s. 6d. per week, or roughly 2½d. per day, the child who is allowed seven bottles gets about a quart of humanised milk, so that there is a positive saving on what would have to be paid at a dairy for milk of less value to the child." The writer of this article is able to mention the willingness which is shown all round to co-operate with the efforts of the Council. He says, "This is most remarkably seen in the mothers' sense of responsibility to one another should a case of even mild infection occur in a family. Not only are they careful at once to notify the medical officer of health in a recognisable case, but the manageress of the depot is anxiously asked if the baby's supply may be continued, supposing, for instance, that an elder child has whooping cough. So little is there any attempt to suppress facts that mothers will ask the manageress for advice when the baby 'is not very well.' It is rare that the baskets are sent back with a bottle broken or a stopper missing, and as a rule the bottles are well rinsed before being returned though that is a mere preliminary to the thorough cleaning and disinfecting which goes on at the depot all day. For the convenience of the large district served the daily supplies are also distributed at the Town Hall, the public library and its branch, and the baths." That is, I think, the whole statement. I imagine the number of children up to two months dealt with in this way cannot be large. Most of the mothers would suckle their children.

2940. (*Mr. Struthers.*) Where does this milk come from?—I do not know. I am afraid it is not mentioned.

2941. (*Chairman.*) I suppose they guarantee its purity?—Yes.

2942. (*Mr. Struthers.*) It is not got from these horrible dairies which we were told about the other day?—No.

2943. (*Colonel Fox.*) In Denmark the State runs these things?—Yes. I am sorry to see that this institution was surcharged, and I hope it will support itself.

2944. (*Chairman.*) With regard to infant mortality have you ever considered whether the power the parent has of infant insurance is prejudicial to the life of the young?—I have never doubted that.

2945. Do you think it would be a good thing to prohibit infant insurance up to a certain age?—That is rather drastic, perhaps, but I should like to think the methods of insurance could be watched. It is so easy to overlay the children; that is such a common form of death.

2946. Do you think the municipality might insist in their housing regulations that wherever there was a child a proper cot should be provided?—Yes, I think it might be possible.

2947. You do not think it would be too drastic; I do not think it would.

2948. Nor too inquisitorial?—The parents might say there was not enough room, but that is a question of having sufficient cubic space. As the question of overlaying has been mentioned, may I say that a good deal of excellent advice has been offered on that and kindred subjects in the form of leaflets issued by municipalities. I do not know whether you have had anything on that subject.

2949. (*Colonel Onslow.*) At Manchester?—Yes, and in other cases at Acton, Brentford, and several other places It is done at Woolwich also.

2950. (*Chairman.*) You think the whole question of the treatment of the young, including their sleeping accommodation and their food might be properly treated by leaflets issued by the local authorities?—Yes, I do think that would be a help. I believe that a great many mothers, quite apart from the insurance question, kill their children by ignorance, and are willing to be taught.

2951. And that would be the best means of teaching them?—Yes, it would be a good means. It was brought to my attention by this newspaper cutting:—"The West Middlesex coroner, Dr. Gordon Hogg, told a jury at Willesden yesterday, in a case of overlaying, that in Acton and Brentford there had been no case of infant suffocation for a year. This he said was the result of a leaflet issued by the two district councils, on the advice of their medical officers pointing out the danger of having the infant in bed with the mother. The mischief, the coroner said, was not due to want of affection on the part of the mothers. It was rather the reverse. But many young women married who were unfit to take care of a kitten or a canary, and ignorance made them cuddle a crying child in bed. The registrar, he thought, should issue a leaflet on the care of infants with the vaccination certificate. The jury asked the coroner to induce the Willesden District Council to issue a leaflet similar to that issued in Acton and Brentford. The health department of the Stepney Borough Council has decided to issue a pamphlet for free distribution, giving advice to mothers on the bringing-up of infants. It has been prepared by Dr. D. L. Thomas, the medical officer for the borough, and deals with matters of cleanliness, clothing, and feeding of infants."

2952. Do you think the consumption of tea is a bad thing?—Yes, that is mentioned by Mr. C. E. B. Russell, who is to my mind the most efficient runner of boys' clubs that I ever came across. He speaks of tea and smoking as the two worst things amongst the boys. The tea question was quite new to me. What he says is: "Then there are the evils of tea-drinking and boy smoking. Three or four pints of tea-poison a day! It is a mixture which no one should drink, over-brewed and too strong."

2953. It has probably stood from morning to evening?—No doubt. It is the fashion to let it brew—to let it "draw" as they say. Mr. Russell says, "I have got some lads to cease drinking it, at least once a day, and to substitute cocoa, and to see as far as they can—and in the foundries it isn't always easy—that their cans of tea are not allowed to brew an excessive time. This tea-drinking might be moderated, or even converted into a harmless form of indulgence by wise teaching in the schools."

2954. As to smoking has he noted the full effects of it? We have had a good many impressions upon this, but we have not had information as to what the bad effects are?—There is the evidence of Colonel Leetham, the late Chief Inspector of recruiting in Manchester. "Colonel Leetham who made valuable records of his own observations, attributed the unfitness of candidates for the Army nearly as much to this local tea habit as to juvenile cigarette smoking. He found that the heavy tea-drinkers frequently had one form or other of varicocele, which of course unfitted them for long marches. Cigarette smoking robs the growing lad of his chance of adult stamina, and Colonel Leetham told me that perhaps a third of the 'rejects' from the army in Lancashire might be attributed to 'smokers heart.'"

2955. (*Mr. Struthers.*) Smoker's heart I understand from medical men who conduct insurance examinations is a purely temporary affection unless persisted in for a long time, that is to say a man going up for an examination and rejected for smoker's heart is put back for a certain time; he comes up and is examined in a month, and if he cares to drop off smoking or moderate it during that time he passes all right?—Yes.

2956. That rather points to smoker's heart being a temporary affection which does not injure a man permanently?—Yes. I suppose the point here was that the boys had smoker's heart at the time of the examination, and very likely they did not give up excessive smoking, and so continued to have it. Then Mr. Russell speaks as a manager of the boys' Clubs and of athletic teams. He says "We find ourselves that it is non-smokers as a rule who get into our junior football teams. The boy smokers have not the stamina for the second half."

2957. (*Dr. Tatham.*) In your own experience at Cambridge you will remember that it was the practice among men training for the river, if the training was supposed to be of a serious character, to give up smoking absolutely?—Certainly, always.

2958. For that reason, that it was known to depress men and render them unfit for severe exercise?—Yes, it

was the wind it affected. That was the case invariably for a month before any race; and in the case of the Oxford and Cambridge boat race it was for six weeks.

2959. (*Chairman.*) We may presume that the question of child labour has been dealt with by the Act of last session?—Yes, to some extent.

2960. Then early marriages, of course they are diminishing in numbers; I do not know that we need trouble you with that?—I may say Canon Hicks, of Manchester, has found that a very good deterrent are the clubs for girls; there are not nearly enough of them.

2961. Yes, we understand the clubs for girls and boys ought to be very much more numerous. Then we have touched on the humanised milk. Is this dietetic hospital in Hampstead?—Yes. The Duchess of Teck is the president I believe, it is the only thing so far as I know of its kind. It takes young children away from the care of their parents—children who are practically being killed with bad feeding or wrong forms of feeding. The staff take them there, and practically they do not give medicine at all. They say they expect to spend not more than £5 a year in the hospital on medicine. It is simply a question of getting the constituents of the food in the right proportion. The whole system is based on the investigations of Dr. Rotch, of Harvard, and also of Dr. Ashby of the Childrens' Hospital at Pendlebury.

2962. What are the conditions of entry? Is it a charitable institution or do they make the parents pay?—I do not think I have any information on that point.

2963. But the effect is wonderful is it not?—When I got this article the hospital had only just been opened—it has only been opened for five months now. I have here a form which has to be filled up from which you will see the sort of questions the staff wish to have answered. (*A document was handed to the Chairman*). It simply deals with food, and the composition of the food, the proportion of milk, lime, water, lactine, and so on.

2964. (*Colonel Fox.*) Does that touch the question of excessive alcohol drinking, as affecting the health and also poverty of the lower classes?—No, it does not, I think.

2965. I suppose they take it for granted?—There is a description of the whole system here, and I will send you a copy.

2966. You would advise some sort of treatment of that kind as expedient to adopt generally where there is a great deal of neglect on the part of parents of their obligations?—Yes, when possible. Neglect is nearly always attributable to drink. But there is also ignorance, which can be dealt with partly by pamphlets and partly by lectures to girls in the schools. The lecturing is being done now in Manchester.

2967. (*Chairman.*) Have you anything to say on the question of feeding in schools. In Manchester they have gone a considerable length towards introducing a scheme of that kind?—I think we have now got to the point, having decided to give free education, of having to decide whether, and how far, we should give free meals. It is a question which must be decided in principle one way or the other—whether free food in any form is an improper charge on the rates and how far we are going to impair parental responsibility. In Manchester they work on the following lines: they will not spend a penny of the rates, but the School Board, which is now extinct, used to recognise the charity, and made teachers help in distributing the food and waiting on the children.

2968. The food was not cooked in the schools was it?—I think it was. I have the last report on the subject. It is from the City of Manchester Education Committee:—"For many years during the winter months free meals to destitute children attending the Board Schools have been given, The cost was entirely met by subscriptions and by the proceeds from school concerts, jumble sales, and social parties, all organised by the teachers. The balance in hand at the beginning of last winter was £36 9s. 1d., which together with £230 5s. received in subscriptions, £131 7s. 6d., proceeds of school concerts, jumble sales, social parties, and £2 9s. 3d. bank interest, brought up the total amount available for last winter's work to the sum of £400 10s. 10d." This is the other important point;—"During the last six years no less than 668,660 dinners have been given to the Board School children in destitute circumstances.

2969. What percentage of children attending school have received these meals?—I do not think they say that. I have an article on the subject here which I will refer to in a moment. The report goes on to say:—"It should be here stated what has been stated in previous reports, that food has only been given to children whose parents (after investigation of the circumstances of each case by the school attendance officers) have been found to be in real want." Then there is a list of subscribers. It is entirely a private charity, recognised and regularised by the school Board. So far it was only in the School Board, but in the past few weeks the system has been extended. A friend sends me this account, which I think has not been published yet. "One minor but interesting result of the Education Act has been a notable extension of the work in Manchester of giving free meals to destitute school children. For a quarter of a century the School Board made it a part of its business to feed many of the poorest children in the schools." They did not pay the money, they regularised the use of it. "These meals were given, of course, in the Board Schools alone. Under the new *régime* all the schools in the city are brought under the Committee. Many of the voluntary schools are placed in the most poverty-stricken districts of Manchester, and the children attending them are those who are in most need of being fed. The system of free meals has therefore this winter been extended to many of these schools. Last winter meals were given in twenty-one schools and in thirty-six departments. This winter the children are being fed in thirty-six schools and seventy-four departments. The movement has been steadily growing for years past. Last bear 139,000 free dinners were given, and the cost was slightly over £400. This winter both the number of dinners and the cost will be nearly doubled. No fewer than 668,660 dinners have been given during the last six years. Free meals, it may be said, have no legal sanction or basis, and consequently not ½d. of money can be taken from the rates for this purpose. The whole cost of the dinners, therefore, has to be met from private sources." *Mr. Atkins.*

2970. Is not it possible to recover anything from the parents?—There is no machinery for it at present.

2971. Is any effort made at present?—Of course the machinery by which money used to be recovered in the case of school fees could be set in motion again.

2972. (*Mr. Struthers.*) I presume that children whom the School Board officer after enquiry reported could be fed by their parents were not fed by the Association?—I do not know. I do not gather that any penal machinery was used. But in cases of neglect I should prosecute without remorse.

2973. (*Chairman.*) If a parent can give its child proper food and sends it to school unfed, surely it is open to the manager to exclude it and to prosecute the parent for not sending the child to school. If he sends it in an unfit condition it is the same as if he did not send it?—I think that often comes within the province of the Society for the Prevention of Cruelty to Children, but they cannot cover the whole ground. "For some years past there has been a Free Meals Fund, to which many citizens have subscribed. The subscriptions have been supplemented by school concerts, jumble sales, and social parties which the teachers have organised. It is evident that if the meals are to be carried on over the wider area there must be a large increase of public support." Then there is a description of how the children are selected, that is—which of the children shall be fed and which of the children shall not. "It should be emphasised that every care is taken in Manchester to guard the free meals from abuse. The custom is for the teachers in all poorer schools to send in to the officers of the Education Authority lists of the children in their schools whose circumstances seem to warrant their receiving free meals. The house of each child is then visited by a school inspector, who examines closely into the position of the parents. If the inspector's report is satisfactory the child is allowed to 'stay dinner,' but not otherwise. Every care is taken that no child should receive a free dinner who could get a decent meal at home, The active work of the Free Meals Organisation follows fairly closely the fluctuations of the labour market, when times are bad. The dinner tables at the opening of the year are always the worst—witness the 1,180 respectable working men who have registered their names at the Labour Bureau, and by Easter the absolute

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necessity for free meals almost disappears. They begin shortly before Christmas and end about Easter." Then there are three lines of description of what the meal is. "On the stroke of noon about a hundred boys and as many girls sat down to a good bowl of meat soup and a big chunk of bread." "The teachers take it in turns to wait upon their pupils. All the hard work involved in the scheme is cheerfully done by the teachers in their scanty leisure time. The soup and bread disappeared in a twinkling, and the children ran out to play." On that point my friend, who wrote that article, says in a private letter to me—"There is no doubt that if the physical well being of the children is considered"—this is a man of great experience I may say—"irrespective of social economics as regards the responsibilities of parents, these meals in winter are an absolute necessity. So much is clear to any intelligent person who goes to the schools in the poorer parts of Manchester. This ought to be extended. I have seen children eat their dinners so ravenously that half the good effect of the meal must be lost, and a general system of breakfasts is also needed in the winter months."

2974. Of course, the teaching of cookery in schools can hardly be worked in to dinners of that sort to a very great extent?—No. There is a very common objection to that. It is said that if the instructor shows every step in the process of making some form of food, an hour is spent in making one little thing, and there is no food provided for the whole school. The only example I know of a satisfactory combination of providing food and showing how to cook it—no doubt there are others—is a little village school at Siddington, in Cheshire, where a sister-in-law of mine helped to start a system of feeding the children on payment of a penny. There the cooking is done for the whole school in the presence of some of the children. They go into the kitchen in turns, I imagine the cook may talk to them as she works, but there is no formal lecture. But the fact that they are in the kitchen shows them what is going on, and I understand they almost fight for the privilege of going there, and not only for that but for the privilege of washing up the plates afterwards. That system merely costs a penny for a similar meal to that which has been described at Manchester, and it is paying its way. That system of meals has brought a great increase in the attendance of the school. They have never had so many children. The plan has only been going two months now.

2975. (*Mr. Lindsell.*) What sort of a school is it?—A village school. Eighty children is the most they have ever had, I think.

2976. (*Chairman.*) In some evidence we have had here about London, Dr. Eichholz told us there were about 33 per cent. who require free feeding. Do you think the number in Manchester is as great as that?—Yes.

2977. That includes not only the cases where the parents were too destitute to provide proper food, but where they were neglectful?—Yes.

2978. He argued that they should be made to contribute to the cost of feeding the children?—Yes.

2979. It was made incumbent upon the school authority because of their neglect?—Yes.

2980. It is rather hard that the child who suffers from parental neglect should not gain the advantage of these meals as do those other children who happen to be destitute—Yes. I think that is a case for some machinery being set in motion in future, and if necessary prosecuting without remorse.

2981. (*Mr. Struthers.*) Do they or do they not provide these free meals for children whose parents could provide it, but do not? I understand the inspector inquires into the circumstances, but I am not quite sure whether if he found that the parents could have provided a meal they would refuse to give it?—I do not think there is any definite line drawn. I think it is a matter of discretion, just as in the case of a clergyman who daily has to decide who are and who are not to receive charity. He does not draw a very definite line. He judges whether the circumstances of the case warrant it.

2982. In some cases he exercises his discretion as a means of exercising pressure on parents?—I suppose so. It says here "The custom of teachers is to send in to the office of the Educational Authority lists of the children whose circumstances seem to warrant their receiving it." I think that must mean a discretion on the part of the teacher.

2983. (*Colonel Fox.*) Do they also provide meals for children who are able to pay. Suppose their parents send them with 1½d. or 2d., and they prefer them having their food there instead of having it at home?—I suppose the teachers would have to decide what to do, but I do not gather that they are instructed to receive money.

2984. It is rather considered an advantage, as they would have better food at a lower cost?—I do not think it is so regarded. It says here: "destitute children" are to be fed. Here is the official description of the scheme—"free meals to destitute children."

2985. (*Chairman.*) You also give lectures to girls in the Manchester school, and on the care of children?—Yes.

2986. Have they been established for any time?—Yes.

2987. Are they worked into the curriculum?—Yes, the School Board allowed the lecturers to come in and give these lectures. Of course, I think it is a very important point, because if the mothers go out and work or if they are incompetent or are ill, so much of the care of the children falls on girls, and therefore it is absolutely essential that they should learn. This is the description of what is done in Manchester: "The Manchester School Board after an interview with the physicians for diseases of children to the Manchester Northern Hospital, appointed about six months ago a well-qualified lady to lecture to the senior girls in its schools upon washing, dressing, and feeding of infants. This work is progressing most satisfactorily. The lecturer has gained the goodwill of the parents of the school girls, and often receives through her pupils inquiries from the mothers at home as to how the babies should be fed, etc. It must be evident that the true method of seriously grappling with the great problem, almost the most important in our social life, of endeavouring to arrest the physical degeneracy of many of the children in the poorer quarters of our great towns is to educate the senior girls in the schools and the young women in the continuation classes how infants should be properly fed and tended. Those of us in Manchester who have studied this great question are hoping that the educational authorities will appoint additional lecturers, that before many years it will be rare to see rickets, with all its evil effects, in our hospitals." I think there is nothing to add to that.

2988. Will you explain to us the working of the various health societies in Manchester?—The Ladies' Public Health Society, so far as I know, is the only thing of this sort on quite so large a scale in England. I am told that an imitation of it has been made lately in Westminster, and also one in Macclesfield; but this is really *sui generis* the most creditable thing to Manchester in all the treatment of this question, because the Ladies' Public Health Society has existed forty-three years already. I have here the forty-third annual report. I wrote to the Secretary for it, and it was only published last Friday, so it is the most recent information on the subject.

2989. Will you describe their operations in brief?—The object of the society is to popularise sanitary knowledge among all classes. These are the means to be employed: Personal visitation of districts represented to the Committee as requiring special attention, the formation in those districts of mothers' meetings where opportunity is given for health and sanitary addresses in plain words, and where this teaching can be followed up and impressed on the women by ladies who personally know them. Then sanitary lectures by lady visitors amongst the poor and others, and the distribution of sanitary books and tracts and various other agencies as they may from time to time present themselves. There are twenty-three visitors at the present time, and each visitor is under a lady inspector who is responsible for her work being up to the mark.

2990. She is voluntary?—The lady inspector is voluntary and the Visitor is paid. The salary is 16s. a week, which is probably inadequate, but the Society are unable to pay more. They get a small subvention from the Corporation, but it is really nominal. It does not amount to much more than recognising their work.

2991. (*Dr. Tatham.*) I may explain that the salaries of a certain number of those health visitors are paid by the Corporation direct?—Yes.

2992. (*Chairman.*) And they are recognised servants of the Corporation; they are practically, although not

nominally, inspectors?—These are the rules:—"The business of the society shall be carried on by a Working Committee, consisting of twelve or more ladies, the Lady Superintendents, Lady Lecturers, and Hon. Treasurer and Secretary, and others. The Working Committee shall meet on the first Wednesday in each month in order to transact business. At the committee meetings four members shall form a quorum. No rule shall be adopted or altered without notice at a previous meeting. Occasional meetings shall be held to receive reports from the several districts, to examine the Health Visitors' reports, and to afford opportunity for friendly intercourse." Then every day the Health Visitor has to write a report of what she has done that day. This is really the most important thing—"Rules and Instructions for the guidance of the Health Visitors." First of all they have to live in the district in which they work; they must go through the course of instruction considered necessary by the Committee to fit them for their work; they are required to work six hours every day, Saturdays excepted, and each one is required to write a daily report of the work done. They must visit from house to house, irrespective of creed or circumstances, in such localities as the superintendents direct; they must carry with them carbolic powder." I think that is paid for by the Corporation.

2993. (*Dr. Tatham.*) Yes, that is supplied by the Corporation?—They have to explain its use and leave it where it is accepted; they have to "direct the attention of those they visit to the evils of bad smells, want of fresh air, impurities of all kinds; give hints to mothers on feeding and clothing their children; where they find sickness, assist in promoting the comfort of the invalid by personal help, and report such cases to their superintendent. They must urge the importance of cleanliness, thrift, and temperance on all possible occasions. They are desired to get as many as possible to join the Mothers' Meetings of their districts, to use all their influence to induce those they visit to attend regularly at their respective places of worship and to send their children to school." Then they must report all such cases. Here is a kind of model form of what the report should be:—"(1) Mention general sanitary state of house visited, (*a*) number of rooms and number of occupants, (*b*) presence of bad smells; if present, are they such as to arise from deficient ventilation, or from bad drainage. (*c*) state of the walls and floors. (2) Report upon general mode of living, especially with regard to personal and general cleanliness. (3) Report upon the feeding of children, especially of those under two years old. (*a*) Is the baby nursed by the mother, or partly nursed and partly fed by hand? If the latter, state upon what it is fed. (4) Report upon any case or cases of illness in the house. (*a*) Nature of disease. If contagious, when and how supposed to have been contrasted. (*b*) How many of the family are affected? (*c*) Is there a doctor in attendance? If so, state how far and in what way they have assisted the people in carrying out his orders with regard to sanitary precautions." That is a short practical set of instructions which gives all that one can want to know if properly followed up. The visitors take with them soap as well as carbolic powder. The soap is sold at 2d. a lb. or 5d. a bar of 3 lbs.

2994. At a loss to the Society, of course?—No, it says, "Cheap though this is, small sums result from its sale." No doubt they get it supplied by the ton. The small sums which result are used in helping to defray the necessary expenses incurred in connection with carrying out the work. "Sanitary powder is supplied to people free by the Corporation." Then a most important point is that the visits of these women are not resented. Apparently the people have got used to their living in the district.

2995. (*Colonel Onslow.*) May I ask this: these visitors are trained in some way, are they not—instructed?—Yes. It says here that they must go through the course of instruction considered necessary by the Committee to fit them for their work?

2996. It is not any person, who is possibly quite unsuited for visiting?—Oh, no.

2997. (*Mr. Struthers.*) There has been no remonstrance of grocers, for instance, against the Society selling this cheap soap?—No, I have not found any mention of that in the report. It says all the babies born in each district which has a visitor are visited; so that they must work rather hard.

2998. (*Chairman.*) They cover the whole ground?—Yes. Here is a little human example from the report of one visitor—perhaps a trifling example—of the way in which the poor women meet the advice given. The woman said, "Oh! I always burn my tea leaves and vegetable leaves now, since our lady told us to." The visitors also induce a great many of the tenants to lime-wash their rooms. I think all the Visitors' reports run very much on the same lines. *Mr. Atkins.*

2999. I think you have told us sufficient to enable us to judge of the operations of the Society. Then as to the employment of women in factories, have you formed any opinion as to its being prejudicial to the health of the community, and in what respect—in regard to the neglect of the young, I presume?—Yes. I rather fancy that we are behind every country in that respect.

3000. We know the regulation with regard to the return of women after child-birth and their exclusion from factiores are more stringent abroad?—Yes; you have the facts about that—Germany, Austria, Holland, Denmark, Belgium—I will not repeat those. I want now to summarise, for the purpose of having them on record, a certain number of recommendations I have written down. I think I have mentioned most of them. First medical inspection in schools; second, a more stringent system of laws in relation to women in factories before and after child-birth; third, a regularised feeding system in schools. I do not venture to say on that point whether we have got to the free meal point or not, but we must face the question whether the logical culmination of free education is not free meals in some form or other, when proved to be necessary, it being cruelty, in my view, to force a child to go and learn what it has not the strength to learn; then, fourthly, instruction in the care of infants by pamphlets, by lectures in elementary schools, and by such societies as this, which is worthy of all imitation—The Ladies' Public Health Society of Manchester; then, fifthly, physical training, which, in my view, ought to be of a kind which will command the support of everybody—that is to say, what roughly might be called of a neutral kind; then sixth, the use of games in the public school sense. I do not think that mere drill and formal exercises are enough. "Games," however, cannot be brought in at present by Government statute, but would have to depend upon the help of voluntary agencies. I should like to draw attention to the excellent recommendation made by the Scottish Commission that football clubs, cross-country running clubs, and so on, could all be asked to help to organise what may be called games in the public school sense—quite different from the drill and running about in the school-yard. Games, in this sense, produce a pride of body which is enormously helpful. Directly a man begins to respect his body and wants to get his colours, he hates anything which keeps back his bodily fitness. This result can be produced, I am sure, if we can summon up the kind of patriotism which in recent experience has been summoned up. We can do it again in getting these clubs—private clubs which have grounds of their own—to help in this matter. Then the next point is the need for a quasi-official co-ordinating authority on physical training. I have talked to Sir Lauder Brunton on that very point. We have discussed this possible co-ordinating society for bringing all these agencies into co-operation. The last point of all is a higher form of co-ordination still, of all the Departments which are at present working more or less for the public health. For instance, at present the President of the Local Government Board, the Home Secretary, the Registrar-General, the President of the Board of Trade, the Secretary for War, the Lords of the Admiralty, the Postmaster-General, and the chiefs of the Board of Education—those are a few which I wrote down at random—are all more or less health ministers; each one is more or less responsible for the health of somebody under his control. But all of them rolled into one are not exactly what we want, and I have been led to a conclusion in agreement with that which Bentham made long ago—that there should be a department for Health alone—what Bentham called an "officially-informative and melioration-suggestive Health Minister."

3001. Do you mean a Health Minister? I do not think there would be much competition?—Yes, a Health Minister, but we need not accept Bentham's cumbrous phrase. It was suggested a good long time ago.

Mr. Atkins. The Manchester and Salford Sanitary Association eleven years ago went so far as to send a memorial to the Home Office, pointing out the need for a Minister for Health. Bentham's scheme for a Minister for Health and the recommendations of the Royal Sanitary Commission of 1871 were given in the memorial. Mr. Goschen put the recommendation of 1871 into a Bill, which was thrown out because it contained other matter less desirable. I think one has got to a point where the whole question of developing what Dr. Clouston calls a "health conscience" is so important that the formation of a Department to consider such questions all by themselves is well worth consideration.

3002. (*Dr. Tatham.*) You spoke just now on the question of overlaying children in bed; have you any information as to how far alcohol is at the boottm of that?—I have not said much about alcoholism, because I assumed that that would be continually in your minds. But I think there is hardly one of the papers in this book in which something is not said about alcoholism.

3003. But I mean in relation to the overlaying of children—the fear that women go to bed the worse for drink and overlay their children whilst under the influence of alcohol?—I have not anything in my notes of evidence, but I have often heard that said.

3004. As you say in your evidence, a very large number of children are destroyed in that way?—Yes.

3005. A very large number indeed?—Yes. There was a case in the district where I live, Chelsea, a few days ago. The man and the woman had killed two children in that way—both cases of drunkenness. Nothing happened but a strong censure.

3006. (*Mr. Lindsell.*) With regard to this question of free food, you quite agree, I suppose, that it trenches on very dangerous ground?—The ground of impairing parental responsibility, yes.

3007. We have had evidence that what is bad in the physical condition of the lower classes is due to the increasing carelessness and frivolity of the mothers?—Yes.

3008. That they deliberately leave their homes uncared for for the sake of amusement or drink, or whatever it may be. There would always be a great danger that the more you gave opportunities for the children being fed at schools or elsewhere, whether freely or on a small payment, would either way tend still further to encourage that habit of neglecting the home?—Yes, I quite admit the danger, but I think that danger, perhaps in a slightly less potent form, was considered and over-ridden at the time we decided to give free education. I think it is exactly the same question in another form, and one can only take the next step and see that children are fed, not necessarily by free meals, but by insisting that somehow they are fed, and then prosecuting the parents who do not do it, if they are able to do it.

3009. You mean the child will be taken away from the control of the parents forcibly and given food elsewhere and the parents punished for not providing it?—No. I think the medical inspection, which requires to be very much improved, would decide whether a child was being properly fed at home, and then the attention of the father or mother should be called to the lack of proper food, and if the father and mother within a certain time did not show evidence of feeding the child properly they should be prosecuted. I should not take away the child from them unless it was necessary.

3010. (*Mr. Struthers.*) But if the parent is prosecuted, what are you going to do with the child meanwhile?—The child would have to be fed at the school, certainly.

3011. (*Mr. Legge.*) What you want is an extension of the section of the Prevention of Cruelty to Children Act, which would define one form of neglect as not providing food to the satisfaction of the school authorities?—Certainly.

3012. (*Mr. Lindsell.*) You would agree it is only a remedy necessary to meet an existing evil, but it would be better if the evil itself was removed?—Oh, yes.

3014. That is to say, that the better course of endeavouring to improve these matters is by such agencies as you have mentioned in the way of training up from the very earliest years people in the duties of motherhood and so on?—Yes, certainly.

3013. Such work as has been done by the Ladies' Health Society in Manchester?—Yes.

3015. And by lectures to children and all that sort of organisation?—Yes. I think if a child is taken away from its home to be fed, that is in itself a confession of weakness in the system which has to do it, but I still think it may be necessary, and will for a long time be necessary, to give meals at schools where medical inspection proves them to be necessary.

3016. It will always be necessary in the case of absolute poverty?—Yes. I admit ideally it is a confession of weakness.

3017. With regard to the medical supervision of schools, is there any existing organisation by which that can be carried out?—No. I think it requires to be invented.

3018. It would involve an enormous addition to the total expenditure?—I do not know. I am not experienced in these matters, but I should have thought if one got young and active doctors their salary would not be very much. I understand a young doctor who puts up a brass plate has to wait a long time.

3019. (*Chairman.*) It is a good advertisement for him?—He would be glad, I think, to have the work at, say, £200 or £250 a year perhaps.

3020. (*Mr. Lindsell.*) Then there are the teeth; some people advocate every school child having his teeth periodically inspected?—I think the school should have a dentist too, but at the same time I am not prepared to go so far as some people and say that bad teeth are necessarily a sign of degeneration.

3021. Should it be another set of officers or all combined in one officer?—I think one of the medical staff attached to the school should have a knowledge of dentistry That is all I would say.

3022. Then there is the question of eyesight again, they would all require specialists to a certain extent?—Yes. I suppose where cases required very expert knowledge doctors could be made interchangeable among the different schools.

3023. I suppose that might be, but it would involve a very large army of medical experts going into these matters?—It would involve a good many certainly, but I cannot think the cost would be prohibitive. One doctor could do an enormous amount. I think that several young fellows while they are putting in their time would be willing to undertake the work. At present one knows that a young doctor takes a voyage because he has nothing else to do and he gets very little for it. He could put in his time in that way, and if he got £200 a year for it I should say there would be any amount glad enough to do it.

3024. Then with regard to the factory laws in relation to child-birth. At present you think the laws are too lax in regard to requiring the mother to abstain from work before and after child-birth?—Yes. I was asked not to go into all these cases, and I thought you had evidence before, but let us take the case of Spain, where I believe the law is that a woman must abstain from work at the time of child-birth and her employer has to pay her wages when she is idle.

3025. (*Mr. Struthers.*) Do you know how far that law is in force; I have come across several instances of excellent laws, which I found on inquiry had no machinery for carrying them out, and I know they were not carried out?—From what I know of Spain I can quite believe it is not in force.

3026. (*Colonel Onslow.*) I can corroborate that?—At the same time there is the fact that Spain, very much behind us in most things, is capable of putting that law on the statute book.

3027. (*Mr. Lindsell.*) With regard to the feeding of children at schools, I rather gather that you are in favour of extending the system of rate-given food and would not confine it, as it is at present in Manchester, to purely voluntary effort?—I should bring in the rate system, but I am not clear yet—I have not had sufficient evidence on the subject—whether the rates should be brought in to pay for the food itself. I am clear as to this point, that the rates might come in to pay for the apparatus, the support of the cook, the room say, and the table and the table cloth if they had one, and all the cooking utensils.

3028. That could be combined easily with the educational part?—Yes. I think the teaching of cookery could be done in a less formal way than some people seem to think. A great many will tell you that you cannot teach cooking because it is so slow and therefore when the cookery lesson is over practically nothing is cooked. Children enjoy being allowed in the kitchen. They can be taught a good deal in that way, to take only the one example which I have already given.

3029. The evils of the free food system, if evils there be, exist equally under a voluntary system as under a system of rate aid: it would not affect the moral effect of the thing?—No.

3030. If it were in any way evil?—No. I should like to say that I feel strongly that the question of parental responsibility was disposed of in principle when we gave free education. It is the same question.

3031. (*Mr. Struthers.*) Is it not possible that the nation made a mistake? I am not giving an opinion of my own. Is it a wise policy to take this as irrevocable and to consider that because we have possibly made a mistake we are bound to go on on the same lines?—Without going into the question of whether a mistake was made or not, I think your question involves a problem of whether we are to go back. Personally I do not think it is possible to go back.

3032. I do not think that quite follows. I think it simply involves this, that we ought not to be prevented from discussing the question of free food on its merits because we have perhaps taken a false step already. We need not go back on free education, but we can hold our opinion free as to whether we will take another step in the same direction or not?—In the abstract perhaps that is so, but practically I could not agree.

3033. (*Mr. Lindsell.*) We have had it pretty definitely stated that the critical period with regard to the want of proper food is rather earlier than the school age—I mean absolute infants. It is at that age that the effect of bad or good food is most telling, and therefore this system of free feeding in schools would not to any great extent meet the physical deterioration caused by bad food, and therefore we should logically come to this that if you feed the child at school you would have to provide means of feeding him at the age of one or two, and therefore you come to a much wider question than merely feeding children attending at school. You come to the question of feeding the proletariat infants generally?—I think if these milk supply institutions such as at Battersea, run by the municipality, can be made self-supporting or almost self-supporting, there can be no objection to their meeting the case as far as possible.

3034. They can hardly be self-supporting if the mothers were too poor to buy the milk; you would have to give a certain amount through some agency, a municipal or other agency, a certain amount of milk to parents gratis or at any rate at considerably below the cost price in order to do any good at all?—Battersea is a very poor district and they are already looking forward to the time when the thing will become self-supporting.

3035. My point is that if it is good for the nation that a child between five and thirteen should be fed in order to improve his physique, it is equally important that the child shall be fed between one and five?—I agree.

3036. (*Chairman.*) I suppose your view would be that it is because the State compels him to learn that we must see his physical condition is commensurate to the strain placed upon it?—Yes, that is so. We force the children to learn; we do not force them to come into the world.

3037. (*Mr. Lindsell.*) That will not remedy the evil?—No.

3038. We are considering what methods there are of checking any possible tendency there is to further physical deterioration, and if the age at which that can be best checked is before the school age, it follows logically that if you do it in school age you ought also to do it before the school age—from the point of view of physical deterioration, not from education?—Yes, I see your point, and as a logician's point I cannot meet it. But I think all these questions of practical politics depend upon expediency. Pure logic will lead one no farther, but will check one at many points.

3039. I do not think it is a question of pure logic; it is a question whether it will be of much use feeding the child after five if his system is already hopelessly ruined by want of food before five?—I should take each point on its merits and treat it according to expediency. As regards the younger age, I should certainly recommend the full consideration of this Battersea scheme of municipal milk, and the encouraging of such excellent institutions as the Ladies' Health Society, which really covers the ground and meets the need in Manchester. *Mr. Atkins.*

3040. You are not inclined to press the charge of militarising physical education?—No, I do not believe in it. I believe if a boy is taught to use a rifle even—which he is not—that that would rather inoculate him against militarism. He would regard it as a citizen's obligation, and would not be inclined to run away with a wild jingo spirit as some people do who have not been made to share any of the sobering responsibilities of the Army. But men like Dr. Macnamara and Dr. Yoxall represent a large bulk of opinion, and I think they ought if possible to be conciliated. Is it not the counterpart of the religious difficulty on the other side of education—people with conscientious objections? I believe a neutral system is ultimately of the same service to the Army and will meet the wishes of everybody.

3041. Of course on your next point, "Games" obtainable by the help of voluntary agencies, boys' and girls clubs, athletic associations of every kind, for the benefit of the young must necessarily be a very important factor in improving the physique?—Yes.

3042. In towns the great difficulty is to obtain space for games, and so on?—Yes, but even in large towns these private clubs have their grounds.

3043. You would be in favour of this being extended to part of the recognised school curriculum?—I believe that if the teachers were appealed to they would take it up. I think the whole thing would have to be voluntary for the present. You could not make it an official system when you are dependent all the time on the gratuitous help of private clubs.

3044. You would hardly go so far as to say that the State should pay for the attendance of the child while he was playing football?—No, I do not think that.

3045. That is advocated very strongly in some quarters?—I think it would be better for the present to appeal to the generosity and loyalty of private clubs. I am only speaking of games in the public school sense. I am very strong on such games as are possible round the school itself being absolutely insisted upon by law and taught regularly.

3046. How would you distinguish between the two—you mean in the play-hour intervals?—Yes, I would have such games as are possible at the school itself, and physical exercises, included in the curriculum and made absolutely compulsory.

3047. But not such games as football or cricket, you would not include those in the category of physical exercises would you?—I do not think there is room for them, and therefore I think it is unwise to include them. One could not play football properly in the school yards.

3048. They are expressly excluded from the term "physical exercise"?—Yes.

3049. Would you be in favour of boys going out into camp being included in school attendance?—For a fortnight in the whole year?

3050. Yes; that is generally what they go for?—Yes, I should certainly. I have talked to boys who have been in camp, and I know the results are splendid, and therefore I think they are worth paying for by the State, if not too much time in the whole year is taken up.

3051. It has been actually allowed?—Yes.

3052. The attendances at the volunteer camp at Grantham are allowed?—Yes.

3053. (*Mr. Legge.*) I should like to follow up a recent question. With regard to these games of football and so on; would you object to the time expended in playing football and cricket being included in the school time-table in such circumstances as these: supposing a local club, which only uses its private ground on Saturdays and

Mr. Atkins.

on evenings, takes a particular Board school or set of Board schools under its wing?—Yes, in the summer.

3054. Why should not these Board schools whom it invites to use its ground go in the morning at different hours throughout the week?—That is the only time they could go.

3055. Should you object to that being counted in the school time?—I did not understand that point was put. I should not object in the least to that. I should approve of that.

3056. You would therefore allow the time expended in the playing of football and cricket under proper conditions coming, just like a visit to a museum, within the school hours?—Certainly. They would work all the better when they got back. I thought the point was put to me whether the school, or let us say the State, should insist on this football going on and pay the expenses of it, and I did not think that you could have a regularised system of that kind, seeing that you are dependent upon the private clubs for the use of their ground. That is the point I thought was put to me.

3057. Then you approve of the recommendation of the Scottish Royal Commission on physical training on the enlisting of all possible voluntary help in organising?—Yes.

3058. Their recommendation amounted to this, that every educational authority in the country should have one of its sub-committees a games committee?—Yes.

3059. Now, we know there are excellent authorities like Manchester and others quite ready to take up suggestions of that sort, but then there are an immense number of lethargic public bodies in the country; do not you think it would be a good thing if the Board of Education in England and the Scotch Education Department were to issue a circular to every single educational authority in the country, calling their attention to that recommendation, and asking to be informed of their views upon it, and then in three months or so afterwards sending them another circular to ask them if they have formed some such committee or not, and actually in their annual report publish a statement as to the progress of this movement?—You mean, do I approve of that recommendation of the Scottish Commission being made thoroughly practical? Yes, undoubtedly.

3060. Being enforced by the Department so far as it can be by exerting that sort of moral suasion?—Yes. The only way they could enforce it is by giving their official support to it. I certainly should approve of that.

3061. You have told us you are anxious to see a Ministry of Health under the conditions you describe. I suppose in additon to that you would see the great advantage in our having a central bureau to collect physical statistics?—Yes.

3062. You are aware that we have an ordnance survey and a geological survey?—Yes. It would be an anthropological department.

3063. And that bureau might well co-operate with all the public departments you have named—the Home Office, the Board of Education, the Local Government Board, and so on, in co-ordinating such statistics as they could get together which would throw a light on the progress or retrogression of the country?—Yes.

3064. Or of any section of the population of the country?—Certainly, but I imagine that if there were a health department the anthropological department would be a section of that department would it not?

3065. It might be?—I mean a particular arm of its work.

3066. Are you aware of a special class of school known as the day industrial school?—No.

3067. Schools to which truant children are sent?—Oh, yes.

3068. There is a famous one in Manchester and another at Salford—schools to which truant children are committed, many of them truants because they are too miserable to attend the ordinary day school. They have their meals, and they have a curriculum which is half time schooling and half time manual occupation and training?—Yes. You have not referred to the Poor Law Schools?

3069. No?—Then I have no definite information on that subject.

3070. I have just described their curricula. They get their meals; they have half time schooling and they do half time manual occupation and training and a good deal more physical training than is given in the ordinary school?—Yes.

3071. Do you think the extension of that class of school would suit the conditions of the poorer parts of our big towns?—I think that the ratio of physical education to mental education in the majority of our elementary schools is quite wrong at present. I think there is too little physical training and too little open-air exercise.

3072. In two parts of the same town you may have the ratio quite different—in the better part of the town the children could get so much more of their physical training by the clubs outside the school, and so on?—Yes.

3073. Just like boys attending a private day school?—Yes.

3074. Whereas in the poorer parts of the town you may have to have a school where the ratio of physical training to literary training was reversed?—Yes; that would be a question for the inspectors, I suppose, to decide on its merits.

3075. (*Mr. Struthers.*) I suppose you know that games in the manner you advocate are conducted in various other towns such as Edinburgh, where there is an Association who have made an arrangement with the football clubs of the town to hold inter-school matches?—Yes.

3076. And there is a big organisation for that purpose?—Yes, I have heard of that. It is done in Manchester too at the instigation of such men as Mr. C. E. B. Russell, whom I have mentioned.

3077. I understand there is a fairly widespread organisation of that kind for elementary schools?—That I have not information upon.

3078. To the extent of bringing teams from Scotland to compete against teams of children from schools in London?—That I did not know. Where is that organisation?

3079. I do not know where it is. I think it is at Leeds, but at any rate it has the effect of bringing about an international competition?—I did not know it had gone so far as that.

3080. Now I take it that you think this kind of work, games in the sense of football and cricket, must be entirely an out-of-school arrangement?—No. I have just admitted that if one could only get the loan of the ground at certain times, say, in the morning, it would be necessary for the boys—and the girls too if they went—to go in what normally would be school hours.

3081. What I am thinking of is this—that with a school of 1,000 or 1,200 children of all age: you cannot provide games for all those children?—They would have to take it in turns. Say you have in a large town a loan of two or three or four grounds, you would have so many boys and girls going at a time in relays. The whole thing would have to be thought out. I never contemplated the whole school going at once.

3082. The average class in a school consists of thirty or forty pupils?—Yes.

3083. And there is one teacher to them?—Yes.

3084. That is rather a favourable case, because there is a larger number even in the higher classes than that. If the teacher goes with one section in the morning to play at football, what are the other children supposed to be doing? You cannot take the whole thirty or forty to play at once, therefore that is why I suggest this must be a matter of extra-school organisation?—But why could not thirty or forty go down to the ground at once? In Rugby football you have fifteen on a side, and there is thirty straight off.

3085. (*Chairman.*) And you could have twenty a side?—Yes; we used to play twenty.

3086. (*Mr. Struthers.*) Do not you think there would be a certain advantage in having persons outside the school so as not to put the whole burden upon the teachers, to have the assistance of voluntary associations who make this their special interest?—I think it might be possible for estimable people who have no particular

work to do, to be invited to organise the play. Of course the very fact that they were already connected with football, cricket and swimming clubs and so on would guarantee the fact *primâ facie* that they were more competent than the teachers in the schools for doing it.

3087. You want some further instruction for the older girls in the school for health and care of infants and so on?—Yes, I quoted the case of the lectures in Manchester. I think that plan thoroughly sound, and capable of extension.

3088. Do you think that the lectures by themselves are much use unless you have something in the nature of demonstrations, practical work, especially lectures to children of twelve to fourteen years of age?—I think the teaching would have to be very plain. If it is plain I do think it is useful. One would hardly believe what those children do not know. They do not know that air gets exhausted in a room if the windows are shut for a week. That is the kind of thing which I think they should be taught.

3089. I suppose you would approve of teaching of this kind being made obligatory in all the higher classes of schools? The subjects to be:—"The proper care of the body, the value of exercise and of pure air, the proper selection of food, the means of preventing the spread of disease, and various other matters such as might be treated in a slightly extended Ambulance course. Much of the instruction given under this head will necessarily be empirical, but it should, where possible, be referred to first principles, and the teacher should be careful to keep himself as far as possible abreast of the knowledge of the day in such matters." You think that that is a proper outline of a scheme which might be given to children from twelve and a half to fourteen years of age?—Yes, I think so in itself if the teacher put it in very simple language. I think the teachers would have to be people of tact.

3090. They would have to be ordinary teachers of the school who might be under the guidance and direction of expert visitors?—Yes.

3091. If in conjunction with that you provide for the girls of the school a household management course, which includes instruction as to the "care of rooms, furnishing, clothing, marketing, and the keeping of household accounts, cookery, laundry work, needlework, especially mending, darning, and cutting out," and with special extension of such topics from the list I have read as bear upon the health of the individual and the family, and especially with regard to the feeding of infants, do you think that that might be a useful course of instruction for the older girls?—Yes. I do not take in quite so much at once, but most of these subjects, I think, are perfectly feasible.

3092. The general idea is that from twelve and a half to fourteen, say, the girls should be freed from a great deal of their ordinary work, they should still give a little time to reading, English, and arithmetic, but the greater part of the time would be taken up with instruction which bears directly upon household management, taking care of a house, with as much practical instruction as possible?—I should not be in favour of substituting that for what you might call a literary education. I believe the great thing is to prepare the mind. It is not necessary to have what are often called "practical" lessons if the mind is made capable of thinking for itself.

3093. You would have none of this for the girls between twelve and a half and fourteen?—I do think it could be worked in with the other, but I would not agree with what I think I overheard Mrs. Close say when I first came into the room, that the present education should be dropped and that practical education, as she calls is, should be substituted. I would not be in favour of that.

3094. You attach much greater value to the literary side of education?—I do not say we have the best possible education at present. The great thing is to decide what is the best training for the mind. I think we are more on the right lines now than we should be if what Mrs. Close called "practical education" was substituted for it.

3095. Even supposing that they had nothing but the literary education up to the age I am speaking of they must leave the school at some time and must begin practical instruction?—I think that practical instruction most valuable, and I would bring it in

Mr. Atkins.

3096. Do not you think it would be as well to have a transition year in the school, in which the child would learn to apply its knowledge of arithmetic to practical problems, such as it would have to face when it goes out?—I think it should be taught all the time to apply arithmetic to practical results. How can it be asked in the last year to make it more practical? There should be such questions as this: if the mother bought so many pounds of meat at such a price, how much would it cost? That should be taught all the time.

3097. We have to spend time in teaching the principles of multiplication and addition and so on. That is what happens in the school. But do you or do you not think that a reasonable idea, that towards the end of the school course there should be a certain modification of the instruction which was given up to that stage, retaining certainly all the main subjects, such as English, arithmetic, geography, and history, to a certain extent, but giving more time to such subjects as cookery, laundry work, and needlework, in the case of girls?—Yes.

3098. Say a year or a year and a half?—I should be in favour of giving what you have named more prominence.

3099. On the other hand, not taking these subjects at all to that stage of the school. At present, you understand, it is taken at eleven, or earlier?—When a girl is old enough to be capable of receiving that kind of instruction and putting it to practical use.

3100. When she begins to look forward to applying it at home?—I would certainly be in favour of putting it well forward, but I understood you at first to propose that it should be substituted bodily for what we now call a literary education?

3101. No; it is a combination of both. This is only one part of the school work. The other is retaining in a minor degree the main subjects of instruction?—Yes, I should be in favour of that, but I thought we were verging on the question whether a "literary" education is good in itself or whether children should only be taught to fill what may be their station in life. I have no sympathy with the latter method at all.

3102. There is nothing of that idea in this proposal at all. Now, as regards this supply of free food and so on, several questions have been raised about it, but there is one little point I would like to put to you, which I have hinted at before: I think that the milk supplied by the Battersea people costs about 2½d. per quart?—Yes.

3103. That is less than it is supplied at by the ordinary retail merchants of the place?—Yes.

3104. I believe that the ordinary price of milk is 4d. and 5d. per quart?—Yes. I remember one company used to go round selling milk which turned out fairly good for 3d. per quart. However, that came to an end, I think.

3105. You see no objection to the increase of such agencies as you propose here, and also, in the case of free feeding at schools, from the point of view of the interests of those classes of the community who make their living by dealing in those things?—I see to a certain extent that there are conceivable hardships, but I could not accept them as a reason against these things, which seem to me essential for the well being of the whole national fibre and backbone.

3106. Might it not be possible to secure a proper supply of food by the ordinary dealer—I mean food of proper quality—by better enforcement of the Adulteration of Foods Act, and without absolutely taking it out of his hands altogether and underselling him by means of an association of this kind?—That would come under the Food and Drugs Act.

3107. Or an extension of that?—I am afraid I am not conversant enough with these Acts to know.

3108. (*Chairman.*) Independent of this organisation would these people get milk at all? Is it the case that it competes with the ordinary distributor of milk?—It does in this sense, that some people who would get milk in any case now get it cheaper. On the other hand, there are a great many people who now get milk for the first time.

3109. And probably the greater bulk of those who enjoy the advantages of this distribution are among the latter class?—Yes, I think so.

Mr. Atkins.

3110. (*Colonel Fox.*) As regards physical training of a neutral kind. When I first read that I thought you were going to deal with a class of training suitable both for boys and girls. You do not mean that?—No.

3111. The system of physical training sanctioned by the Board of Education, which is practically a neutral one, is equally suited to boys and girls?—I understand.

3112. Therefore you can imagine that this would not be of a military nature?—Not quite necessarily so. At least from the point of view of Dr. Macnamara and Mr. Yoxall the present training is too military, yet it has been given to girls and most of the female instructors have been forced to learn it.

3113. In the old model course the drill predominated, and a great deal of time was taken up with the actual military drill and perhaps the body was rather neglected. It is considered that two things are necessary. The military drill is necessary to give a certain amount of discipline to which they attach very great importance in schools; it increases discipline and makes the children act quickly, and think quickly, and has a very beneficial result. The only thing is that it should not predominate. The idea is to have one-third of the time taken up by disciplinary drill, or order movements, and the other two-thirds devoted to the development of the body?—Yes.

3114. And that, I think, is the wish of everybody Then as regards games, I gather from the remarks you made that you are rather inclined to reduce the number of hours of mental instruction: is that so?—I do not know whether I should be in favour of reducing the total number. I believe children are at present taught too long on end. I do not think a child can bear being taught more than three-quarters of an hour on end.

3115. Have you read what Sir Edwin Chadwick stated in reference to the Factory Act?—No.

3116. He stated—and he was supported by many leading physiologists of that time—that the receptivity of the mind of the average child for direct education did not exceed three hours in the day—that was the average child up to fourteen. A growing brain would not stand more than that amount of work, and it was not only a waste of time, but it also wearied the children and did their brains harm. The physical training is carried on during the actual school hours—it is not done in the time for recreation—and am I to understand that you would like to see more time taken out of the school time and the brain less worried by too many mental subjects?—I should like to see the number of minutes in succession which any child is taught reduced; I believe three-quarters of an hour is long enough on any subject. I am afraid I am not expert enough to know whether the total amount of teaching is too much.

3117. (*Mr. Struthers.*) Do you think more than three-quarters of an hour is given in schools?—I believe it is in many schools. At the end of every three-quarters of an hour the children ought to be turned out to some sort of play—drill, if you like—if possible, in the open air; if in the school all the windows and doors ought to be opened. Ventilation is not good in most cases. If you could get the use of grounds for football, cricket, and so on, I repeat it would be well worth using school hours for the purpose. When arrangements have been made for all the children to go it would not amount to a great deal of time off. I doubt if each child would get more than one game a week.

3118. (*Colonel Fox.*) I do not know whether you are aware of it, but in a very large number of schools, especially voluntary schools, there are no playgrounds whatever, and in those where they have playgrounds there is no room even for drill or physical training?—I know it.

3119. And the only playground they have in some of these towns like Taunton is the gutter; they have no place for any form of recreation?—Yes.

3120. Therefore, if this great League which is in prospect, initiated by Sir Lauder Brunton, is going to provide playgrounds and gymnasia in all the different towns, it will be a very great benefit, but is there any probability of this ever happening?—I believe the whole thing depends on the state of public opinion. If we could get public opinion at the back of it—such a public opinion as there was about the war, when it was felt to be a national question, a question of patriotism—we could do anything. I am sure the grounds would be lent by private clubs.

3121. I think it is the general wish that children should have games?—At present there is no great feeling on the question.

3122. I think, on the contrary, there is great feeling amongst people in general?—There is more recently. There has been a remarkable increase of feeling in the last six months. But there is not enough.

Dr. Edward Malins, M.D., called; and Examined.

Dr. Malins.

3123. (*Chairman.*) You are President of the Obstetrical Society of London and Professor of Midwifery in the University of Birmingham?—Yes.

3124. You have been good enough to attend here in consequence of having been informed of certain evidence that we received the other day in which it was stated by Dr. Eichholz, on the authority of other medical men, that if people are going to have children they will have healthy children as though Nature were giving every generation a fresh start, and he went on to say that healthy births were about 90 per cent. in the poor neighbourhoods, and he suggested that we should go to the London Obstetrical Societies to ascertain how far their experience bore out this statement. What are you able to say on this point?—What I have to say at the present time is more a matter of observation and of opinion. We have not the figures at present to prove the accuracy of it, but I think the testimony of experienced observers would be in accordance with the views expressed by Dr. Eichholz, though, perhaps, not to such a large extent. I I should say that from 80 to 85 per cent. of children are born physically healthy.

3125. Whatever the condition of the parents may be?—Whatever the condition of the mother may be antecedently.

3126. And you think the deterioration sets in later?—I do materially so. The weight of children at birth as far as I know—and I have weighed a great many—is generally not below the average; the average keeps up very much no matter what the physical condition of the mother may be for the time. Since receiving this information we have instituted at the Obstetrical Society of London, in connection with Lying-in Charities and Hospitals in London, a tabulated form for ascertaining these facts—what the weight of children is at birth, their physical condition, and whether there is increase or otherwise during the time a woman is under observation. That time is not very long, not more than ten days or a fortnight generally.

3127. Will you be able to furnish us with these facts when collected?—Certainly. I will give the information later on, but I think there is a general consensus of opinion at all events irrespective of figures which I am not able to give that the average is kept up no matter what the condition of the mother may be.

3128. That proves what you say in your *précis* that Nature intends all to have a fair start?—Yes.

3129. We had evidence of a very interesting kind from a great scientific authority, Dr. Cunningham, Professor of Anatomy in the University of Edinburgh, who, touching more or less upon the same subject, said, "I have referred to the manner in which changes in the conditions of life affect the growth of an individual or class, and more especially how poverty with its squator, its bad feeding, and its attendant ignorance as to the proper nurture of the child, lowers the physical standard of the lower classes." Then he went on to say this to which I call your special attention:—"In spite of the marked variations which are seen in the physique of the different classes of the people of Great Britain, anthropologists believe,

with good reason, that there is a mean physical standard which is the inheritance of the people as a whole, and that no matter how far certain sections of the people may deviate from this by deterioration (produced by the causes referred to) the tendency of the race as a whole will always be to maintain the inherited mean." Is that your experience?—That is quite my view. I have not seen Dr. Cunningham's statement, but that is the view that I have long maintained and held. It is absolutely irrespective of the condition of the mother.

3130. You have noticed a great difference between the children brought up by maternal suckling and those brought up by hand?—Undoubtedly. I think that is one of the points to which teaching might be justly directed.

3131. To what do you attribute the reluctance of mothers to nurse their children, has it much to do with employment?—It differs in various classes. In the higher classes it arises from the discomfort and pain and annoyance.

3132. The tie?—Yes, the tie of doing it and the interference with social engagements.

3133. And what is the cause among the poorer classes?—That is more from the mothers having to go out to work very often and not being able to take their children with them, and from what they generally call the bother of doing it.

3134. Indifference enters largely into it?—Yes.

3135. Then you have formed some opinion as to what are the post-natal cause of deterioration; will you enumerate them?—I think, first of all, absolute indifference to the children.

3136. Do you think the system of insurance contributes at all to that?—I do. I think it materially alters the relations between parent and offspring.

3137. Would you go so far as to prohibit infant insurance up to a certain age?—No, I would not prohibit it, but I would hedge it with the most stringent regulations that could possibly be made, more particularly in reference to motive. The temptation to infant insurance is very great, particularly in times of poverty or in times of distress, and it overcomes parental instinct. The fact of a large family existing and the greater number of them starving or having insufficient food, makes them less careful about the latest offspring, I am sure.

3138. What restrictions would you suggest under which it might still be permissible?—It is difficult to say.

3139. Would you limit the sum recovered to the actual expense of burial?—Yes.

3140. So that no profit should be made?—Yes, that would be a wise precaution. I think that would have a very great influence in diminishing the number of infant insurances.

3141. If no profit could be made?—Yes, I am satisfied that that would be a good thing.

3142. Then there is another point in connection with infant deaths: do you think that our system of granting certificates of deaths is faulty? Do you think that it would be as well to make registration of the deaths of infants dependent upon an adequate medical certificate?—With regard to the deaths of infants and more particularly with regard to the deaths of still-born infants.

3143. There is no registration of them?—No.

3144. You think that should be introduced?—Yes; the registration of still-born infants, and the number of abortions.

3145. With regard to the infants who die in the first few years, do you not think it would be desirable to insist that before these deaths are registered there should be some certificate of death from a competent authority?—Undoubtedly.

3146. So that in cases of obvious parental neglect they should be traced to their source?—Yes, they are very lax at the present time.

3147. You are aware, of course, that there are a large number of deaths through over-laying?—Undoubtedly. That, I think, is very often associated with alcoholism. My own observation has shown that it more often happens on Saturday night than any other night of the week.

3148. Do you not think it might be made incumbent for parents to provide cots for their children?—Yes. The objection to that is that very often in the poorer houses there would be the want of maternal warmth to the children, which is a great necessity. The houses are not sufficiently warm, or the cot is not sufficiently comfortable, to adequately supply what is wanted for a child's growth. Therefore they are taken into bed with the mother, more as a means of keeping them warm than anything else. *Dr. Malins.*

3149. You have formed some opinion of the other causes of deterioration?—Yes. Women working in factories is another element in large towns. They go out to work and leave their children to the care of others, and in some towns—Birmingham, for instance—there are *crèches* in which children are taken for the day and fed and minded.

3150. We have had Dr. Scott of Glasgow, a certifying surgeon, here. Are you prepared to say that the employment of mothers in factories should be prohibited unless the local authority took upon itself to provide *crèches* of this sort?—I should not say it should be prohibited, because there are a great many industries in certain towns in which women's work is more easily obtained—more facile and cheaper.

3151. But female work need not be done by mothers. There must be plenty of young women or wives without children. It is only the mothers of young children I am referring to?—I should not prohibit them entirely from working. I do not think you should go to far as that. It is interfering with the liberty of the subject a good deal.

3152. But that has been done a good deal already. You put a high value among the causes on the want of knowledge of proper feeding?—Undoubtedly. In Birmingham alone—speaking of the town of which I know most— I have counted twenty-eight different kinds of foods.

3153. Tinned foods?—Farinaceous foods, tinned foods, biscuits, and different kinds of prepared foods.

3154. Are many of them deleterious?—Undoubtedly.

3155. All of them?—No, I would not go so far as that. Some of them are good. But it is the custom of many chemists in large towns to advertise among their wares foods for infants—"Brown's food is the best," or "Jones' food is the best," in their respective localities, the custom is to give probably recognised form of food their own name. No doubt the number is derivable from that cause, but a great deal of ignorance is exhibited in regard to the feeding of children.

3156. Do you think it might be made incumbent on the local sanitary authority to issue leaflets to all mothers dealing with these questions—simple questions touching the attendance on and the bringing up of children?—Yes, it is done very largely by different agencies, but you cannot make it a municipal matter.

3157. It would not be costly?—No. It would be advantageous if it could be carried out, but the mere distribution of leaflets to people who do not read them would not do any good.

3158. But that might be supplemented by such an organisation as the Ladies' Health Society?—Yes, its value would be increased by the lady health visitors.

3159. Have those lady health visitors any special qualification?—Yes, they are educated to a degree, and some of them have been trained nurses.

3160. There is a society called the National Health Society, which gives certificates after examination which are evidence of qualification for work of that kind?—Yes. I think certificates of all incorporated bodies, unless they have some public governmental recognition, are not of so much value. There is competition among the bodies themselves which render their certificates of less value, and the test of their knowledge has no particular standard.

3161. Some combined action on the part of the municipal authorities might establish that standard?—Yes, it would be a very wise provision.

3162. All these municipalities have a kind of joint organisation, have they not, which enables their representatives to consult and decide upon a uniform course of conduct?—Yes.

Dr. Malins.

3163. There is the County Councillors Association, for instance?—Yes. Some kind of uniformity might be obtained.

3164. Would you attach value to that?—Yes. It would be very important to have uniformity.

3165. I suppose even doctors differ a great deal?—I am afraid they differ more than the general public with regard to the feeding of infants.

3166. That is a condition of expert knowledge, I fancy—It is more diverse?—It is very unusual indeed to see any two agree to the mode of feeding and the best kind of food to be used. In some instances the want of knowledge of doctors themselves with regard to the most elementary principles of infant feeding is lamentable.

3167. Much might be done in training the elder girls in schools for the responsibilities of domestic life?—Yes, a great deal might be done.

3168. I suppose the elder children after they leave school are employed by their mothers to tending the young ones, and their knowledge would be put to immediate application?—Yes, I take it that you mean in the ordinary domestic details of the house.

3169. Yes?—In addition to cooking.

3170. Yes, house management generally and attending to children?—Undoubtedly it would be a very great advantage, because in the majority of the houses of the poor it is the eldest girl who has perhaps more influence in bringing up the children than the mother.

3171. Yes. It is from that point of view we advocate it. In Birmingham is it difficult to bring home good milk for the consumption of the poorer classes?—No.

3172. Has the municipality done anything to assist it?—Nothing at present at all. There is a good milk supply.

3173. The health of Birmingham is good, is it not?—Yes; the death rate is low.

3174. I presume the municipality there has always been wide awake?—The Health Department, the Department of the Medical Officer of Health, is very well organised, and well arranged, and the Chairman of the Health Committee has devoted a great deal of personal attention to the subject himself.

3175. I should like to ask you one question on the general issue, from your experience in Birmingham. Birmingham is, of course, one of the great centres of population in the United Kingdom, and you have been there some years?—Yes.

3176. In the course of your experience in Birmingham would you say there was anything to warrant the belief that progressive physical deterioration existed?—Yes. I could not give you figures to that effect.

3177. You think the health of the Birmingham community is not as good as it was?—I think the general health is quite as good as it was, but there would probably be a greater number of rejections if physical examinations were made of a certain standard.

3178. There would?—Yes.

3179. Owing to the abnormal conditions of town life?—Yes. I do not think that it is worse than it was, because the Factory Acts have improved the conditions of the workers. There are a large number of factory workers; they have been very much improved in both sexes. The very large employers of labour are philanthropic men who have given a great deal of attention to the sanitary and hygienic condition of their workers—men like Cadbury, for instance, and Tangye, the great machinists, and others, so that I do not think, as a whole, the health is deteriorating, although there may be a greater number.

3180. You do not think that a large proportion of the population are permanently damaged?—No.

3181. The number is not more than it was a few years ago?—No; I do not think it is.

3182. Do you think on the whole, that the condition of things is encouraging?—Decidedly so.

3183. You think there is a greater public conscience on this question than there was?—I think the outlook for the future is very much better than it has been for many years past—with reference more particularly to greater attention being drawn to the subject, and a greater number of agencies for facilitating and promoting the objects of health, the greater love for outdoor games, and a greater sense of the need for phyiscal culture altogether.

3184. We had it suggested that want of fresh air was a more potent cause of degeneration than either overcrowding or bad food—they lack open air life?—With regard to that, my impression is, that there is rather a craze for open-air treatment at the present day; you are recommended to live on the roof, and so on. I do not think we have evidence that the physical condition of people who live in the open air is really stronger than others. I do not think we have evidence that farm labourers, or people who live on the land, are really physically stronger than those who exercise a certain amount of care and live in towns.

3185. Under sanitary conditions?—Yes.

3186. (*Dr. Tatham.*) You spoke just now of a decline in the general death rate in Birmingham?—Yes.

3187. Is it within your knowledge whether the mortality amongst infants is decreasing or not?—I could not say with regard to infant mortality. I do not think it is separated from the general mortality. I suppose it would be, but I have not looked at it.

3188. Do you know whether or not the mortality amongst illegitimate children is very considerably greater than amongst legitimate children?—No. I could not tell you that; I do not think it is; I could not give you any figures.

3189. If it were represented to you as a fact that the mortality amongst illegitimate children is very much greater than amongst legitimate children, it would follow that the proportion of illegitimate births in a population would control to some extent at least the mortality of infants, would it not?—As a rule I think it is accepted that the mortality of illegitimate children is greater.

3190. It is enormously greater, and, that being so, you will allow, I think, that the proportion of illegitimate births in a population would be a material factor?—Yes, undoubtedly so.

3191. Is the proportion of illegitimacy high among the Birmingham people?—No, not more than the average.

3192. For a large manufacturing town?—That is so. It is always fairly high.

3193. With regard to distributing leaflets amongst the mothers of the poorer children, you were speaking of the great difference of opinion existing amongst medical men as regards advice given as to the feeding of infants?—Yes.

3194. Do you think that could be got over by an official leaflet being circulated by the Medical Officer of Health?—Undoubtedly it could.

3195. Because he would be responsible for what he wrote, and would probably be in touch with consulting physicians, like yourself and others, who probably would be able to agree?—Yes, a great deal might be done by him. Still more might be done by calling attention to the teaching in the medical schools. It is a subject which is not taught thoroughly. It is picked up by degrees, and not taught so systematically as it should be.

3196. Do you think the system which has been spoken of here, and which obtains in Manchester—the system of lady health visitors—might be utilised to give information to the mothers?—The lady health visitors is a very good institution indeed.

3197. (*Mr. Legge.*) I believe you stated in your *précis* that a Committee of the Obstetrical Society of London has been appointed to collect statistics as to the weight and condition of infants at birth, and their progress during the time they are under observation at various lying-in hospitals or places of confinement?—Yes.

3198. Are they engaged in collecting these statistics now?—Yes; but only since I had the intimation that this inquiry was going on.

3199. Would it be possible for us to have the benefit of the results of that inquiry within the next two months or so?—Yes, up to that point, because it has already started operations.

3200. You will not wait till the conclusion before you send us some result?—No, there will be no conclusion except the number obtained.

3201. Perhaps you could give your information from time to time, as the statistics are got together?—Yes. In two months I should say I could send them to you.

3202. (*Chairman.*) Will you do that?—Yes. I will give you information from different sources. I think it is a point of very great practical value, and of much importance. It bears out the opinion I expressed at the beginning.

3203. (*Colonel Onslow.*) You consider that the majority of children are born healthy; do you include amongst these the cases of children whose parents are very syphilitic—either or both of them—or who have mental infirmities?—Transmissible diseases?

3204. Yes. These would come out in the infant, would they not?—Many of them would come out at birth. Syphilis does not come out for a few days.

3205. I mean it would come out during the early stages?—Yes. I make allowance for that in the 15 per cent. or so. That makes 85 per cent. who are born healthy.

3206. With regard to outdoor games, we have heard a great deal about that to-day; do you think really the lower class, especially in large towns, would themselves go in for outdoor games now?—No.

3207. As much as their forbears did?—I do not think they would do so so much.

3208. They go to look at others?—Yes, and do not participate.

3209. That must be very bad?—You will find a crowd of 15,000 or 20,000 people go to see, perhaps, thirty players, and then they will go off to drink, as a rule, although it is said they go quietly back home, having enjoyed the fresh air. That is not so. In a town like Birmingham they will give up their work on Wednesday afternoon to witness a football match. However great the pressure of work in a particular factory may be, I am told nothing would induce them to remain at work if they want to see a football match.

3210. Regarding the prevention of mothers from working in factories, in the case of widows who have to support their whole family, for instance, a woman might have lost her husband just before her child was born—you would make an exception in their case?—Yes.

3211. Who would take charge of the children—the public?—Yes, I think that child ought to be kept. Then it falls under the care of the parochial authorities.

3212. What do you say with regard to the pauperising of women?—I do not think they should be pauperised in circumstances of misfortune like that. At the same time the parochial authorities are the proper people to take charge of the child unless there is a voluntary agency, which is most places there is not.

3213. (*Mr. Struthers.*) You spoke of a plentiful milk supply in Birmingham?—Yes.

3214. Even in the poorer quarters?—Yes.

3215. Does that come from the surrounding district?—Yes, within 15 or 16 miles.

3216. Do you happen to know whether the dairies from which it comes are in any degree under the supervision of the medical officer of Birmingham?—Yes, The milk shops where it is sold are directly under the supervision of the health officer.

3217. Do you know if he has any sort of power whatever with regard to the farms where the milk comes from?—None, except that the farmer gives a guarantee to the purchaser of the milk. It is brought in in cans, and a certificate of its purity is given.

3218. Have there been any epidemics of typhoid fever traceable to milk?—Not within recent years in Birmingham.

3219. Do you know if there is much prosecution on account of the adulteration of the milk?—Only occasionally. It is generally found that the milk supply is good.

3220. You would not infer from what you know about the milk supply in Birmingham that the dairies from which it comes are in a state of perpetual filth and insanitation?—I know the surrounding district and I should hardly believe such a statement. *Dr. Malins.*

3221. It would rather surprise you, would it not?—Yes, it would surprise me very much.

3222. As regards the difference of opinion among medical men as to the proper feeding of infants, of course it is of no use sending round leaflets to other people until the proper method of procedure has been settled?—I think it would be, because the health officer would be able to formulate systematic rules which would be very few and very simple because the principles are very few and the ignorance is very great with regard to it.

3223. That is to say, in spite of the difference of medical opinion you have spoken of, there is a substantial amount of agreement as to certain things?—Yes.

3224. Which ought to be brought home?—Yes. The right principles are very few in number and might be very easily condensed into a few simple rules.

3225. Such a thing as milk ought not to be replaced by any substitute if it can possibly be avoided?—That is so. The milk alone should be used and not the artificical foods, which are an unknown quantity and which are of unknown composition.

3226. I gather that some of these foods are satisfactory?—Some of them are satisfactory, and foods that are sold under certain proprietary names such as Mellin's food or Benger's food; they are good foods. What I alluded to was the foods made by chemists on their own initiative.

3227. But there are many others which are not satisfactory?—Many others.

3228. Now is there no means of stopping the sale of these foods? Suppose a food is sold as an infant's food which is known by medical men not to be a satisfactory food and one which will do the infants harm, is there no means of stopping its sale?—None. Under the Food and Drugs Act I do not think you can do so because it would contain certain things which would be advantageous—the necessary elements of food. The starchy materials which would be disadvantageous could not be said to be deleterious or poisonous because it was sold as an infant's food and represented to be an infant's food. All you could say would be that it was not suitable as food. You could hardly make it penal.

3229. It would not come under the Adulteration Act?—No. The chemist would say that he advertised it as an infants food.

3230. If it were proved that it was a food that was not suitable for infants?—There the question of standard comes in. You want some uniform standard as to what are the right proportions.

3231. Would not that rather point to the fact that it would be useful to have a Committee appointed by the medical societies to go into it thoroughly?—I do not think the medical societies would take the responsibility of making the standard or even the Education Department. It would have to be a sub-section or an addendum of some kind to the Food and Drugs Act, I think.

3232. I am suggesting a Committee of research by people to go into the matter thoroughly?—A small committee as to the standard and uniformity of food supplies for children would be very valuable.

3233. What do you think would be the proper body now to appoint such a Committee—perhaps several bodies might be asked to take part?—Yes, I should think the Medical Society of London and the Chemical Society would be the two bodies from which the greatest amount of scientific knowledge could be derived.

3234. And, of course, it is scientific knowledge which is wanted, is it not?—Yes, that is the basis for determining the kinds of food to be used. The Medical Society would be essentially practical; the Chemical Society would give the scientific composition of food.

Dr. Malins.

3235-6. (*Chairman.*) There is one question with regard to milk supply. You are aware, probably, that by the Contagious Diseases (Animals) Act, 1875, the Local Government Board is empowered to make orders for the registration of "cowkeepers, dairymen, etc., the inspection of cattle in dairies, and prescribing and regulating the lighting, ventilation, cleaning, drainage, and water supply of dairies and cowsheds, etc., and securing the cleanliness of milk-stores, milk shops, and vessels, etc." Are you aware whether the medical officer in Birmingham ascertains whether those powers are in force in the rural districts from which Birmingham draws its milk supply? Does he take that precaution to see that the dairies from which Birmingham gets its supply of milk are protected by such powers, the exercise of which the law places in the hands of the authorities?—I am not aware that it is done systematically.

3237. Do not you think it would be a good thing if the local sanitary authority did satisfy itself that the milk supply of big towns came from a district where such precautions were taken?—Yes. At present all that is done is to test the milk occasionally to see that it is right.

3238. That only discovers obvious facts?—Yes, certain obvious facts such as dilution. I think it would be advantageous to put those powers into force systematically.

3239. They may be enforced, and it would be as well to find whether they are or not, before the town is satisfied that its milk supply is good or not?—Yes, it would.

3240. Have you observed the effects of alcoholism in parents upon young children?—Not physically, not their physical development. It must tell hereditarily, of course.

3241. It produces neurasthenia?—Yes, undoubtedly, and degeneration of all kinds.

3242. Have you any of these lady health visitors in Birmingham?—Yes, there are six of them.

3243. Are they organised in connection with the municipality?—Yes, undoubtedly. They are appointed and paid by them under the direction of the Health Committee.

3244. And do you enlist voluntary labour?—No, there is no voluntary labour in that.

3245. That, of course, is done very largely in Manchester?—Yes.

3246. They are virtually sanitary inspectors?—Yes.

SEVENTH DAY.

Monday, 1st February, 1904

PRESENT,

[Mr. Almeric W. Fitz Roy] (*in the Chair.*)

Colonel G. M. Fox.	Colonel George T. Onslow.
Mr. J. G. Legge.	Mr. John Struthers.
Mr. H. M. Lindsell.	Dr. J. F. W. Tatham.

Mr. Ernest H. Pooley (*Secretary*).

Mr. J. Gray, called; and Examined.

Mr. Gray.

3247. (*Chairman.*) You are a Member of the Council and Treasurer of the Anthropological Institute and Secretary of the Anthropometric Committee of the British Association for the investigation into the physique of the population?—Yes.

3248. And you have given a good deal of time to it from a sheer love of the subject?—Yes, for the last eight or nine years I have been engaged along with Mr. Tocher in carrying out anthropometric work in Scotland, and we have made some of the largest surveys which have been made in the British Isles.

3249. You are a member of the Civil Service, I believe?—Yes, I am on the technical staff of the Patent Office.

3250. You have something to say upon the constancy of physical dimensions under normal conditions, have you not?—Yes. The whole value of anthropometric statistics as a test of physical deterioration depends upon that. I may mention one or two cases which are accepted amongst anthropologists as evidence that those dimensions are practically constant for ages when there are no disturbing influences. I have mentioned in my memorandum the case of the Egyptians. The statistical investigations of Miss Fawcett have shown that the predynastic race discovered by Professor Flinders Petrie in Egypt are of the same race as the Copts or modern Egyptians. Comparison shows that the change in the average dimensions of the head which has taken place among the Egyptians, in an interval estimated at 8,000 years, amounts to a decrease of only 3½ per cent. in the length, and an increase of only 1½ per cent. in the breadth. A similar comparison of the neolithic people of Sweden with the modern population shows a decrease of ½ per cent. in the length, and an increase of 3 per cent. in the breadth. The interval in this case is about 4,000 years. Knowing from this and other evidence the constancy of average physical dimensions for very long periods of time, if we find a very great decrease of dimensions in any population in a comparatively short time, we naturally infer that some abnormal force is at work which is bringing about this change in the dimensions.

3251. You have considered what you conceive to be the causes of physical deterioration?—Yes.

3252. I will not trouble you to tell us about the first matter which you have mentioned, because it does not touch our subject, namely, the admixture with inferior races?—I should like to say a little about that because it appears to me to have an important bearing on the deterioration of the national physique.

3253. There is not much admixture is there ?—In certain places there is.

3254. (*Mr. Lindsell.*) You mean those people coming into this country ?—Yes, the influence on the population of the immigration of degenerate aliens.

3255. What do you mean by the bearing of the law of averages on this question ?—I simply meant that the adding to the population of a certain number of degenerates would reduce the average dimensions of the population. That, of course, is an arithmetical axiom.

3256. You have not got that at great length have you in your memorandum ?—No.

3257. (*Chairman.*) You have the memorandum on this subject before you, have you not ?—Well, I have slightly modified it by adding some more evidence. It is self-evident, as I have already said, that admixture of an inferior race with a superior race, even without intermarriage, will reduce the average national physique, but as long as the inferior race remains isolated the evil can always be remedied in the last resort by the expulsion of the degenerate aliens. If, however, the inferior race intermarries to any considerable extent with the native population, this remedy can no longer be applied, and the high position which the superior race has won by ages of progressive evolution, may, in a few generations, be hopelessly lost. The history of Poland is an awful example of national ruin brought about by the unrestricted immigration of degenerate aliens. About 600 years ago the Jews were invited to settle in Poland at a time when they were cruelly persecuted in every other country in Europe. At that date the Poles had the high average stature which the other races of Northern Europe still possess. Poland now contains the largest percentage of Jews and the lowest average stature in Northern Europe.

3258. That may be the case with regard to emigration into Poland, but we have been told here that the Jewish children are to be found among the best types of children the country can produce in the urban districts ?—They may be more intelligent.

3259. Yes, and physically they are very much superior to the average British boys. What you say may be true of Poland and scores of countries, but to my mind it has no application to the conditions in this country ?—The enquiry of Mr. Jacobs among the Jews in the East End of London leads to a different conclusion, namely, that these Jews are three inches shorter than the average Englishman.

3260. (*Colonel Onslow.*) They are shorter in stature, but are they of less bulk ?—You mean less in weight ?

3261. And chest measurement, are they worse nourished —The chest measurement of the Jews is very much less, it is very small.

3262. But that does not coincide with the evidence that we have had ?—That may be.

3263. (*Mr. Struthers.*) That coincides with one's observation in walking down Whitechapel, namely, that the Jews are undersized ?—Mr. Jacobs has made a most thorough investigation of the Jewish race, and he has published a paper on the subject which he read before the Anthropological Institute.

3264. (*Chairman.*) Will you continue on that point ? —With reference to the recent proposal of the Government to exclude the degenerate aliens I have suggested here that it is not sufficient to ask for a passport of good character, but that an anthropometric test should be also made.

3265–6. As a condition precedent to admission to this country ?—Yes ; one has to consider the physique of the nation. You may have a good character with a degenerate physique, and the good character would not lessen the physical injury done to the population of the country.

3267. What do you conceive to be the second cause of degeneracy ?—Unhealthy environment, which consists of a great many different elements—deficient nutriment and want of fresh air, and disease, and several influences generally associated with town life. It is a point that has been proved and accepted by anthropologists that deficiency in nutriment and other miserable conditions of life lead to decided reduction of stature at least. No investigations, as far as I know, have been made on the influence of unhealthy environment on other dimensions, but there is little doubt that the stature is very much reduced. At Limousin, in France, the population has a stature of 3 inches less than the surrounding people, and yet it has been proved that it is entirely due to the environment, because the children of races living in this district, when brought up in more healthy regions, recovered their original stature, namely, that of the surrounding population. The influence of nutriment on growth is also shown by the difference in stature of Jews living in the East End and in the West End of London. The wealthy Jews of the West End are found to be 3 inches taller than the poor Jews in the East End. The loss in stature is recovered under the influence of healthy surroundings. A third cause of deterioration is the unequal rate of increase of the superior as compared with inferior classes. Anything which decreases the difference between the birth-rate and the death-rate among the superior classes, and increases this difference among the lower classes tends to produce a progressive deterioration of the average national physique. The tendency of the population in modern industrial communities to concentrate itself in large towns and the increase of wealth appear to have the effect of reducing the birth-rate of the superior classes and of decreasing the death-rate of the inferior classes. It has been established by taking a census of the size of the families of the professional classes in the United States of America, that there has been a great decrease in the size of their families within recent times, and that these intellectual classes are now barely reproducing their numbers, and the same tendency is no doubt at work in this country.

3268–9. You are not following this memorandum of yours ?—Not quite.

3270. Do you think it is necessary to amplify much what you have said here ?—Not with respect to that point.

3271. This might go into the evidence just as it is ?— Yes, it is not materially different. I have merely added one or two illustrations of the arguments.

3272–3. You can add that in the proof ?—I mention the effect of the Franco-German War in reducing the physique of the generation born during the war. It was found that a much larger percentage of the conscripts who came up twenty-one years after the war had to be rejected. That was explained by the assumption that the most vigorous men had gone to the front and that the parents of the degenerate conscripts of 1891, were the men who were rejected in 1870 for defective physical deterioration.

3274. Something the same as in the Napoleonic wars in the third and fourth decades of last century, I suppose ? —Yes. These examples illustrate the danger which results from a reduction in the numbers of the superior classes in a community.

3275. Can you tell us the effects of emigration on this point ?—It has been found in Ireland by comparing statistics of emigration and statistics of insanity, that emigration is closely associated with the percentage of insanity in the population. As the emigration increases the percentage of insanity increases, and if the emigration diminishes the percentage of insanity also diminishes, showing that one is affected by the other.

3276. Is that owing to the intermarriage of the inferior classes left behind ?—Yes. That appears at least to be the most obvious explanation, but even though the intermediate train of cause and effect is in reality more complex, there can, I think, be no doubt after analysing the statistics that emigration is one of the primary causes of insanity.

3277. Now to come to the kind of statistics to prove the existence or non-existence of physical deterioration, what have you got to say ?—If the population was of uniform type throughout the whole country it would be sufficient for statistical purposes to measure a fairly large sample, say, 2,000 to 3,000, taken anywhere, in order to determine the average dimensions with sufficient precision. But the population of the British Islands is by no means of this uniform type. For instance, according to the British Association Report, 1883, average statures in Great Britain vary from 70·14 inches in the border counties of Scotland to 66·27 inches in Herts and Middlesex. Here we have a difference of about 4 inches ; and a still greater difference might be found by selecting smaller districts. Evidently in making

Mr. Gray.

a comparison between the dimensions of the population at different dates we must take our samples from districts so small that there is no sensible variation in the type of people to be found within its boundaries. The British Association (1883) Report also shows that there is a considerable difference in the average dimensions of the different classes of the population. The average stature, for example, of boys between the ages of eleven and twelve, at public schools, is 54·98 inches, while of boys of the same age at industrial schools it is only 50·02 inches. There is thus a difference of about 5 inches in the average stature of boys belonging to the two extreme classes measured. The difference in the stature of the two extreme classes of adults is not quite so great, being only 3½ inches, but even this is a very considerable difference. The bearing of these facts upon the taking of samples at different dates for comparison is evident. The two samples to be compared must be taken from a district of sufficiently limited area, and must either contain the true percentage of all the different classes in the community, or separate samples should be measured from each class.

3278. Do you say "the same percentage"?—I say that from the Census report one would ascertain the percentage of the different classes, and in this way make a true sample of the population. The rules to be followed, in collecting statistics capable of proving the existence or non-existence of physical deterioration may be stated approximately as follows. I have somewhat altered the memorandum. The whole country should be divided into 400 districts with a population of about 100,000 each. In thinly populated rural districts a smaller unit of population may be taken, while in large towns a larger unit may be taken. The object is to choose a district so that the population throughout the whole district is practically homogeneous. Samples of not less than 2,000 (1,000 of each sex) of each homogeneous unit of the population should be measured. In the case of children comparisons can only be made between children of the same age. The classes to which the parents belong should be noted. The measurements of each district should be repeated at intervals of ten years.

3279. Do you think it necessary to go over the whole country?—Yes, but not at the same time. It may be spread over the ten years so that the staff of the survey will be continuously employed. There is no necessity to measure the whole country simultaneously. There might be some advantage in it, but it would be enormously expensive, and one could get the same result practically by measuring forty districts per annum, and measuring them again after an interval of ten years. Assuming that any change is progressive, one can ascertain the amount of deterioration that would happen at any year between the two periods, so that one could make up the state of the whole country at any particular date, simply by calculating the condition of the district from what we know of its condition at the two dates, ten years apart. There would be very little doubt about it. The other method would be very much more expensive. It can be shown by statistical theory that in comparing the average stature of two groups of 1,000 persons each, no difference less than ¼ inch is significant of a real change of stature, and as it may be desirable to detect a change of that amount, in ten years a sample of at least 2,000, (1,000 of each sex) should be measured.

3280. I should like to hear you explain briefly what the British Association Committee did?—Yes. Between 1878 and 1883, a Committee of the British Association collected statistics of stature and weight of 53,000 persons of all ages and both sexes, 8,585 of which were adult males. The distribution of the adult males was as follows: England 6,194; Scotland 1,304; Wales, 741; Ireland, 346. The adult material was classified independently (1) according to classes, and (2) according to counties or groups of counties. But in no case is it possible to ascertain both the class and the locality of a given group, a condition which is essential to making a comparison with measurements taken at a later date.

3281. Will you mention any cases in which comparisons can be made between the 1883 measurements of the British Association and measurements made at a later date?—There are only three cases in which more or less legitimate comparisons can be made. The first case relates to the popuatilon of the N.E. counties of Scotland. In the 1883 Report the average stature is given as 68·04 inches; in 1895-97 measurements made by Mr. Tocher and myself in Aberdeenshire gave an average stature of 68·02. There is evidently no significant difference between these two averages, and we may say that there has been no change in the average stature of the people in this district, provided the same classes were measured on both occasions, which, however, is not quite certain. The second case relates to the boys at Marlborough College. Measurements have been made of the stature of these boys since 1874. The British Association Report gives the average stature in the period 1874–78 of these boys between the ages of 14 and 15 as 61·4 inches. From figures kindly supplied to me by Mr. Meyrick I find that the average stature in the period 1899–1902 was 61·96 inches. This means an increase of ·56 inches, and since this difference would occur only three times out of a 1,000 among pairs of samples drawn from homogeneous material, we are justified in saying that there has been a small increase of stature among the professional and upper middle classes from which the Marlborough College boys are drawn. The third case relates to the population of the west of Ireland. The British Association Report gives the average of a sample taken from Connaught as 68·72 inches; and recent measurements made by Cunningham, Haddon and Browne give an average stature of 67·41 inches among certain groups of people on the west coast of Ireland. Statistical analysis shows that this difference means a real deterioration of stature, but there is strong reason for suspecting that the same class of people was not measured on both occasions, and for this reason deterioration cannot be said to be proved with anything like certainty.

3282. There is a list of measurements in your memorandum we will put into the appendix without troubling to go through that. But what do you consider the effect of the measurements of Dr. Hay and Dr. Mackenzie, because they are the most recent, and they were taken in connection with the Scottish Physical Education Commission?—The measurements of Hay and Mackenzie are of great value in showing the effect of insufficient nutriment and insanitary dwellings upon the stature of the child?

3283. They have only examined 600?—Six hundred in Edinburgh and 600 in Aberdeen.

3284. Is that enough on which to base any accurate conclusions?—It was enough to show a real difference of stature, because the difference between the Edinburgh and Aberdeen children was considerable.

3285. Will you tell us what you have to say about that matter?—The average stature of the Edinburgh child between the ages of 12 and 15 was found to be two inches less than the corresponding Aberdeen child. Statistical analysis shows that this means a real inferiority in the stature of the Edinburgh children measured. The Report shows that the environment was much more favourable in Aberdeen and makes it probable that this had something to do with the difference.

3286. There was no racial difference to account for that?—Not as far as we know. The head measurements are the same. But that is a presumption; it is not necessarily the same race with the same head measurements.

3287. But what is known anthropologically of the Lothians and Aberdeen; would you say that they were identical in race?—They are not identical. We know very little about it, but so far as we know they have different dimensions.

3288. Are the Lothians the larger or the smaller race?—The Lothians, according to Beddoe, have a higher stature than Aberdeenshire.

3289. And that implies a greater deterioration than the bare fact would seem to show?—Yes, it would, if all the children measured in Edinburgh were really Lothian children. But I have been informed that a considerable number of the children in the Edinburgh slums are Irish children, and the stature of these children might be less than that of the natives. The published statistics do not enable us to calculate exactly what difference between the Aberdeen and Edinburgh samples measured, would be significant of a real difference, because the deviation from the average is not given. But I have assumed that the deviation is the same as in similar groups of children in other schools, and on this assumption it appears that the children in those Edinburgh schools are certainly of lower stature than the children of the same age in Aberdeen.

3290. Certainly that seems to be so?—But I mean that these differences might be due to sampling. It would not necessarily follow that they were really of less stature except where the difference exceeded a certain amount.

3291. Did they take large enough samples, do you think?—Yes.

3292. And was the basis of their system of selection intelligent enough to avoid error on that account?—I think it was.

3293. We shall have Dr. Mackenzie here to give evidence. Now will you go on with your memorandum?—Some of the other conclusions on the Report on Physical Training are not, I think, justified by the statistics. For instance, it is said that they prove that the west end schools of Edinburgh showed superior physique to the east end, but the statistics given are not sufficient to prove that point. The numbers measured were far too small, and the difference found might have occurred between two samples taken from a uniform material. I do not say that the conclusions are not right, but the statistics do not prove that they are right.

3294. The statistics are not sufficient to prove the point you think?—Quite so, and I think that in several other cases where the conclusions on strict examination are found not to be proved by the statistics. It is only in this one case of the difference of stature between Aberdeen and Edinburgh children that I find the conclusion is justified by statistical analysis. Taking into consideration the whole of the available statistics, the only more or less legitimate conclusions we can come to on physical deterioration in the British Isles are: The physique of the population of the slums of large towns like Edinburgh has deteriorated; the physique of rural population of the N.E. counties of Scotland has not changed within the last 20 years; the physique of the professional and upper middle classes in England has improved within the last 25 years; the physique of the population of the west of Ireland has deteriorated.

3295. I thought there was a different conclusion to that?—No.

3296. But there is no guarantee in this case that the racial type of that part of Ireland was the same in both cases?—That is quite right.

3297. That is what you assume?—I take it from the statistical point of view. I go on to explain that the material might not be the same and that of course weakens the conclusion.

3298. Besides, the number was very small, so that the 200 adult males given there would not help us?—That is also an objection.

3299. We should like to hear your general conclusions before we go any further?—The only possible way, in my opinion, of determining the existence or non-existence of deterioration of the national physique is by the establishment of a permanent Anthropometric Bureau to carry out continuously an anthropometric survey of the whole population on the lines which I have already indicated. Then I come to a general discussion of this scheme. May I go on?

3300. Yes, please?—It is not quite the same as you have before you. I have, in some details, altered the scheme I submitted in my original memorandum.

3301. This scheme which you have here is the same as explained by Dr. Cunningham, is it not?—Yes, practically the same. I have made some slight alterations in the statistics. According to this scheme the United Kingdom would be divided into 400 districts each containing on an average 100,000 persons. The school children between five and eighteen years number about a quarter of the whole population. There would thus be in each district 5,000 infants under school age, 70,000 adults over eighteen years, and 25,000 school children. As I have already explained, it is necessary for statistical reasons to measure a sample of about 2,000 (1,000 of each sex) in each homogeneous group. This requires that samples of the children be taken from age groups extending over one year. As there are thirteen groups in the school period the average size of the sample in each age group will be just under 2,000. It is necessary, therefore, to measure the whole of the school children in each district in order to get sufficient samples for every age group of one year. The infants under school age may be left out of account in this estimate, as they would be rather difficult to get at. It would be possible to get the parents, in many cases, to carry out measurements of this class. With reference to the adults it will be sufficient to measure a sample of 2,000, that is 1,000 of each sex in each district. To sum up, it will be necessary to measure every ten years, in each district, 25,000 school children and 2,000 adults. As there are 400 districts to be measured in the course of ten years, the total number of the population to be measured in that period will be 10,000,000 school children and 800,000 adults. The number to be measured per annum will be 1,000,000 school children and 80,000 adults. That is to say one-tenth will be measured every year. Each surveyor or measurer could, I believe, when thoroughly expert measure about 180 school children per day. The number measured will, of course, depend on the number of characteristics to be noted. I have assumed that length breadth and height of head, chest, stature, and weight are measured. The two latter dimensions could be taken by the teacher who would also do the recording. With this arrangement from thirty to forty children could, I think, be measured per hour, judging from my own experience. That would mean 180 scholars measured per day and would amount in a year of 250 working days to 45,000 measured per annum. Since it is necessary to measure 1,000,000 scholars per annum this would mean that twenty-two surveyors would be required to measure the school children. As adults would be more difficult to get at probably not more than fifty could be measured per day; this amounts in a year of 250 working days to 12,500. Since 80,000 adults have to be measured per annum this would imply that seven surveyors will be required to measure the adults. We may estimate, therefore, that approximately thirty surveyors will be required to measure sufficient samples of the whole population. In my former estimate, I came to the conclusion that only twenty surveyors would be required, but in that estimate I assumed that only three head dimensions and stature would be measured. Professor Cunningham thinks it desirable that more measurements and certain observations on eyesight, etc., should be made. I quite agree with him that the results obtained by these additional measurements would be of the greatest value and they could easily be made by a small addition to the number of surveyors. The employment of school teachers, medical men, factory inspectors, or the like to make measurements, instead of a permanent staff of surveyors has been suggested. Since I sent in my first memorandum I have changed my opinion upon this subject. I have made an approximate calculation of the comparative cost of these two methods of carrying out the survey, and I find that the employment of a large body of teachers or government officials to carry out the survey as an addition to their present duties would cost several thousand pounds per annum more than a permanent staff of surveyors. The following considerations will explain this point:—1. The number of teachers, etc., employed would be at least 100 times greater than the number of a permanent staff. 2. This implies a great additional cost for instruments (about ten times as much). 3. The cost of training so large a number of teachers will be very great as they will have to be brought to London, Edinburgh and Dublin, and kept for several days till they are trained. 4. The most serious objection, however, is that the measurements could never be so accurate and uniform as those made by a small permanent staff continually employed at measurement and constantly checked by the instructors.

3302. If you simplify the measurement so far as the children are concerned, could not outsiders be taught to do it without much trouble?—If one includes head measurement it would be difficult for outsiders, but, stature and weight could be done by them.

3303. (*Colonel Fox.*) The chest measurement would be the most difficult, would it not?—Yes. I imagine that the chest measurement would be most difficult. The difficulty is to get the children to inhale and exhale to the full extent.

3304. Do you think it would be easy to train outsiders to take the head?—I have trained a number of persons to measure the head and I find that it takes several hours before I get them to make a correct measurement. It looks a small matter, but it requires some skill. I should not rely upon the teacher. It takes two or three hours for people of intelligence, and in many cases a great deal longer.

Mr. Gray.

3305. How is the head measured ?—We do it with the callipers. We do not measure the circumference but the length from the glabella to the extreme point at the back of the head, and the maximum width.

3306. You get the maximum diameter ?—Yes, in both cases, and they can be measured very exactly—within a millimeter with practice. But those who are not skilled might vary three millimeters. It has been found in the case of warders who measured criminals for the police that the average variation was three millimeters, although these people were instructed.

3307. I conclude that they would go on until they ascertained the maximum measurement ?—Yes. You put the callipers down so (*indicating*).

3308. (*Chairman.*) Do you remove the hair in the case of those with thick hair ?—In the case of boys the points of the callipers go through the hair, so that the thickness of the hair makes practically no difference. But in the case of the girls where the hair is tied up, it would have to be let down.

3309. (*Colonel Fox.*) In measuring the chest, do you use callipers ?—No, only the tape.

3310. In Sweden they use the callipers measuring from the sternum breast to the spine. This is done because they find that it does not bring in the muscle ?—Yes.

3311. It is more easy in the case of a child than a man ? —Mr. Maybrick, of Marlborough College, condemns the chest measurement on account of the difficulty of getting the exact measurements.

3312. (*Chairman.*) Why do you propose to include those measurements ?—Well, Professor Cunningham thinks that it is very important, as it shows vital capacity I am giving these more in deference to his opionin than from the anatomical point of view.

3313. (*Colonel Fox.*) As to the weight, would not you make a note as to the condition of the teeth, hair and eyesight ? You would notice very much vitality in those, would you not ?—That would be all useful. But then the scheme becomes so expensive ; one must restrict oneself to the most essential things. But a good many of those things may be noted without much extra time being taken up.

3314. Dr. Kerr puts down those things in the enquiry into London School Board children ?—Yes ; but if you go far in that direction you would have to employ a medical expert.

3315. But you are suggesting that ?—No.

3316. Not for those annual measurements ?—No, not the employment of medical men, but simply men trained to measure. That would be much simpler than a medical examination. I think it most essential to employ permanent surveyors, because where they are only trained as a teacher would be, for instance, to measure a school once in ten years, the measurement would not be so efficient.

3317. Would it not be necessary in drawing up those statistics to confine yourself to the same district and the same class of children ; otherwise you might bring in race. —That is what I propose, that the country should be divided into four hundred districts, and to measure each district, and at the end of the ten years you compare the same districts; if there was a great difference in one district there must be some cause for the difference. Besides, continual practice in measurements increases the accuracy, and also increases the rapidity in taking the measurements. I know from experience from continued practice in measuring that you can measure two or three as fast as another person who has not had experience, so that that would be a matter of economy. Of course a few teachers and inspectors, who showed interest and aptitude, could be taught by permanent surveyors who visited the schools, and these teachers could make measurements more frequently, perhaps once a year in the same schools. That would not involve the bringing up of the teachers to a centre to be trained.

3318. (*Chairman.*) This seems to be very good, but it does not deviate from what you said in starting ?—Well, at first I thought it would be a good plan to employ teachers to measure the school children but I found on going into the figures further that it would be much more expensive.

3319-20. And that is why you have modified it ?—Yes.

3321. Well, will you proceed with your remarks ?—I was going to read this memorandum on the constitution of the staff. which is practically the same as I have already submitted to you.

3322. Well, will you kindly let us know how that should be constituted?—The staff should consist, in the first place, of a Consultative Committee consisting of three leading anatomists,who have devoted special attention to anthropometry, one residing in England, one in Scotland, and one in Ireland ; the appointments to be honorary, without salary. The director to be an official with experience in organising and carrying out anthropometric surveys, with a special knowlege of the latest methods of dealing, with anthropometric statistics. He should also have administrative ability sufficient for the management of the permanent staff. His duties will be to determine, in consultation with the Consultative Committee, what dimensions are to be measured, and also the general scheme of the survey. When this has been determined, it will be his duty to organise and carry out the survey, by giving the necessary instructions to the heads of the surveying and statistical departments. The deputy director should be an anatomist with special knowledge of anthropometry. His duties will be to superintend the chief surveyor with respect to measurements, and also to see that the instructors give uniform instruction as regards dimensions measured, and methods of measurement. In the absence of the director, the deputy director will take his place and perform his duties. I have here an estimate of cost of an anthropometrical survey of the United Kingdom carried out wholly by a permanent staff. The chief surveyor will superintend the surveyors. He must be a person with tact and experience in carrying out surveys in the field. He will assign to each surveyor the district where he will measure, and he will, by frequent visits to the surveyors, ascertain that the work is being efficiently and accurately carried out. He will also carry on negotiations necessary to obtain consent to measure. The superintendent of the statistical department must be a person acquainted with the latest methods of statistical analysis as applied to anthropometry. His duty will be to superintend the statistical computers, to instruct them what calculations they are to carry out in order to calculate the necessary statistical constants. He will have to see that maps are made to show the geographical distribution of physical characteristics and also curves, etc., to show the distribution of characteristics in each district. Also to determine at intervals of ten years whether there has been any change in the physique in any district, and work out correlations with circumstances which might influence physique to determine causes of change. The instructors must be acquainted with the methods of anthropometry. They should preferably be assistants to professors of anatomy in London, Edinburgh and Dublin in medical schools having anthropometrical laboratories attached—the instructors in London would use the national laboratory. Their duties would be to instruct the surveyors. They would receive a fee for each surveyor they instructed. If teachers were employed to make measurements, the instructors would be so fully occupied in training the teachers, that it would be necessary to pay them a salary.

3323. You do not suggest that now ?—No, I say they might be paid a fee, as there are only thirty surveyors.

3324. It would not take long if you gave us that part of your memorandum ?—No. The surveyors must be accurate and reliable manipulators capable of being taught by the instructors to make the necessary anthropometric measurements. Their duties will be to go to districts as directed by the chief surveyor, and to carry out measurements as he directs. About one half of the surveyors should be ladies to measure school girls and female adults. The statistical computers will have to be accurate and reliable arithmeticians, preferably with some knowledge of the mathematics of statistics.

3325-8. Have you formed any estimate as to the cost of this ?—Yes, I have drawn up a scheme on the same lines as the Geological Survey.

3329. What was the total ?—The total amount of salaries would be a minimum of £11,000 and a maximum of £14,000, The amount for the Geological Survey is at present about £20,000. That is a rough estimate.

3330. What salary would you suggest the surveyors should receive ?—I have suggested the surveyors should receive from £200 to £300. I assume the salary would

be the same as for factory inspectors of the third class. But of course that is approximate. One can get men without very much education who are skilful.

3331. You would employ a man locally ?—Well, as they do in the Geological Survey; they would be sent out to the district until they had completed the measurements, and there would be very little in the way of travelling expenses because they would go round their districts in ten years, and the travelling expenses would not be much.

3332. And your director and deputy director, what should they be paid ?—Director, £850 to £1,000; deputy director, £750 to £850; chief surveyor, £600 to £700; superintendent of statistical department, £500 to £600; three instructors in anthropometry (one in London, one in Edinburgh and one in Dublin), fees; twenty surveyors (twelve male, eight female), each £200 to £300; twenty statistical computers, £200 to £300; record keeper, £150 to £200; correspondence clerk, £150 to £200; typist, £75 to £100; and messenger, £75. Total amount of salaries: minimum £11,340; maximum £14,975. I also estimate l the cost of the sets of instruments.

3333. And you think that 200 sets of instruments is the number that would be required ?—Of course, if you have thirty surveyors you would only require thirty sets; if you employ teachers you want ten times as many.

3334. And a set of instruments would cost each £8—that is £240. There is not much wear and tear of instruments, is there ?—No. They would last ten or twenty years. The set includes samples of hair colours and eye colours. These are necessary to note pigmentation in order to determine what races the people belong to.

3335. Have you anything more to suggest ?—In connection with the advantages from the survey, do you mean ?

3336. We should like to know what results favourable to public health would follow ?—There are are one or two. Our position among civilised nations in peace and war depends on the maintenance of a high average physique. The greatest mental endowments have been shown to be associated with the classes having the highest average physique. The statistics collected by an anthropometric bureau would supply exact knowledge of the physique of the whole population. If deterioration was taking place in any section of the population it would be immediately detected; the cause of the deterioration could be investigated and in many cases removed. Where the Government could not remedy the evil, public opinion would be influenced with beneficial results. I made an extract here from an article by Professor Karl Pearson which appears in the *Encyclopædia Britannica*.

3337. Is that with regard to its scientific value ?—Its value to the State. He says in short that the statesman should be able to tell whether ten or fifteen years hence we shall be as strong and active as a nation as we have been in the past; and also, for example, what are the effects of urban life, preserved foods, and universally used drugs ? This can only be done by an anthropometric census taken at intervals. From this census we should also learn the effects of trades on physique; the district where special physical and mental aptitudes are to be found, and thus direct the establishment of schools. We may attempt to remedy wrongly an admitted national failure through ignorance of its source. I have also notes of what has been done in other countries.

3338. What has been done there ?—No country has carried out an anthropometric survey anything like so accurate and complete as the survey which I have just sketched out. The nearest approach to such a survey is that carried out by the Government of India in connection with the last census. Complete pigmentation surveys have been carried out by the state in Germany, Austria, Switzerland, and Belgium. Large numbers of persons, chiefly conscripts, have been measured in France, Alsace, Lorraine, Baden, Wurtenburg, and Bavaria. Very extensive measurements of conscripts have also been made in Norway and Sweden. The German Anthropological Society has quite recently appointed a commission to carry out a survey very similar to that which I have proposed to you, but not quite so complete. They propose to measure from 1,000,000 to 1,500,000 of conscripts, but no female adults or school children. One of their objects is to detect physical deterioration, and they propose to repeat their measurements at intervals of ten years.

3339. Are any of these investigations which are carried out investigations of the Governments of those countries ? —The pigmentation survey of Germany, which was made about 1874, was carried out under the Government. It was recommended by the anthropologists. *Mr. Gray.*

3340. But as to the examination of these conscripts, has it been done by scientists ?—In Baden the measurements were carried out by scientists, and the scheme was financed partly by the Government and partly by the Anthropological Society. In Sweden the measurements were made by Professor Retzius and his colleagues; he may have got some financial assistance from the Government. In the United States there is a Bureau of Ethnology supported by the Government, but it merely collects information about the manners and customs of the Indians, it does not measure them.

3341. Does that conclude the evidence you intended to give ?—That is all.

3342. (*Dr. Tatham.*) In your experience is there anything like general progressive deterioration of the population ?—I do not think there is sufficient evidence to prove that.

3343. Progressive ?—There are no statistics which would enable anyone to prove that there is a progressive deterioration of the whole population; one can only guess. What statistics we have seem to show some slight improvement in the professional classes and a deterioration in the lower classes. I strongly believe that there is a great deterioration amongst the manufacturing classes in large towns and amongst the poorer population in slum districts in towns.

3344. Do you think that there is any evidence of deterioration amongst the country-bred people ?—No, I do not think there is.

3345. Do you think when country people migrate to the towns, that they deteriorate because of that migration ?—I think so.

3346. Do you think there is good evidence of that ?—One can only say all the evidence we have points in that direction. I do not say that it is absolutely proved; seeing that we have not got extensive measurements of the two districts, one cannot be certain. I have myself personally measured about 100 persons drawn from all the different parts of England and Scotland, and some from Ireland. These are people I have met in London; and I find that the smallest heads in England are those to be found in the manufacturing towns of Lancashire and Yorkshire; the largest heads are to be found in Devonshire and Cornwall, and also in the North of England. But my numbers were so small that I cannot say that it is proved—it is a probable conclusion, I consider.

3347. You spoke just now of the probable deterioration of the Edinburgh children by an influx of Irish children ?—Yes.

3348. I understood you to say so ?—Yes.

3349. Do you think that in any other cities besides Edinburgh the same thing is taking place ?—Do you mean the influx of Irish children ?

3350. Yes ?—Yes, there is a very large influx into certain towns.

3351. In Glasgow for instance ?—In Glasgow and the manufacturing towns in the neighbourhood. I understand there is a very large Irish population settled there.

3352. The Irish people coming from the Irish towns or from the country, the west coast of Ireland ?—I am not quite certain about that, but I believe they belong to the lowest class in Ireland. They are really representatives of the most inferior class in Ireland.

3353. What you said about the increase of lunacy in Ireland very much interested me. You said you thought emigration from Ireland probably was one of the causes at least of the increase of lunacy in Ireland ?—Yes.

3354. Have you figures to show that ?—Yes. The figures really were supplied by Dr. Macpherson, one of the Commissioners of Lunacy in Scotland, who has written a remarkable paper on the subject. Taking the figures given by Dr. Macpherson, it appears that within the last 50 years insanity in Ireland has increased from 15 per 10,000 of the population to 56 per 10,000. Analysis of the figures also shows that there is a high correlation between emigration and insanity. The paper is published in the *Edinburgh Medical Journal*, May, 1903.

Mr. Gray.

3355. (*Colonel Onslow.*) Is this a matter of increase in numbers or increase of percentages?—An increase of percentage.

3356. Is that partly accounted for by the fact that more cases are taken in these new statistics than would be taken thirty years ago when a lunatic would be merely treated as the silly boy of the village?—Yes.

3357. Now he is certified, that is not the case?—That might probably account for part of the increase.

3358. That might account for a large increase, might it not?—Yes, but still it would not neutralise the fact that there is found to be a distinct correlation between the amount of emigration and insanity. This shows that emigration, if not the sole cause, is one of the causes.

3359. But the increase of percentage would be partly due to the fact that there is more known about them now?—A certain amount of the increase in Ireland and other countries might be set down to that account, but it does not wholly account for the increase.

3360. (*Dr. Tatham.*) You think that there is no doubt about it that there is evidence of increase lunacy, proportionally of course, in Ireland?—Yes.

3361. And that this is largely due to the emigration of Ireland's best sons and daughters?—Yes.

3362. (*Chairman.*) How do you connect it?—It is no doubt true that emigration is greater in Ireland, and it may be that there is more insanity, but it would be very difficult to prove an absolute connection between the two. It may be due to many causes, and you have only given me one?—When one gets a large number of instances at different dates and places and compares them altogether and one finds on the whole that as emigration increases insanity increases, and as emigration diminishes insanity diminishes, one is justified in saying that one of these phenomena is directly or indirectly the cause of the other.

3363-5. But insanity is increasing in this country, but emigration is not increasing to the same extent?—I have not worked the correlation out in this country. There might be a certain amount of connection in that case.

3366. You must get what are the causes of insanity it seems to me, before you can draw those conclusions?—Quite so.

3367. (*Mr. Lindsell.*) Your scheme is rather this, that migration to a great extent tends to leave the weaker behind?—Yes.

3368. And that the weaker left behind have a greater tendency to insanity than the stronger who have emigrated?—Yes.

3369. So that the emigration is not the direct cause, but only indirectly the cause, of insanity, in so far as it leaves behind the least fit?—Yes.

3370. And that the least fit are more likely to produce insane off-spring than the stronger?—That is my point.

3371. That would be only one among the causes?—Yes. Confirmation of this view appears to me to be furnished by the case of the Jews. They have been shown to be an exceedingly degenerate type in Europe, and there is a high percentage of insanity amongst the Jews, much higher than among the surrounding Gentile races. This seems to point to the conclusion that the insanity is connected with degeneration.

3372. I think that you have given up the idea of suggesting that there should be any extensive employment of school teachers?—Yes, it would be more expensive, and the measurements would not be so accurate and uniform.

3373. It might be exceedingly difficult to get them to do it as a body?—They would require to be paid.

3374. But they might say that even if they were paid they have enough to do without it?—Yes.

3375. There is a great movement going on, that they have more extraneous work placed upon them than they ought to be required to undergo; and if without payment, they were asked to perform these duties, they might possibly object?—Yes, it is very likely. I have been informed by anthropologists who have attempted to collect pigmentation statistics in England that the teachers have asked what they were to be paid for it, and that they objected to do it without payment.

3376. And the concession made by the Government that no teacher shall be required to undertake any duty not connected with the ordinary work of his school would entitle them to object?—Yes.

3377. They might object even if they got the individual payment, and it might be difficult to carry it out through the teachers, might it not?—Quite so.

3378. It could not be done without considerable expense and it might be difficult even then?—That is quite what I thought about it.

3379. (*Mr. Legge.*) As regards the items to be taken into account in the survey, I presume you agree with what Dr. Cunningham gave us?—Yes, I quite agree with him.

3380. Do you think, in the case of children, that weight is essential?—Weight seems to be a very valuable indication of the nutrition of the child.

3381. Of the individual, yes; but supposing it is found in 999 cases out of 1000 that weight in a growing child follows height would you for the sake of the exceptional case insist upon weight being included?—No, I should not, but I should not think that the relation was so very close as that.

3382. Then what about breadth of shoulders—why breadth of shoulders?—I believe that Professor Cunningham, as an anatomist, considers that that is a very valuable measurement. It shows the development of the skeleton, of course. We usually only take the stature, the length of the total stature, but it seems to be equally important to take breadth.

3383. Breadth of hips?—That is an indication of development of the pelvis.

3384. But of the three, dealing with the skeleton alone, height, breadth of shoulders and breadth of hips, which do you consider the most important?—I think the stature is, of course, the most important.

3385. Then what are those instruments you speak of besides callipers—the measures of height and weight?—Some kind of graduated standard with a sliding bar.

3386. For height?—Yes, and for the breadth of shoulders one would require sliding callipers, larger than what is used for measuring the head.

3387. And then a weighing machine?—Yes, I have suggested that, if weight is taken. Then these hair and eye samples would be essential if we are to take the hair and eye colours, and that is so valuable for racial reasons that it should be taken. The most recent method proposed is to have a scale representing twenty different hair colours, made-up hair. This is given to the observer and he notes the number of the sample which is nearest in the scale to the hair-colour of the child. The eye-samples consist of glass eyes. One selects about twenty glass eyes representing the leading colours of eyes. Otherwise one cannot get a true estimate of the eye, because different persons have different ideas as to the names of colours.

3388. You have given us an estimate of the expense of the permanent staff of surveyors, as compared with the expenses of utilising teachers and so on?—Yes.

3389. You say in your estimate the balance is strongly in favour of the permanent staff?—Yes.

3390. But I think you will find that while you have charged teachers with travelling expenses and subsistence you have omitted that on the side of the permanent staff?—Yes; I have.

3391. You just show salaries there?—I have omitted that because in the case of the permanent staff the amount of individual travelling expenses would be exceedingly small.

3392. But there must be subsistence?—Yes, but that I consider is included in his salary. I do not think that the members of the Geological Survey are paid extra for subsistence; they have to support themselves on their salaries I think, but I am not quite certain about it.

3393. The travelling expenses would not be much?—They would be exceedingly small. The permanent surveyor travels through the districts assigned to him in ten years, and I have found that the amount of his travelling expenses would be negligible. It would be quite different in the case of the teachers. It would be necessary to

bring more than 3,000 teachers per annum to be taught in London, Dublin, and Edinburgh.

3394. Yes, if the enquiry were of the precise sort you ask for ?—Yes.

3395. Has the extreme difficulty of getting people to submit themselves to examination occurred to you ?—I have myself had very large experience in measuring people, and have hitherto met with very little difficulty. It requires tact in approaching the people, but after that is employed we find very little difficulty. For instance, in Scotland we have gone to games where people met for a holiday and we have set up a tent in the grounds, and by inviting the people to come in we got as many as we wanted to measure. They showed slight reluctance at first, but when once a start was made a spirit of competition caught on to each man, and he wanted to know whether he was taller or whether his head was bigger than his neighbours.

3396. Yes, but have you ever entered a busy factory and tried to measure the people; first of all having to ask the manager whether he would have any objection ?—No, I have not. I have measured a number of people at Toynbee Hall within the last few months. I went with a friend who gave a lecture on anthropology, and I offered to measure the people after the lecture; I found that practically the whole of the audience wanted to be measured.

3397. But that is a different collection of human items to what you would find in a large factory in Lancashire or the West Riding ?—Yes.

3398. And it has already caused a little irritation to some owners and managers of factories that the operatives should be taken by a factory inspector or a certifying surgeon; but if we have a third Government official taking the man away from his loom to measure him and so on there would be very serious objection, would there not ?—It might be objected to. But one must remember that one does not wish to measure every person.

3399. But see what a serious difficulty there would be in making your selection if you are to take the personal disposition of individual factory owners into consideration ?—Yes.

3400. It seems to me in regard to measuring the working classes you are driven to utilising people who have already access to them. I do not mean the inspectors you speak of, who would not really have time to do it, but the certifying surgeons. Do you not think that the certifying surgeon, who is a medical man, in most cases perhaps the most prominent man in the district, that he would have much difficulty in getting up sufficient skill to make as good surveys as your ordinary permanent surveyor—I am not speaking of your head staff in London who will direct the whole thing, but your ordinary individual surveyor ?—I do not think the certifying surgeon would have any difficulty. But my point is that no class of men will measure on a uniform system unless they are personally trained by instructors controlled by a Central Bureau.

3401. But a great many of them would have gone through that training during the medical course ?—Not very many. In my experience, even in a medical school where there is an anthropometric laboratory, very few take the trouble to learn to measure, so that they can do it afterwards.

3402. (*Chairman.*) Surely the knowledge could be picked up by a medical man with the intelligence it is to be presumed he has ?—Yes, certainly.

3403. (*Mr. Legge.*) Because they take such a keen interest in this sort of enquiry ?—Yes, but there would be some difficulty in giving them satisfactory instruction. They would do it very accurately and quickly no doubt, but my objection is to the expense of training them.

3404. (*Chairman.*) Is not training rather a big word ? Would not very little indication of what they have to do be sufficient ? Would not written instructions do ?—No, I do not think so. If you look at the opinions of anthropologists, as expressed in the Report of the Anthropometric Committee of the British Association, you will find that the great majority of them insist upon a very thorough practical training. Professor Manouvrier, of Paris, for example does so.

3405. (*Mr. Legge.*) But against that I claim what Francis Galton says, viz: that a good deal of time has been wasted in taking too precise measurements ?—I believe Francis Galton is the only one out of a large number who holds that opinion. *Mr. Gray*

3406. Francis Galton's opinion is in that leaflet you kindly set ?—I know that is what Galton says.

3407. (*Chairman.*) That is a point I want to lay stress upon. The more simple the scheme, the less likely it is to require considerable expense, and the more likely we are to get it accepted. Is not that so ?—Yes.

3408. (*Mr. Legge.*) And the more workable in the country ?—Yes.

3409. (*Colonel Fox.*) In many districts they have already commenced taking these measurements. For instance, in Rochdale and several other places they have already commenced six months ago ?—Yes.

3410. (*Mr. Legge.*) Then, again, as regards schools, you are aware that there is a very strong movement in the country for increased medical inspection in schools ?—Yes.

3411. Surely you could not have a better surveyor possible than a medical officer ?—No.

3412. Whose business it was to watch the health conditions and so on in children attending the schools ?—I quite agree; but would this medical officer do it without any payment ?

3413. There are not many of them appointed yet but if there is to be any extension of medical officers among schools this should be one of his duties, and it would be recognised before his salary was fixed ?—Quite so.

3414. Now as regards the children, do you think that it is necessary to examine all the children ?—I think it is necessary if you wish to get the average of the children in each age group of one year.

3415. Why in each age group; why not reduce them by taking two age groups ?—By taking two years together ?

3416. By taking them at seven or eight and then again at eleven or twelve, and then again at a later age when the certifying surgeon sees them at fourteen; that would be three ages ?—Yes.

3417. That would enormously reduce the amount of work, would it not ?—If that was considered sufficient for practical purposes I have no objection.

3418. Then you would have all the children at certain ages ?—If you want to get a complete registry of the growth of the children during school age you must measure them once a year. If you do not wish to have that, but if at certain ages you want to know the averages, that would reduce the labour.

3419. You do not see any statistical objection to that ?—No. It simply means that you get your points at three intervals instead of twelve.

3420. Only one other question; as to your interesting evidence as regards the degeneracy of the Jewish race on the Continent, you are aware that we have the most striking evidence in this country of the very reverse of your evidence. You have seen Dr. Hall's figures, I suppose, where the results of his examinations in Leeds are given; the Gentiles show very poorly besides the poor Jewish children, and his figures are quite confirmed by figures I have myself got for the class of schools I inspect, namely, the industrial schools ?—Were these dimensions as to stature, or head measurements, or chest measurements ?

3421. Practically all are given. We have had most striking photographs showing them standing up side by side, Gentile children and Jew children of the same age. Well now is not that odd ?—Yes.

3422. (*Mr. Struthers.*) Of course all those photographs must have been selections.

3423. (*Mr. Legge.*) We have got them. They were probably all the Jew children in a school, set out, and a corresponding number of Gentiles in a school.

3424. (*Witness.*) It quite differs from what has been found on the Continent, in Poland, for instance.

3425. (*Colonel Onslow.*) The Polish children or the foreign alien Jews who come into England may be of inferior physique; but what about the English Jews ? There are thousands of Jews who have been in England for generations; how do they compare ?—Mr. Jacobs found that those in the East End were three inches below the average Gentile.

3426. But we have got absolute evidence ?—Quite so.

Mr. Gray.

3427. (*Colonel Fox.*) I went purposely into the schools in Whitechapel and Ratcliffe Highway and I saw those children paraded for physical training, and I asked the headmaster and the headmistress in each of those schools what were their opinions of those children—they consisted of Polish, Russian, and Roumanian Jews and Jewesses, and the headmasters and headmistresses and teachers all agreed that they were of good physique, that they were of higher intelligence than our children, and that they were better fed by their mothers, who were more thrifty, and understood the art of feeding and bringing up the children much better than the English mothers?—I understand that.

3428. And that the fathers were much more temperate in their habits than the English ones—Those are the foreign Jews.

3429. The schools consisted almost entirely of alien children, some who could not speak the English language, and the teachers, headmasters and headmistresses all agreed that individually they were better in every way than the English children?—Yes.

3430. I saw them at work, and they were full of energy and vitality; Dr. Hall states the same as regards the Jewish children of Leeds. His investigations in Leeds show that the Gentile children have bad teeth in the ratio of 60 per cent., and rickets in the ratio of 50 per cent. The Jewish children are visibly superior in these and all other physical respects, and in addition to that, at the age of twelve they measure two inches in height more than the others, and they are seven pounds heavier, and that seems to point to the fact that although they are more densely packed in their houses they are better fed, and their mothers understand the art of feeding them better?—Of course you are speaking of the Jewish children and the most degenerate of the English children.

3431. (*Chairman.*) And so are you?—Of course. These statements that I have made are with reference to the average of adult Jews and the average of adult Gentiles. It did not refer to children.

3432. (*Colonel Fox.*) I am speaking now of children, but they tell me that the Jews, when they grow up, are not ahead of our people?—Yes, the death rate is only one half as compared with that amongst the Gentile children.

3433. During this enquiry it has been impressed upon us by every medical man that the most important time of a human being's life is from its birth to the age of five or six, and that it is during this time that it receives the foundation of a good constitution or the reverse. If these Jewish mothers understand nourishing their children surely we can also by some means, get at the mothers amongst the Christians, and make them feed and look after their children in the same way. If it can be done by one class it can be done by the other. Would not you say so?—Yes. These statistics of Mr. Jacob's refer to adults, and that might explain the contradiction, and they might fall off as they increase in years; that is to say, the average stature might fall off. The average stature of the adult Jew in Northern Europe is only five feet four inches.

3434. I am speaking purely of the young children. But I think that everybody agrees that the Jews do not go ahead after the first childhood?—That is so.

3435. (*Colonel Onslow.*) You speak in your scheme of taking the colour of the hair and of the eyes. That would be very interesting and useful in some respects, but would that be of any use at all as to the physical condition of the people?—I think it would be indirectly necessary because it indicates difference of race. For instance if we have measured a group of people who are brunette, very dark, and we compare them with a group of people having mostly blonde hair, we know that they belong to different races and we would expect their normal or inherited average dimensions to be different.

3436. Do you think that the British Isles generally are so marked—are not the races very much mixed up?—I do not think so by any means.

3437. Have not we each got the blood of several different races in us?—No doubt, in many cases; but the rural population in many districts is of the same racial type as it was hundreds of years ago.

3438. What is the object of having the measurements of head as a physical test? Is a large head an advantage or otherwise, speaking generally, physically?—As far as the evidence goes the classes with larger heads are the more intellectual.

3439. Apart from intellect, I mean physically?—Generally tall men have larger heads.

3440. But you might find a large head on a very small man?—Yes, in individual cases; I only speak of averages.

3441. You do not lay much stress upon chest measurement?—I think that they are very difficult to take. I consider they are valuable but there is a difficulty in taking them.

3442. Surely, as Colonel Fox said just now, eyesight and teeth are very direct guides to the physical condition of a person?—Professor Cunningham, I believe, proposes to test eyesight. But one must put some limit to the number of observations made, or the survey would become impracticable on account of the expense.

3443. Well but surely if in the comparison with results of ten years apart, it is found that eyesight and teeth had gone down, that there were more cases of blindness or semi-blindness or short sight, and in the same way the teeth were more defective, there must be some cause?—Yes.

3444. Would not it be as necessary as taking the size of the head or even the stature?—Do you think that they could take place without any change in the physique?

3445. I do not know, but I should have thought that it was one of the guides?—Of course the estimation of disease would be very valuable, but that is done already to a certain extent by other Government departments, for instance, by the Local Government Board.

3446. You frequently find a young man of fine physique who has very inferior eyesight or inferior teeth—very inferior teeth indeed—but his physique is good?—Yes, that may be so.

3447. That might be found amongst a large number?—I should have thought that these defects were on the average the accompaniment of deterioration of physique.

3448. You would not include them amongst the subjects to be noted?—No, it would make the survey far too complicated if we noted all the kinds of defects of deterioration.

3449. (*Mr. Struthers.*) You spoke about the population of Limousin in France as being on the margin of subsistence, so to speak?—Yes.

3450. And consequently of low stature and bad physique generally?—Yes.

3451. And if the children are living in more favourable conditions they improve?—Yes.

3452. And if strangers go there and are subject to the same conditions they come down in physique?—Yes.

3453. So that deterioration is dependent upon the physical conditions to a very considerable extent?—That seems to be so.

3454. I wanted to know whether that might go on indefinitely. Would you say that the poor physique of Limousin has, so to speak, reached bed rock, the conditions being so bad that they cannot go further?—I should say so. Speaking generally I should say that unfavourable surroundings produce a certain amount of depression which will not be increased. Such depression is simply temporary, and when the conditions are improved, the race will recover its normal dimensions.

3455. But there is a point beyond which it would not be depressed, or it disappears altogether?—I think so.

3456. So applying that to large towns—we have heard of the present generation of London not reproducing itself in the fourth generation—that would be inconsistent with that theory?—Yes, it would be inconsistent with the degeneration being due to unhealthy surroundings.

3457. So that every race would have its own minimum of physique, which it might be depressed to under given conditions?—That is so.

3458. And that might be different for each race?—It might be.

3459. You have the people of Kerry, for instance, who are living on the margin of subsistence, at least one is told so, and yet they are generally considered to be men of good physique?—Yes.

3460. That is to say the minimum for the people of Kerry might be much higher than the people of Limousin practically under the same conditions?—It might be. One does not take the amount of food only into account, but the conditions of the climate as well. I understand that in Limousin the air is unhealthy down in the valleys where the people live. Perhaps in Kerry there is very good air though the food is deficient.

3461. But at any rate it is not entirely a question of town *versus* country; you have that depression of physique just as much in the country as in the town under particular conditions?—Yes.

3462. You do not know the island of Lewis, do you?—No.

3463. You do not know anything about the population of Lewis do you?—I have seen some of the fishermen from Lewis.

3464. What is your impression of their physique?—The blonde type has usually a very good physique.

3465. Of the Scandinavian stock?—Yes. There is a very small dark type that appear to be degenerate.

3466. You do not consider the conditions of living as to the amount of food and so on affects them?—No.

3467. I think you have studied carefully this report of Dr. Hay and Dr. Mackenzie upon the physical condition of children in Aberdeen and Edinburgh?—Yes.

3468. Do you think, speaking generally, that the basis of examination is sufficient to justify the comparison between Aberdeen and Edinburgh as cities? For example, I will read what they said in one paragraph of the report. "It may be assumed with little if any risk of error that the Aberdeen schools fairly represent the school board children in Scotland generally, and can be contrasted with the scholars in the larger towns, such as Edinburgh, Glasgow, and Dundee." That is to say that Aberdeen is very different from Edinburgh—that it has to be taken almost as rural population as against Edinburgh and Glasgow. Do you think that the figures are sufficient to justify that and that the basis of the examination justifies that?—I think that the conditions under which children live in the country are better in Aberdeen, because you have not such a large slum population. The slums of Aberdeen are very small and the town is very healthy—on the whole I should say healthier than Edinburgh or Glasgow.

3469. The value of the comparison between the two towns would depend very much upon the districts from which the children are selected, would it not?—Yes.

3470. And there is a very large element of chance considering that there are four in Edinburgh and six in Aberdeen; I am not saying that this is the case, but it would be quite possible to approximate to this without knowing it, and to be selecting your whole school in one town from a distinctly lower class than you are selecting from in the other?—I am inclined to think that was the case.

3471. You know the Grammar School in Aberdeen?—Yes.

3472. That, of course, represents a very much better type, children of a better class than in the ordinary Board School?—Very much.

3473. You would observe that there was no such school included in the Edinburgh examination. They were all Board Schools?—Yes, and even the West End school was a working class school.

3474. The difference being emphasised by this very important fact, that Edinburgh is full of secondary schools, into which the children in Aberdeen would go; and in Edinburgh they go into the Board Schools?—Quite so.

3475. So that the best Board School in Edinburgh might compare socially, but poorly with the best Board School in Aberdeen?—Yes, I quite agree.

3476. So that, to some extent, weakens the strength of any comparison between the towns?—I think so.

3477. But taking each town by itself, you probably think that the difference between North Canongate and Bruntsfield in Edinburgh corresponds with the difference in the physique in those quarters?—I think that the statistics are not sufficient to prove it. The conclusion may be correct or it may not, but the difference is a difference which might occur between two samples taken from the same school. The numbers measured, I believe, were very small; thirteen in one school and twenty-five in the other for children between the ages of twelve and fifteen. With these numbers a difference five times as great as that actually found would be necessary to prove that there was a real difference between the schools.

Mr. Gray.

3478. And that applies to any comparison between the ages of twelve and fifteen, because they had some difficulty in finding the number of children to make up the quota between those ages?—The variations found between children at different ages are in many cases due to sampling.

3479. So that you think there is nothing in the statement that Edinburgh, with an index almost uniformly just over seventy-eight, would show, were race the chief cause, a less striking contrast between its schools than Aberdeen. The basis on which they get that is not good enough?—I should say that the statement has no validity. It may be a correct statement, but the statistics are not sufficient to prove it.

3480. They do speak of more uniformity in the population of Edinburgh than of Aberdeen, but I think you have already mentioned as a matter within your knowledge that Canongate is very largely populated by the people from Ireland?—Yes, I have been informed by a friend well acquainted with the schools of the Canongate that that is the fact.

3481. And in all probability in this North Canongate a very large proportion of the children were of purely Irish stock?—That is what I understand.

3482. As compared with Bruntsfield, where there are practically none?—Yes.

3483. Do you have the same proportion of Irish immigrants in Aberdeen?—Very few, indeed.

3484. So I always understood—that there were comparatively few in Aberdeen. There, comparing the lowest school in Aberdeen with the lowest school of Edinburgh, you would be comparing children of the Scotch race with the children of the Irish race?—And probably degenerate Irish.

3485. So that on all these grounds it would scarcely be fair to make the strong comparison there is made between these two towns?—I think so.

3486. I do not want to go into this matter too much, but it struck me in reading through this just now, that if you want to bring out these facts as to percentage of weight and relative stature as between schools, it would have been far better to have taken a certain number from one room, or two rooms, or three rooms, and so on?—Yes.

3487. Instead of taking them indiscriminately?—It would have been very much better.

3488. Than try to form an inference as to the social condition from the accidental mixture of two or three classes in a school?—Yes, it would have been possible I should think to have found in that way the correlation between the number of rooms and the physique of the children.

3489. Then a strong point is made in the Edinburgh Report that everything—comparison of height, weight, cleanliness, and so on—corresponds with the fact of whether they live in one or two or three or four-roomed houses. You have noticed that?—Yes.

3490. But it suggests itself to me, in looking through the Report, that there is the real difference between the two schools of Bruntsfield and North Canongate, that the correspondence of all these variations with the one-roomed and the two and three-roomed, etc., houses, is not quite established?—I think it would probably be impossible with the small number of measurements that they have measured to establish any such conclusion.

3491. Then I also find something bearing upon that in the Aberdeen Report, where Dr. Hay writes thus:—"There still remains the substantial difference in height already fully detailed, and it is proper to consider whether the inferior height of the children from the smaller houses is due to home conditions. A similar difference has frequently been noted by previous observers, but, while it may be admitted that deficient feeding hinders growth, it must not be too readily assumed that this, rather than inheritance, is the chief cause of the differences in height observed in Aberdeen." Would you agree with that?—That the difference was due to what?

Mr. Gray.

3492. He says that ' while it may be admitted that deficient feeding hinders growth it must not be too readily assumed that this rather than inheritance is the chief cause of the differences in height observed in Aberdeen " ? —Dr. Hay considers that it is due to race.

3493. No. His point is rather a negative one, one must not say due to the feeding or the character of the home ?—One would have to compare a large number of measurements of the people living under normal conditions to discover whether they really belong to the race, and it would be possible then to say whether the difference of stature was due to inheritance.

3494. He goes on to say : " Scarcely any of the children had a starved appearance, and, as already remarked, the apparently ' thin ' children were in larger proportion among the children from four-roomed houses than among those from one and two-roomed houses " ?—Yes.

3495. " Moreover, the disparity in height between the different groups did not, as already remarked, advance with increase of age, as might have been expected had home conditions been exercising a continuously deterrent effect " ?—Yes.

3496. That is to say that, although the children from the four-roomed houses are better than the one-roomed children on the average, that difference did not increase as the children grew up later, which seemed to point out that there is some other cause of variation, and it is not entirely due to the difference between two, or three, or four rooms ?—It seems to point to that. The law of growth is different in the two cases.

3497-8. (*Chairman.*) As to the point about the Jewish children, may it not be the case, that here the Jewish emigrant suffers from the depressing conditions which obtain in Poland and that the care that he takes of his children and the more favourable circumstances under which they are brought up in this country, are conducive to a restoration of the type to its original form. In other words, to use Professor Cunningham's evidence, " they revert to the mean physical standard that is the inheritance of their race as a whole " ?—I think that this is highly probable. In fact this discovery by Mr. Jacobs as to the Jews in the West End being three inches taller than those in the East End appears to support your view.

3499. You agree as to the points included in the scheme that the anthropometrical survey might be modified so as to contain the irreducible minimum of what is necessary for the purpose ? You do not think you presented the irreducible minimum ?—Not at all.

3500. You do not think that simple machinery and a more restricted field of observation would seriously interfere with the usefulness of the scheme ?—I think that the scheme might be started on a very small scale and expanded as experience suggests.

3501. You would reserve your opinion as to the points for measurement, would you not?—Yes. I would have a few simple measurements for the deterioration, any additional measurements that could be taken would be of very great scientific value, and indirectly would be of value to the State.

3502. With regard to the stress you laid upon the employment of experts, rather than having recourse to school teachers or doctors, there is that expression of opinion of Francis Galton, in which he says : " I do not think that laxity in measurement **matters** much, so long as laxity does not lead to error in *one* direction ; in fact I know that a vast deal of effort is wasted in minuteness of measurement." Do not you think that it would be a good thing to spare this scheme at its inception, from the tendency to waste a vast deal of effort on measurement ?—Galton is the only one who expresses that opinion, and I think five or six take the exactly opposite view. The majority of anthropologists seem to think that it is necessary to have the trained assistants. Professor Manouvrier, the leading anthropologist in France, says here : " An experience of more than twenty years has convinced him of the necessity for a practical and very careful training in the technique of anthropometry, even when a small number of simple measurements have been selected. Uniformity and accuracy are very difficult to obtain when an investigation is carried out by several persons. Repeated comparison and mutual checking are necessary if an investigation is continued for a long time." And most of our own anthropologists also emphasise the necessity of training. I think it would be a very dangerous thing to take Mr. Galton's views on that subject. He says that there should be no bias. It is very likely that there would be a bias in untrained measurers. They would always adopt slightly different methods of measurement.

3503. It is not so much untrained measurers as the employment of professional surveyors as against persons of more than average intelligence, and some expert knowledge, who are willing to acquire the requisite technical knowledge ?—Yes, I quite admit, for instance, these medical experts could learn with sufficient training, but my objection is that the cost of this training would be very much larger in proportion, and they could not devote their whole time to the work. A medical man could only give one tenth or one twentieth of his time, and a very much larger number would have to be trained.

3504. My point is that the training would not be of a very arduous, and therefore of an expensive, character, and that there would be very little training required if you utilised medical men, and that is your opinion, Mr. Legge.

3505. (*Mr. Legge.*) Yes.

3506. (*Witness.*) The training from a centre is chiefly necessary to secure uniformity.

3507. (*Chairman.*) You do not think that written instructions would be sufficient ?—No. My experience is that written instructions will not secure the highest degree of uniformity.

3508. As to mere instructions, you think they do not understand the meaning of the words used ?—One has to discover the points, say, in measuring the head, and it would be highly improbable that several persons would fix on exactly the same points from written instructions.

3509. A doctor would know ?—Yes, perhaps better than other men, but still you want to secure uniformity, and even doctors might differ as to the exact point which was indicated, say, by the term *glabella*.

3510. (*Dr. Tatham.*) I am afraid you have a very low opinion of medical men ?—No, I have not.

EIGHTH DAY.

Monday, 8th February, 1904.

PRESENT:

Mr. ALMERIC W. FITZ ROY (*in the Chair*).

Colonel G. M. FOX.
Mr. J. G. LEGGE.
Mr. H. M. LINDSELL.
Colonel GEORGE T. ONSLOW.
Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary*).

Mr. DOUGLAS EYRE, called; and Examined.

Mr. Eyre.

3511. (*Chairman.*) Will you kindly state what your qualifications are to give evidence on this subject?—I am the Chairman of the Executive Committee of the Twentieth Century League, and honorary vice-head of Oxford House, in Bethnal Green, and the Chairman of the Executive Committee of the Federation of the Working Lads' Clubs in London.

3512. The general object of these clubs is, I suppose, to keep in touch with lads after they leave school until they grow up to the period of adolescence, and to save them as far as you can from contaminating influences physically and morally?—That is the main object.

3513. Would you kindly enumerate the voluntary agencies with which you are associated?—Yes. I should put first the associations for the promotion of physical drill, and I group them as follows: The Boys' Brigade, the Church Lads' Brigade, and then there is a separate brigade for London, of the London Diocesan Church Lads' Brigade, and then there is the Jewish Lads' Brigade, promoted for Jewish lads only; and the Catholic Boys' Brigade, promoted by the Roman Catholic community; and the Boys' Life Brigade, which is an association formed for promotion of physical exercises, divorced from any military aspect—it is promoted by people who do not believe in the military side of the work amongst lads, but who are very keen indeed about the physical development side, and the moral progress of the boys. Then there is the Newsboys' Brigade, which is in its infancy at present, its object is to turn lads employed in selling newspapers into an organised corps. I think these are the chief brigades which are at work in this connection.

3514. Can you tell us what the total number of boys composing them is at the present moment—have you any figures?—The Boys' Brigade comprises over 7,300 officers and lads. As to the Church Lads' Brigade, I have sent in their report to you, and I can give you the exact figures presently. The London Diocesan Church Lads' Brigade has 6,500 officers and lads, comprised in eighteen battalions of 150 companies. The Jewish Lads' Brigade—the London regiment of that comprises 1,000 Jewish lads, and there is a capacity for developing that number as they proceed with their movement.

3515. Is that in its infancy?—It is not so old as some of the others.

3516. (*Colonel Fox.*) The Jewish Boys' Brigade is 1,000 strong. I think you mentioned?—Yes.

3517. What are they?—They are working lads amongst the Jewish community.

3518. Are any other than Jews admitted?—No; they are a brigade promoted by the Jewish community only. It has nothing to do with the Church of England or any religious English community.

3519. Are they under your own organisation, or are they federated with you?—They have representatives on our League for the purpose of promoting their general object.

3520. (*Chairman.*) What are the numbers of the Catholic Boys' Brigade?—I have not the exact figures.

3521. I should like to have a note of them, and of the whole of the others?—I shall send them to you.

3522. I suppose they cover a very small proportion of the ground?—Yes, a very small proportion of the ground that might be covered.

3523. Are their general characteristics more or less the same?—The Boys' Brigade are not confined to any religious community. The Church Lads' Brigade is promoted entirely by the Church of England, and the London Diocesan Church Lads' Brigade is under a different constitution altogether, and is confined to the London Diocese, with the result that nobody can start a Church Lads' Brigade in the London diocese, and he has to limit himself to the London Diocesan Church Lads' Brigade.

3524. The Church Lads' Brigade is not confined to the diocese of London, is it?—Not to the diocese of London. It purports to extend throughout England.

3525. The figures will not be confined to London that you have promised me then?—No. Then under the second head I would comprise the cadet corps. The oldest cadet battalion is that of the 1st Queen's, which was started in Southwark, and comprises now eight companies—the aggregate would be about 600 to 700.

3526. They are rather older boys, I presume?—They are entirely for boys between the ages of fourteen and eighteen, and some boys over eighteen are allowed to stay if they make themselves very efficient non-commissioned officers.

3527. What ages cover the Boys' Brigade as a rule?—The boys soon feel that they are too old for that.

3528. Within what years are they eligible?—I should say from twelve to seventeen. Then as to the cadets corps movement, I should say that that appeals more to Government aid than the voluntary movement.

3529. With regard to the *modus operandi* of all these, apart from their religious complexion, is it pretty much the same? How do you get hold of the lads? Do you get them from the schools from which they have emerged, or do they come from the parochial agencies, or what?—With regard to the Church Lads' Brigade, they are managed from the parochial agencies and to a certain extent the public school missions and settlements. That applies also, of course, to the Catholic boys and the Boys' Brigade; but the other method of getting hold of them is through clubs—the Brigades existing as a portion of the club organisation. Then the third head would be the work done by the Polytechnics.

3530. Which are more educational than physical?—But then the physical side is of extreme importance, and extends rather to the higher classes of the industrial community. They appeal rather to them—they do not really touch the rougher elements of society. Then I would proceed to enumerate the various agencies promoting these clubs. The clubs, firstly, of the parochial clergy are the most numerous. Then there are the clubs of the University Settlements, such as Oxford and Cambridge Houses, Toynbee Hall, and Mansfield House and those of the other Settlements in London. Thirdly, there are the

Mr. Eure.

public school mission clubs, such as those of Eton, Harrow, Haileybury, Charterhouse, Wellington, etc. Then come those started and maintained by Nonconformist bodies. And then there is a growing number of clubs which are worked on voluntary principles, and use the school buildings of an evening, which it seems to me is a very important side.

3531. These are all of a recreative type of club ?—Yes. Those are allowed to hire or use the school buildings after school hours.

3532. Is there any general co-operation between these agencies, or do they overlap to a certain extent ?—They do overlap to a certain extent, and the object of the Twentieth Century League was to rather co-ordinate them and procure their representation by one association ; the object of the League would be to unite and consolidate them as far as possible.

3533. Have they met that effort on the part of the League ?—They are meeting it slowly. They have all procured representatives upon the League, but I should say that they would be anxious to maintain their own independent existence. Of course, that would be naturally so in the case of all those associations which are founded by religious communities.

3534. But they see no objection to co-operation ?—No, but they co-operate mainly for the purpose of strengthening their own position.

3535. How long has the Twentieth Century League been in operation ?—About three years.

3536. (*Colonel Fox.*) It is in existence then ?—Yes. I handed in their report to show the representatives on the Council : you have the report.

3537. (*Chairman.*) Have you anything to say about the special needs and weaknesses of these several institutions ? —Yes. I have noted here what strikes me as their chief needs, and I shall enumerate them. They are in great need in a great measure of better accommodation. The premises are very inadequate in a very large number of cases. Then they are very poor indeed, and some of them have no means of getting even the proper club appliances.

3538. In all cases do they make the members of the club or brigade contribute anything ?—The club boys always subscribe a penny or so a week, with an entrance fee.

3539. That does not go very far ?—It does not go very far. Then the third is the need of more workers especially of managers of experience. It is not at all an easy thing to work these clubs, and more people who are really experienced in it are sorely needed for the purpose of making them successful.

3540. It does more harm than good to have inexperienced people, I suppose?—Yes, you may do more harm than good with inexperienced people. Then, of course, the fourth need is the insufficient funds for maintenance and development and expansion. I may say about clubs that they are becoming so varied in type that representatives of most of the classes of which the youthful portion of the industrial classes is composed, are becoming attracted to them.

3541. You think that is so ?—Yes, I think also with regard to the rougher elements of society, the existing agencies are most adapted for the purpose of grappling with them.

3542. Do you think that they are gradually being tamed and interested ?—Yes, wherever they can be got together, but you cannot get the roughs into one institution—you have to deal with them by gangs and small numbers. If I might pass on, I would say that I consider that most important work is being done by bands of hope and juvenile branches of temperance societies in connection with the children of school age, also by the Children's Happy Evenings Association.

3543. (*Mr. Lindsell.*) Are you passing away from that subject ?—Yes, I was passing away from the clubs.

3544. Will you tell us something about boys' homes ?—Yes, the boys' homes, I think, constitute another branch of very useful work. It seems to me that there is a very insufficient amount of accommodation for lads who come up to London, and go right into offices and places of business and factories.

3545. (*Chairman.*) That is what you mean by boys' homes ?—Yes. I refer to them because a very important work is being done with regard to physical development. The homes generally have connected with them agencies for this ; evening clubs are generally associated with them. But I put them in a different category to the clubs themselves because they supply a need not covered by the ordinary clubs, which are for boys who have homes of their own in London and the large towns.

3546. Do you think all these organisations tend to check the practice of juvenile vices prejudicial to health such as smoking, and so on, and to the exercise of a vigilant watch over them ?—Yes, the best type of boys club is a club which rigidly prohibits any smoking whatever on the club premises.

3547. They do not all do that do they ?—Some of them do not. I have always made an effort to advise those who promote these clubs not to allow any smoking in them. I manage myself a very large club in Bethnal Green, and I prohibit smoking, and the boys are perfectly happy without anything of the kind.

3548. Would you consider one of the best objects of this central office would be to secure a general acceptance of that principle by all those clubs ?—It would be one of the most useful pieces of work. People would go to the central office for advice on these subjects, and the experience of the most experienced people would be quoted to them.

3549. Now what have you to say as to the summer camps ?—With regard to summer camps, a most important work is being done, both by the brigades and the cadet corps, and the club movements generally for enabling boys to have a week's holiday under canvas during the summer. In addition to the camps connected with these various brigades and cadet corps and clubs, I might specially mention the camps for London boys which are worked by the London Diocesan Society for the welfare of lads. Under that scheme practically any respectable London boy can be accommodated in a well-organised and well-conducted camp for a week—for a small payment, generally 7s. to 10s. per week.

3550. I think you attach very great value to the health-giving effects of these summer camps ?—Yes ; I think they have a great effect upon the physique of the lads who go there, if they have been confined in London or in any large town without any country experience at all, and that they are enabled to find a healthier condition of holiday than under any other circumstances.

3551. There are certain voluntary associations, I understand, whose object is to strengthen the hands of the agencies you have been describing ?—Yes.

3552. Will you tell us something about them, and what their *modus operandi* is ?—The first one that I would mention with regard to boys, is the Lads' Drill Association, formed for the promotion of drill in school buildings, and for the promotion and recognition by Government of cadet corps. I think that is capable of doing very useful work indeed under those heads. Then there is in London the Federation of Lads' Clubs, which promotes the union of all clubs for working lads which are in existence in the Metropolis. That has affiliated to it some forty clubs, most of them clubs organised by the University Settlements and Public School Missions. Then there is a similar organisation, called the Federation of Working Men's Social Clubs, which promotes the union of clubs for young men, as well as older men, and has over seventy clubs affiliated to it. Both these associations promote competition amongst the clubs, and so encourage physical exercises and various other forms of recreation by offering challenge cups for competition and so on. The Social Institutes Union is doing much in the same direction. Then I ought to mention the work of the Young Men's Christian Association, which will probably be dealt with by other witnesses before you.

3553. Does that deal largely with boys in the slum population ?—No.

3554. That is rather a better class of people altogether, is it not ?—Yes.

3555. I presume something is being done for girls at the same time ?—There is a great deal being done for girls, but not on the physical side so much as the Association which work among lads. It seems to me to be an important thing that the physical side of club life for girls should be more fully developed than it is.

3556. Do those agencies which you speak of, which are connected with girls, do anything towards developing a high domestic ideal among them ?—Yes ; they do in a great measure.

3557. Is not that one of their principal objects ?—Yes.

3558. To make them good housewives and good mothers?—Yes. But I should say that gymnastics are not as efficient as they might be with regard to any of those associations which I have enumerated.

3559. You might go through that part of the subject?—The Girls' Evening Homes Association, of which the Duchess of Bedford is president, has a number of girls' clubs affiliated to it—I may specially mention those in Bethnal Green, Clerkenwell, and Silvertown. Then there is the Girls' Clubs and Institutes Union, and the most prominent person to be mentioned with regard to that is Miss Maud Stanley. That has a large number of clubs affiliated to it, and there is a similar Association which has clubs affiliated to it in Liverpool.

3560. How many members have these clubs as a rule?—I can get the correct membership.

3561. I wanted to know whether they touch any considerable section of the population?—The girls' does not comprise so many, as a rule, as a boys' club does, and I think I can give you an idea as to the extent of the population touched by the clubs as a whole.

3562. I should like to have that?—Yes; as far as my information goes at present; and then there is the work of the Recreative Evening Classes Association, and the National Physical Recreation Society, and the Girls' Friendly Society, and the Factory Helpers Union, and the Women's Industrial Council. Then there is another organisation called the National Union of Women Workers. These are the principal organisations which seem to me to have for their object the strengthening and development of the work of institutions for the welfare of girls.

3563. Am I right in supposing that the sphere of each of them is small?—Yes, it is small. Then with regard to the percentage so far as can be gathered from the returns which have come in to us as members and officials of the Twentieth Century League, I do not believe there are more than five per cent. of the youthful portion of our industrial population who are materially touched or assisted at present by anything in the shape of any well organised recreative agency out of school or working hours. The extent of the work, and the ground that is covered is very small as compared with the ground that ought to be covered. Then might I just mention the objects of this Twentieth Century League.

3564. I should very much like to hear what they ar?—The first object is the strengthening of the hands of the existing agencies and their consolidation into a representative association; we find them all rather isolated, and to a certain extent overlapping, and very little is known about all that they are trying to do.

3565. Have you done much in that direction?—The progress we have made is, I confess, somewhat slow at present. What we have endeavoured to do is to get committees formed in every borough in the Metropolitan area for the purpose of investigating the amount of work that is being done and reporting to us as to their needs.

3566. Is the new municipal organisation helping towards this movement?—In some cases the Mayor of the borough has taken the chair at the meetings, and is acting as chairman of the local council or committee.

3567. What I wanted to gather was, whether the creation of these new municipal bodies in London has led to any increase of local patriotism which exhibits itself in the organisation or promotion of associations of this kind?—Not at present. I do not think that the municipal authorities have had time to show the extent of their interest in this movement; but as far as things have gone they look promising. The municipal authorities are awakening up to the need of this kind of work in their various areas, and it only requires to be organised and put upon a practical basis. Then our second object is to enable all these agencies to reach the roughest classes. One of our chief objects has been to try and prevent those congregations of cliques of the rougher classes in the streets without anything whatever to do but to hang about and get into mischief.

3568. What is your *modus operandi* in dealing with what you describe as the roughest classes?—To promote the extension of the club system.

3569. Are they willing to join clubs?—Yes; they are willing to join them, but there must be special clubs for them. If you start a club in a district, it soon gets filled by people who are not composed of the roughest element, and even a club which includes originally lads of the roughest portion of the community gets, as time goes on, to be respectable, and then these members do not wish to have the roughest class in their club.

3570. Do you draw up a somewhat indulgent code of rules when you introduce this rough element in the first instance?—We try and form a committee of the lads themselves.

3571. Of the roughs themselves?—Yes, and instil into them a sense of responsibility. I certainly find where people know how to deal with them the club system is very successful. But one club cannot comprise a large number of these. You must work them in what I call cliques, and have a special club for special cliques.

3572. But that all adds to the expense, does it not?—Yes. I have also seen good work done by forming a club in connection with the school buildings. That can only be done on a small scale at present, but in Wandsworth they have tried them with effective results.

3573. Do you get much assistance from the clergy?—Not in that particular line at present: not for the utilisation of the school buildings.

3574. But for getting hold of the rough classes, I mean?—Yes, I think in certain parishes in London the parochial clergy are the most competent for dealing with them.

3575. But you would not say that would be so in many cases?—Not as a rule.

3576. The clergy as a rule do not take up social questions as much as they might—would you be prepared to say that?—The clubs in connection with the parishes are the most numerous of all at present. They have covered more ground than any other. But their primary object is to get into touch with them religiously, and those they cannot get into touch with in this way are apt to be left out in the cold.

3577. They do not look upon getting hold of these rough classes as a preliminary step to what may be the means of influencing them religiously. You think they are too much inclined to put the religious influence in the forefront?—Yes, they are inclined to do that, and I do not think you will get hold of the rougher sort of boy or girl originally in that way.

3578. That is what I understand you to say?—Yes, then, of course, they are justified, it seems to me, in going for that portion of their parishioners who are likely to accept their religious ministrations, and when they have done that they have probably exhausted their resources. Then the third object is to be a central bureau of information, an illustration of which has been already provided with regard to smoking, and we purport to be able to tell people what things to avoid and to point to models for their study.

3579. Havey ou got such a bureau now?—We are collecting all the information in the central office, and we have a secretary there whose business it is to be there all day.

3580. And your fourth object is what?—It is to attract personal service and financial assistance for those various organisations.

3581. Are you able to do that?—We have not had any particular success, although we have issued a public appeal. But the public will require first, I think, to know that our organisation is on a practical basis; and that its committees have threshed out the subject and will be able to inform them as to the state of each borough area and the work that is going on there. The Executive Committee has taken steps to get all that information together.

3582. What funds have you in hand at the present moment?—We have next to no funds at present. What we are trying to do is to get a sufficient number of annual subscribers for the purpose of enabling us to run our central office and to promote our organisation, and then we shall hope to attract a sufficient amount of public assistance to enable us to make grants in aid to those organisations which seem to us to do the most effective and useful work.

3583. And accept your methods of guidance, I suppose?—Yes.

3584. Then you have described your methods of work in stating your object, I think?—Yes. I should say further that we can only proceed gradually as those local committees show themselves to be in working order and give us the information that we require.

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3585. And you say that that sphere of your operations is enlarging?—Yes. I should say that it is enlarging, but it is small because it is so very difficult to attract London as a whole.

3586. And the persons who come under the influence of these clubs are increasing in numbers you say?—Yes, as we go on the clubs are growing in numbers and in efficiency.

3587. Would you say that they have increased by 10, 30, or 50 per cent?—No, I have not sufficient data for that; but I can say that generally the club movement is increasing and all those voluntary agencies are becoming more and more convinced of the importance of promoting institutions for the industrial population as a whole.

3588. Are they working more efficiently towards that object?—Yes, and they become more efficient as time goes on and as they combine together and derive light from other people's minds.

3589. How many years have you been handling this subject?—For twenty years.

3590. You are in a good position to answer general questions on the subject of physical deterioration in those years during which you have been engaged in work of this kind. Have you formed any opinion as to whether physical deterioration is on the increase or not in the classes that come under your notice?—My opinion is that there is a tendency to physical deterioration, especiallly in the overcrowded districts, but that can be to a large extent counteracted by the promotion of physical exercises and recreation in those districts.

3591. What about the effect at the present moment of those counteracting agencies so far as it has gone?—So far as covering the ground is concerned they seem to be good—that is they have produced a good effect on the physical development of the youthful population. You can see a marked difference in the members of those clubs physically.

3592. Do they go to school better to begin with?—Yes, and then those who are inclined—I have seen cases in which those who are inclined to be consumptive (the phthisis cases) I have seen them capable of throwing that tendency off in their early days through taking part in physical exercises and healthy forms of recreation in the evening which is provided for by these clubs and institutions.

3593. Have you formed any opinion as to whether any State assistance of a more efficient character should be provided?—Yes, I think that the State might help voluntary agencies, and it also might promote this work itself a great deal more effectually in the future than it has done in the past.

3594. How could that be done?—I should have thought that the State could in the first place help by grants in aid for physical development and drill work.

3595. Who are these grants to be paid to?—These grants in aid should be paid to the several organisations according to the amount of the results which they achieve.

3596. You would require a system of inspection?—They would have to submit to the inspection if they were to expect any aid from the State. Then, I think, that there are certain numbers who would not wish to submit to that. But I can only say for myself that I cannot see how they could expect grants in aid unless they submitted to State control and State inspection and supervision.

3597. Does not the State do anything to support cadet corps?—Very little, only in this way the Government provides arms and ammunition free. But the Government make no grant. My own opinion is that the Government might certainly make grants in aid of cadet corps who of course are prepared to submit to Government control and inspection in every way; and those cadet corps would be more efficient men and cover a far greater amount of ground if more pecuniary assistance were given to them. All the companies have to be maintained at the expense of private people, and what with the provision of uniforms and the provision of money to enable those camps to be run and so on, it is really more than can be managed effectually from private sources. In my opinion the Government should make grants in aid certainly to cadet corps; and camp allowances, for instance, would be a very good way of beginning. I think also that cadet corps require officers with real military training, and especially that should be secured in the case of the adjutants of the various battalions.

3598. Do you think that the local authorities could assist in certain directions?—I think that it is very important that they should assist that movement in particular, because I conceive that there is no movement more capable of securing the welfare of lads who are accustomed to haunt the streets, and to make things unpleasant in the various areas than that cadet corps movement, which is not based upon any definite religious organisation, and does not require any religious tests of the members, and it appeals to people irrespective of their religious opinions.

3599. Are there any alterations in the law which you would suggest?—I think that the rates on buildings which are set apart for these purposes might be remitted. I do not say that there shall be no rates at all upon the building; but it seems to me that it is very hard upon those voluntary organisations to have to pay rates on buildings irrespective of the purposes for which those buildings are actually used; and I think that it is also hard upon clubs and institutions to have to pay Inhabited House Duty on the whole building when they have to have a caretaker who occupies only one room in it. These two points have occurred to me in the working of these institutions. The rating is really based on what the buildings are worth to be let irrespective of the purpose for which they are actually used.

3600. Would you prefer the rate to be put upon the site?—That might be a relief to the voluntary agencies.

3601. You would gain by that—by making the general rating on the site value instead of on the buildings?—Yes. I think we should gain upon that, but still more on a remission of rates.

3602. Not only a redistribution, but a remission?—Remission is what is really needed. I daresay it is not sound policy that those buildings should get off the rates altogether; but I do submit that they should have a modified system of rating applied to them.

3603. You have got a note about the suppression of juvenile smoking; won't you make it penal to sell tobacco to young persons under a certain age?—Yes; I should make it penal to sell tobacco and cigarettes and things of that kind to boys under the age of sixteen.

3604. Would you further make it penal for a boy under that age to be seen smoking a cigarette? That would be rather difficult, would it not?—Yes, it would be difficult.

3605. I communicated the other day with the Inland Revenue, because we had heard that one of the causes of physical deterioration among young people was that cigarettes were sold in sweet-stuff shops frequented by the juvenile population, and therefore it was throwing temptation in their way. In answer to that I got a communication from the Board to this effect:—"That they have no means of supplying you with the information you require." that is the number of sweet-shops licensed for the sale of cigarettes.—"A license to deal in tobacco is supplied to any person who cares to apply for it, and there are about 360,000 licenses issued in the year. No record is kept of whether the holder of such a license is solely a tobacconist, or whether he combines with that business any other trade, and the information could not be obtained without very considerable trouble and expense." Do you think it would be a good thing for the Inland Revenue not to grant tobacco licenses to people who sell sweets or other things which induce children to go into their shops?—I think that a vast deal of harm is done by the existence of those sweet-stuff shops. They seem to be not only centres to promote juvenile smoking, but also for the promoting in great measure of a gambling propensity, and if not shut up there should be a rigid system of licensing applied to them; and I doubt whether there is any check placed upon them. You see those sweet-stuff shops in almost all the areas where the poor are gathered together, and you will also see them filled with the youthful portion of the population; and there is a very strong opinion among the workers in this branch of work which I have spoken about this morning, that there should certainly be a rigid system of licensing and State supervision applied to this kind of shops.

3606. But you see you could hardly make it requisite to sell sweets that you should have a license, and my point is rather whether you should not exclude from those shops where sweets are sold the grant of a tobacco license?—Yes, I certainly think that that ought to be done—if nothing more can be done that should be done.

3607. (*Colonel Onslow.*) In what way does the gambling come in?—There are a lot of those machines.

3608. (*Mr. Lindsell.*) The penny-in-the-slot machines ?—Yes, and others. Of course I do not know whether the suppresion of licensing could be applied; but if it could it should be applied for the purpose of stopping that sort of thing. It has a tendency to encourage vicious practices among the young, which is very harmful to them in other ways. They idle away their time instead of joining in such organisations as I have mentioned this morning.

3609. (*Colonel Onslow.*) You have been working for twenty years past in London. Do you consider that the physical condition of the lowest strata of society, the Hooligan, the very worst class, is worse now than it was twenty years ago ?—No, I do not.

3610. Do you think that it has improved ?—I do not think that it is worse.

3611. Then take the labouring class, the ones who really do try to work, is that worse or better ?—I have noticed a good deal of distinction between the two. I should say the labouring portion of them were in a better state of physical health than the other.

3612. Do you mean a better state now than twenty years ago, relatively ?—I should not say that they were worse.

3613. As you go up the scale in society you come to the families of small shopkeepers, and perhaps office boys of the respectable class, do you think they are better or worse ?—I should be rather inclined to say that they were apt to deteriorate; and the more the population is comprised of people who are the children of parents who are really a portion of the town population, I should say their children were less well physically developed than the children of those who come up from the country districts.

3614. It is the children of those who are resident in town, and who have been obtaining their living perhaps for two generations, you mean ?—Yes.

3615. From the fact of their living in the town they are deteriorating you would say ?—Yes, but I think that deterioration can be counteracted by better organisation of their physical development.

3616. You mention here in one of your notes that the State ought to support a cadet corps, which you really think is an important part of the military establishment of the country. Is it not the fact that to give cadet corps and lads' brigade and so on more of a military organisation would deter the parents of those boys from letting them join those associations. Is not that your experience ?—No. My experience rather is that a parent would disapprove of his lad joining, irrespective of that, if that is going to stop him joining.

3617. The reason I asked you was, because, two years ago, or more, I had some correspondence with the Council of the Boys Brigade and the Church Lads' Brigade with reference to boys for the navy. We were then requiring a large number, and I had seen those boys at the Military Tournament on the opening day, and they were splendid looking boys, and I spoke to several of the officers, and the result was that I communicated with the Council, and they said they would be only too glad to help, to advertise as you may say, the navy amongst their boys, but they were afraid, if they did so, the parents would at once object and consider that the associations were being made recruiting agencies ?—Yes, that is so.

3618. Therefore, I doubted the utility of State-aid in any way. When you say here that they should be regarded as an important part of the military establishment of the country, —does that refer to the cadet corps only, or does it refer to those Church Lads' and Boys' Brigades, and so on ?—It would refer to the cadet corps only.

3619. Not to the others ?—No.

3620. But you want assistance, do you not, in your brigades, towards furnishing something in the way of a uniform ?—Yes.

3621. Belts and caps, and so on ?—Yes. But they do not go in for the same equipment as cadets.

3622. And then your bands ?—Yes, I think that the State-aid should be extended to all there brigades, but that no attempt should be made to make them part of the military establishment of the country. It is the cadet corps only, and it seems to me that on that ground the cadet corps would deserve more Government aid than what I may call the religious organisation work.

3623. Then the lads in camps you speak of, you say they go on paying something. Those lads belong to some of those societies, I suppose ?—Yes, for the most part.

3624. Can any lad who belongs to any of these societies join ?—Yes, he can join under the London Diocesan scheme for the welfare of lads. They have their brigade camps and their general London working boys' camps, and they can go under that scheme. They are the largest organisation in London for the promotion of camps for the working class lads, irrespective of belonging to a brigade or cadet corps. But it is not as easy a thing as a brigade or cadet camp, because you have not got the boys under a sufficient military discipline.

3625. You mean you have not sufficient discipline ?—Not sufficient discipline to secure you. But that general scheme of the London Diocesan camp is very successful and very well worked. Although the lads are not sufficiently known to those who are responsible for the camp, they are careful as to who they allow to go down; they have to be recommended by some responsible person. If I might say a word as to the open spaces movement, I should like to.

3626. (*Chairman.*) Yes, certainly ?—It seems to me that in London especially we have had very little done for the purpose of saving open spaces for the national games, and I ought to direct particular attention to the work of the London Playing Fields Society to show what very useful work may be done by even voluntary societies to save areas from building, and so enable them to be devoted to the development of cricket and football and other games.

3627. That must be in comparatively suburban districts, I suppose ?—The only way of doing it is to purchase land in the outer ring, and they have done a great deal in that way, which shows also, it seems to me, that the County Councils, and other bodies might also do that to a greater extent than they have hitherto done. No effectual work in that way can be done unless the land is freehold and bought right out. The London Playing Fields Society, and other similar movements, have also rented ground; but after spending a certain amount of money on renting and laying down the ground, they have been turned out, and so the money that has been subscribed for the purpose has been practically lost. Profiting by their experience they have bought land and saved as open spaces fifty acres at Raynes Park, and now they are preparing a scheme for providing ground in South London, which is very badly off indeed for ground for games, and they have nine acres of land at Earlsfield on a forty years' lease, but their ground at Willesden, which is on a short term, they will have to give up as it is required for building purposes.

3628. Both outside the Metropolitan area ?—That is the only way in which they can work by getting cheap tickets if they can, and so enabling the people who want to take part in those games to go there and back again on easy terms.

3629. Do the railway companies promote that ?—The railway companies have assisted us materially both in East London and in other parts, but on the south-west side of London we have not had the facilities given us to the extent that we have had in the north.

3630. Do they refuse it ?—The South Western have not given us the same facilities as the Great Eastern have done, for instance. The Great Eastern have given good terms to the Oxford House settlement. It would not be a very great drain upon public resources if more assistance were given than has hitherto been done by the County Councils. The London Playing Fields Association has done a great deal in that way, and provided London with an increase in open spaces for games, etc.

3631. Can the Borough Councils spend money under the present law ?—I am not sure. My impression is that they cannot.

3632. (*Mr. Lindsell.*) They have power ?—But it seems to me that it would be more effectively done by the County Councils.

3633. (*Chairman.*) Than by the Borough Councils ?—In conjunction with the Borough Councils.

3634. (*Colonel Fox.*) You were speaking just now about the uniform of cadet corps and lads' brigades ?—Yes.

3635. Do not you think that a cap and a belt and haversack is all that should be supplied to them free. It seems to me that very many boys could provide themselves with

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good strong blue serge clothes, which together with a cap and belt and haversack would be the very best uniform for the purpose?—Yes.

3636. If that was all that the Government would have to supply I think that they perhaps might do it; but then so many of the corps expect rather elaborate uniforms, and I think that is a very great pity, because they will never get it, and they would get the other, I think. The boys would look very well in it, too?—You want to add the tunic, although a less elaborate tunic than that supplied to some might be provided.

3637. The present idea of a uniform is a really practical kit, is it not?—Yes.

3638. I think we have accepted that for the real uniform, you cannot make it too practical, and I think that with a turn-down collar of the ordinary boy's jacket and loose pair of trousers, which may be of serge, and a cap, belt and haversack you have mentioned you would have a very practical uniform?—Yes, for younger boys.

3639. For all hands. I think you would find things much easier if you asked only for a belt, cap and haversack, and a blue serge is the most durable stuff you could have?—Yes.

3640. I am speaking not only of cadet corps but also of those connected with the Lads' Drill Association and boys' brigades. I think that a smart, well-set up boy would look well in it?—The cadet battalions are practically attached to some regiment of the line or to some volunteer battalion—and they have been expected to adapt themselves to the uniform in vogue in those battalions.

3641. The elaborate uniform, you know, at once necessitates great expense?—That is where the expense comes in so much, and prevents the development of the cadet and brigade systems now to my mind.

3642. You have been enumerating all those excellent clubs and brigades, but it strikes me that one of your greatest difficulties must be the provision of capable instructors?—Yes; I wanted to say something about that.

3643. I had the experience of seeing the other day at Oxford House two most promising instructors who came from the class to which the boys belonged, and they appeared to show efficient training?—Yes.

3644. It seems to me what you want is State-aid in having a school for the purpose of training these young men with a natural aptitude for drill and gymnastics, at a nominal fee, as instructors at your clubs. Do you not think that is so?—I wanted to say that the State provision of gymnastic instruction is a very practical and most important thing in connection with physical development.

3645. Do you not think that you have many men in your district with natural aptitude who could be there in the evening, who would be well trained, and go forth to the different clubs, and get a small fee as instructors in your clubs?—Yes; they would be competent in gymnastics.

3646. Both in drill and gymnastics?—Yes.

3647. In fact the whole of the physical training, or what we may call drill and gymnastics?—Yes, and they would be glad to earn a grant.

3648. They would be satisfied with a shilling a night for their work, whereas if you want a military instructor it would cost you a great deal more, and you would have to pay an instructor from the West End 5s. or 7s. 6d. per night; but if you could get a man in your own district it would be an inducement to boys to work for a position of that description?—It is rather difficult to get the boys to cotton to the instruction of somebody they know has really only been through the course they are going through themselves.

3649. You think that you want outside assistance?—Yes; an outside man to supervise it and to head it, so that the whole thing should be under a military man.

3650. Do not you think for the provision of leaders it would be a very good thing to have a school of instruction, provided by the State, for the instruction of those leaders under proper supervision?—Just so.

3651. Like those young men I saw the other day?—Well, you want a State-paid gymnastic instructor who would supervise and superintend, and then these leaders may be developed in this way at a very small fee.

3652. At the State-aided school—the evening classes?—That would be the most efficient way of doing it. A little payment—a little more than an honorarium—if they were confined to being the leaders, and not the actual instructors, would be sufficient.

3653. You were speaking just now about the girls' clubs, and that they are taught to be domestic, and you suggested that they should have physical training. At those clubs are there any rooms suitable for the purpose?—Very few of them. You want central halls in each of those areas, which could be used for the purpose of gymnastic instruction to girls on certain evenings and under the really efficient system of gymnastic instruction, such as you suggested, should be applied to boys.

3654. Have they accommodation at those clubs for gymnastic training?—They are very inadequate.

3655. Another question—Have you had any experience of the home life of the very poorest classes—the actual home life—the inner life?—It is as bad as it can be, and it is because of the badness of the home that the boys are bad.

3656. Have you had any experience as to the habits of the mothers—as to whether they are thrifty, or whether the food is bad?—I have not had any experience about the feeding, but I have heard others speak of it.

3657. Have you had any experience of the home life of the Jews?—I have seen their homes.

3658. Which would you consider the best?—I think the Jews look after their children better than the poorest portion of the English community.

3659. Are they not inclined to overcrowd their rooms more than the others?—Yes, they would submit to overcrowded conditions, but I think as to their nutriment they treat their children better than the English.

3660. Are they more thrifty generally?—Undoubtedly.

3661. Do you think that the fathers of the Jewish children drink less and are more abstemious than the fathers of the English children?—Yes.

3662. You are sure of that?—I feel sure of that.

3663. When you spoke just now about hooligans, or what are commonly called larrakins, what class do they come from, is it the lowest stratum, or simply the lads who have greater energy—what is commonly called "devil"?—I think you could not confine them to one particular kind of home or to one particular sort of parent. A boy is dragged into a gang of this sort of fellows by his own weak disposition very often, whereas his home may be a very good one.

3664. Do you not think that it is owing in the majority of cases to boys having superfluous energy?—I do, distinctly. I feel that if adequate provision were made for their recreation, almost the whole of this larrakin business would vanish.

3665. That is to say, if you provided them with footballs and made them kick footballs, they would not be so inclined to kick policemen in the street?—That is so. They simply want recreative facilities.

3666. (*Dr. Tatham.*) Referring to your general views on the subject of physical deterioration, does your experience tend to convince you whether or not the immigration of aliens is harmful in London?—It appears to me to be very harmful when they migrate into over-crowded areas. That is what I have seen myself in Bethnal Green and Whitechapel, the areas are already over-filled and they come into those very areas, and not some other areas.

3667. Do you think that they do so to any great extent?—Yes, I do, to a great extent. I am not at all sure that the Jewish element will not oust altogether the English element even from Bethnal Green, apart from Whitechapel and Stepney, if it goes on without any restriction.

3668. You think that in the poorer neighbourhoods alien immigration is doing harm?—In so far as it crowds out our own population it is, and the Jewish community, by buying up those properties in the eastern quarters of London, turn the Englishman out.

3669. Have you had any experience of the work of the Salvation Army in the poorer districts?—Yes, to a certain extent. I have been into their labour homes, and I certainly think they have provided for a large portion of the submerged tenth which nobody else has made any attempt to deal with.

3670. And you approve generally of their work?—I think that the social side of their work has been in many respects very effective, but they have not much hold upon the population of the east, as far as I can see, religiously.

3671. Can you trace it to any cause?—I should have thought that the population as a whole does not respond to their methods of proselytising, but the organisation of the army seems to me to have a good deal to commend it.

3672. (*Colonel Fox.*) Have you any experience of the Charity Organisation Society in that part of London?—Yes.

3673. Are they doing any good amongst the very poor in that district?—I think some of the most experienced who are at the work have got ideas in their heads about dealing with the people which would be very useful indeed to this Committee.

3674. Do you think that there is any information that we could get from them on the subject of the life of the poor that would be useful?—Yes, I should certainly call in aid the experience of some of the most experienced of the Charity Organisation Society.

3675. Mr. Loch is the secretary, I think?—Yes.

3676. Do you think that he could give that information himself?—Yes. I might particularly say that Mr. Paterson, who has been working at the Clerkenwell organisation, would be a very useful witness. As far as I have seen, he is one of the ablest and most practical of the workers in the field of charity organization.

3677. But they have the means of seeing and knowing the life of the poorer classes?—Certainly. They make such very close inquiries as to the causes of failure and so on, that the ablest of them would give you some very important information.

3678. (*Mr. Lindsell.*) You spoke about the injurious effects of those cheap sweet shops?—Yes.

3679. Can you say much from your own personal experience of them; have you any personal knowledge?—I have only seen the effects of frequenting them on the juvenile population I have had to deal with.

3680. I have had a very strong representation upon the subject of this gambling that you have just touched upon. The representation made to me was that they have these machines, and that a child puts a penny in and may get 3d. worth of sweets or lose his penny altogether?—Yes.

3681. Have you heard that there is a prosecution being instituted upon that point from Shoreditch?—Yes, I did hear about that.

3682. And it has been taken up to the Court of Appeal. The question seems to be whether it comes within the meaning of the Gambling Act, and the defence is that it requires skill—according to the way the penny is thrust into the slot, and if you exercise that skill you may be sure of your 3d. worth of sweets?—Yes. If you are clumsy you lose the penny, that is the point of the defence, that it is a game of skill and not gambling.

3683. Yes, I understood so. If this conviction is sustained the police will be able to cope with these machines?—I think so. Directly the police get control they can counteract the effect of this evil.

3684. It is not confined to London, but the complaint that I had came from Sheffield?—I should think that it is general.

3685. And the other complaint is that they sell cheap cigarettes and bad cigarettes?—Yes, that is so.

3686. Unless they take the precaution to get a licence they will also be liable to prosecution?—Yes.

3687. You have not heard that they do sell cigarettes without a license?—I have not sufficient information, but it is my idea that they do, and my opinion is that they do, from what I have heard.

3688. You talk about the hardship of having your premises rated?—Yes.

3689. You know that schools are exempt from rating, and you would like that extended to the places you were speaking of?—Yes, to where all this work is done.

3690. Cannot you get the use of the central halls of large elementary schools for the purpose?—They are not adapted to all the purposes of a club, you cannot put in any heavy furniture.

3691. You could not put in gymnastic appliances very well?—Not easily. Then you have to attract boys to this sort of thing by providing such things as bagatelle and billiards, and no tables could be put in there.

3692. But for the purpose of purely physical exercises and drill they would be available?—I think it would be very easy to adapt these splendid school buildings that exist, more in the future than they have been in the past, for the purpose of gymnastics. That leads me to say that gymnastics and musical drill, and also proficiency in swimming in the summer, might be encouraged more by grants being made available for them—that they should be made grant-earning subjects.

3693. Do you know that physical exercises are grant-aided under the Education Act?—But only in combination with some other form of education.

3694. But they are recognised as instruction under the Code?—But only in combination with some other form of education.

3695. Yes, it is part of the school curriculum—it can be made part of the school curriculum?—My suggestion is that it should be made grant-aided, quite independently of the Board Schools: and in very many parts of the poor portions of London, splendid work is being done in developing swimming instruction, for instance, in the public baths in their neighbourhood.

3696. I was coming to the teachers. I suppose you find that they co-operate with all your societies?—Yes, they do. The teachers of the public elementary schools take a tremendous amount of interest in their pupils, and they are exceedingly anxious for their welfare, but it would overwork them to involve them in night as well as day work. But they do a great deal at present.

3697. Do not several of them have clubs for their own boys?—Yes, they do, and it is a very good idea indeed.

3698. They work in harmony with those associations, I suppose?—Oh, yes.

3699 (*Colonel Fox.*) I remember the last day I was at Oxford House there was a squad of boys came into your club-house headed by a teacher from the school to which they belonged, and the teacher was a man who took a vast interest in it?—Oh, yes.

3700. He practically marched them up to your club to go through their exercises?—Yes, and they do the same in the summer when the swimming baths are open, and, therefore, you get those masters who are able to organize on a very large scale, the physical and moral welfare, irrespective of the school hours.

3701. He was a splendid young man who was in charge of those boys?—Yes, and there are others.

3702. (*Mr. Lindsell.*) When that large force of boys were on the Horse Guards' Parade, they were nearly all officered by teachers, were they not?—No, those were Church Lads' Brigades and Boys' Brigades, as distinguished from cadet corps—they were not confined to the London Brigades.

3703. But they were officered by teachers, were they not?—To a certain extent by teachers, but mainly by members of religious associations, church workers, etc.

3704. Have you any experience of the Public School Mission?—Yes, I know a great deal about it.

3705. Do they take this work up?—Yes, very well, and they are very successful. They lean more towards cadet corps than Church Lads' Brigades.

3706. Do you consider that the Church Army does much the same kind of work as the Salvation Army?—I think it does.

3707. Does it reach a lower stratum?—I think that it does reach the lowest strata on a smaller scale altogether than the Salvation Army.

3708. The difficulty is to get the lowest strata into your organisation, is it not?—Yes, it is a difficulty. But if you strengthen the hands of the existing agencies, you seem to enable them to go down to the lower strata, and the condition of reaching the lower strata is to do something for the higher strata first.

3709. (*Mr. Legge.*) I gather from the last portion of your examination that you would like to get this State-aid from the War Office in connection with cadet corps just as it is taken from the Board of Education with grants for physical exercises, and so on?—I should have thought that the two would have been independent; that if the War

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Office considered cadet corps part of the military system of the country, they would provide for them in the same way as for the volunteers.

3710. Yes, but generally the grant would be from the Board of Education on physical training?—On physical-training pure and simple.

3711. (*Mr Lindsell.*) I do not know whether you know it, but last year the experiment was tried of allowing attendances in camp to a boys brigade from a particular school, to reckon as part of the attendances for purposes of grant?—Yes.

3712. It was made an experiment and succeeded very well. That would be the way of receiving aid for these institutions?—I think that a camp grant would be the first thing.

3713. Of course, it went to the general education, but still a grant was allowed of attendances made not in the school, or at any particular manual instruction centre or in any sort of actual school hours for boys, but in the camp?—Yes; I think that that is a very important part of any scheme of help.

3714. Would you like to see that further developed?—Yes; a camp grant by itself would be a very important source of assistance to all those agencies, and particularly to the cadet corps and brigades.

3715. (*Mr. Legge.*) You are aware, no doubt, that before the Board of Education stopped the grant for physical training to evening continuation schools an attack upon the administration of it was made by Sir John Gorst?—Yes.

3716. In which he accused the London School Board of encoursging dancing, and so on?—Yes.

3717. You are also aware, of course, that some very severe strictures were passed upon the fairness of Sir John Gorst's attacks, both by Mr. Stewart Headlam, of the London School Board, and Dr. Macnamara?—Yes.

3718. But so far no answers to those have been vouchsafed by Sir John Gorst—you have seen no answer from him?—No.

3719. Well you would rather like to see those grants reintroduced under proper regulation?—I think that they should be.

3720. Did you see that report by the Scotch Royal Commission on physical training?—I have not studied it carefully for I have not had time yet, I have seen portions of it.

3721. They had a special recommendation to meet the cases of the roughest classes in the country, namely: that special evening continuation classes with a particular curriculum, suited to their needs and designed to make the class attractive, should be instituted; would you be in favour of that?—I should if I knew that they were workers who could deal with them when they got them into the buildings.

3722. It would be a very elastic kind of thing?—Yes, and nothing in the shape of mental work would be successful at first.

3723. Nothing at all?—But their chief need would be a physical side entirely.

3724. (*Mr. Lindsell.*) Boys of what age are you speaking of now?—From fourteen to eighteen years.

3725. (*Mr. Legge.*) Supposing local education authorities provided such evening schools, would you be prepared to go so far as to enable a charge to be preferred against any loafer in the street of that age to account for himself and his evenings, or to attend one of those schools? That was another recommendation of this Commission?—Directly the work for them was sufficiently organized, it seems to me that they should be brought to account for loafing about and getting into mischief.

3726. Do you think it would be a good thing that the club should form a part of the regular elementary school system of the country, or in certain districts which should be scheduled, that the schools should be supplemented by a club carried on in the same building, or in part of it, for its own old pupils?—Yes, I think that there would be very great advantage derived from that. That is one of the great weaknesses of their system, the way in which all the associations, both State and volunteer societies, lose sight of old pupils so to speak; lose sight of lads and girls whom they have been brought into contact with up to fourteen. There is so very little done for them afterwards, and both the schools and those religious societies ought to be strengthened in that direction.

3727. You would like to see more inspection of clubs and so on?—I should be quite prepared to see that as a condition of their earning the grant for physical work.

3728. Your league does not at present do anything in that line; they have not a man who travels round and makes reports, pointing out where the work done is bad, fair, good, and so on?—Our league is getting together an organisation for that; but we have not yet been able to undertake this ourselves. Supposing we get money subscribed, we should certainly send round the most experienced people we can get associated with us for the sake of looking into the adequacy of the work.

3729. As I understand, this Twentieth Century League deals with the Metropolis only?—That is all at present.

3730. You would be glad to see an extension of the organisation to cover the whole country, and to co-ordinate it?—That is what we want.

3731. Because the work of one of these clubs would be more effective if you could exchange boys with Glasgow and Edinburgh, or even Aberdeen?—Yes, there should be a practical scheme of commendation from one to the other.

3732. Are you aware that the Roman Catholics have an organisation of that sort?—I did hear of it. I do not know to what extent.

3733. And can transfer boys when desirable from London to Liverpool, and from London to Edinburgh, and so on?—Yes.

3734. I think you did not mention, though no doubt you had it in your mind, the Metropolitan Association for Befriending Young Servants amongst the girls' agencies?—I did not mention them because there is no physical side to them, as far as I know. I may be wrong, but I did not know there was any physical side to their work.

3735. Now with regard to Colonel Onslow's question as to the danger of stigmatising clubs as recruiting agencies. I suppose most of those clubs are to a certain degree employment bureaux, and help to find work for boys?—Yes, if they find boys out of work they do their best to recommend them.

3736. Surely the difficulty would be overcome if, in addition to civil employments in ordinary life, the clubs were posted up with information as to the junior branches of the Civil Service, Post Office sorters, and telegraph boys, and so on, and there would be no harm in adding to them the full information as to the employment of boys in the army and navy?—I think the chief ground taken by parents against the army and navy is that they lose the wages of the boys, which constitute an important source of income to the family.

3737. But if information with regard to enlistment was simply supplied as one item in the general work of helping boys to employment, the prejudice would be an unreasonable one, would it not?—Yes. It seems to me that it very often is even under existing conditions, when a boy really wants to go into the Army or into the Navy.

3738. (*Colonel Onslow.*) That is perfectly true with regard to the parents, that their fear is the losing of the wages. That is the greatest drawback in recruiting to the Navy, which has an enormous number of eligible boys who come up, whose parents refuse their consent mainly, as a rule, because they know the boy will not for some years be able to send anything home; is that your experience?—Yes.

3739. To go to another point: a short time ago two brother officers of mine, old Rugby boys, were working in London for the Rugby Mission Club, at Notting Hill, and they wanted a sergeant as an instructor, and an excellent man went there who would have been well fitted for the work; but the parents heard that they were going to have this sergeant and the man had to go away, and he was going to give his services voluntarily?—Quite so. I do not think that the prejudice would be carried so far as a general rule.

3740. (*Chairman.*) One more question. Is it the practice in these clubs and brigades to take any note of the physical characters of these boys at entrance with the view of recording physical progress?—Some officers do it, and it ought always to be done if you have time to attend

to those things. I understand Captain Bennett, one of the officers of the West Surrey cadets, is going to give you evidence upon that point. He has taken the chest measurements in the Southwark District, and I understood that he was going to give you the results of his investigations, and he has sent round to the other officers in the same battalion. I have not taken it up myself personally.

3741. Do not you think it would be a good thing for your central organisation to bring to the notice of the different bodies affiliated to it the system of taking some note of a physical character with the view of recording development, and contributing to the general knowledge on the subject?—Yes, I think it would be a good thing, and I will mention it to the Council. *Mr. Eyre.*

3742. It would not add much to the labour of those organisations if the boys were examined on entrance and had their height and weight and chest measurements taken?—No.

3743. And notes of the same character at intervals of their membership or when they left?—Yes, it could be done.

3744. (*Colonel Fox.*) This could easily be done when they are stripped?—Yes.

Mr. JOHN TWEEDY, F.R.C.S., L.R.C.P., called; and Examined.

3745. (*Chairman.*) You are President of the Royal College of Surgeons and you are President of the Ophthalmological Society of the United Kingdom?—Yes. *Mr. Tweedy.*

3746. Have you formed any opinion as to the bearing of the question of eyesight upon physical deterioration?—I have divided my notes into the two questions, first of all, whether there was any evidence of physical deterioration, and, secondly, more particularly with respect to the disabilities of those who offer themselves for enlistment. From the standpoint of ophthalmic medicine and surgery I do not see there is any evidence so far as the eyes or the sight of the population is concerned, of any physical deterioration of the people; there is no evidence in the eyes that degenerative diseases are more common than they were. I may say, perhaps, my experience in the hospital and in private is a very large one. I have been for thirty years connected with Moorfield's Hospital, which is the largest ophthalmic hospital in the world, where they have about 35,000 new patients every year. Of course it was only a certain proportion of those who came under my care, but I reckon that my share would amount to an aggregate of about 120,000 patients. During the whole of that time I have been connected with University College Hospital as well, where the number of patients is very much smaller. Altogether, I suppose, I must have seen well on to 150,000 to 180,000 different individuals suffering eye troubles. As the result of that experience I do not see that there is any evidence of any physical deterioration of the people or of their sight. I do not think diseases of the eye are more common. I do not think defective vision is more common.

3747. Is there any correspondence between deterioration of the eye and general deterioration?—Oh yes, that matter I incidentally mention in my *précis*. There are many persons who are degenerating as regards physique or constitution—I mean in some types of people or families you see evidence of deterioration of the sight and eyes. For instance, there is a very close connection between the eye and the development of the brain. The retina which is the sensitive membrane with which the eye sees, and the optic nerve, are in the early stages of development an actual offshoot from the brain, so that the essential structures of the eye, the nervous mechanisms of the eye are really buds thrown off from the brain tissues, and they retain that continuity throughout life.

3748. And, therefore, they are very susceptible to causes which affect the general health?—Very. The same thing applies to the lens of the eye; and there is a very close relation between development of the eye, the brain, and the teeth. In large numbers of people who suffer from essentially degenerative types of diseases of the eye there is often great deterioration of the teeth as well. The foundation of the teeth is laid about the same time that developments are going on in the eye, so there is a very close and intimate relationship between the two. On the other hand there is a very marked reduction in the number and severity of many diseases of the eye which used to be very common, among them is the condition of what is called trachoma or Egyptian ophthalmia.

3749. Is that congenital?—No, that is an acquired disease and a disease which used to play terrible havoc with our soldiers. In fact up to about thirty years ago there was no large community of the people such as those in workhouses and barracks, and so on, in which this disease was not more or less rampant. It is an acquired disease. I remember quite well in my early days, when I was a student, it was my business every morning to attend to twelve, fifteen, or twenty of these cases, and dress them. Now it is rather a rare thing in the London hospitals. Surgeons coming from the Colonies and from the United States are all struck with the small amount of what is called "granular lids" in London compared with what they get in the Colonies and in America.

3750. To what do you attribute that change?—A greater attention to personal hygiene, greater care in cleanliness, and earlier attention to any eye trouble, any simple inflammation of the eyes, and I think it is entirely the outcome of the improved habits of the people, greater cleanliness, isolation of these cases directly they are discovered, and earlier attention. The havoc that this disease used to play was terrible. I should like to quote from a speech which I made at the Mansion House on behalf of Moorfield's Hospital with regard to the damage that this Egyptian ophthalmia used to inflict:—"In the Egyptian Campaign at the end of last century many here may know as a matter of history, that when Napoleon landed in Egypt he had with him some 32,000 troops and it is said that within two months every one of those men were attacked with ophthalmia. During the English occupation at the beginning of the century a similar disaster overtook the British soldiers. Particulars may be given with respect to one battalion alone which was by no means exceptional or unusual. The battalion was of 700 men, and among these there were 636 cases of ophthalmia, and of these 636 cases, 50 became totally blind in both eyes, 40 became totally blind in one eye, and many others had more or less damaged sight." In Lord Wolseley's campaign in Egypt it was a source of great anxiety to the authorities as to how they were to deal with the soldiers. Surgeon-General Marston spoke to me at the time about it. Precautions were adopted; men were instructed what precautions they should take about their eyes, and the result was that in the Tel-el-Kebir campaign there was not a single soldier who lost his sight from ophthalmia. This result was entirely due to the wise foresight of the Army Medical Department and to the intelligent co-operation of the officers and men. Surgeon-General Hanbury who was the principal Medical Officer in the Campaign was amply justified in concluding his report with these remarks:—"These results, when contrasted with those which have been recorded of the same disease in the war of 1801, justify the expression of my opinion that the Army Medical Department has never performed a better service than this or one that they have more reason to be proud of."

3751. (*Colonel Fox.*) Is not the poison generally conveyed by flies?—Flies may convey it. I have brought with me a drawing of the disease (*handed to the Chairman.*) *This* is called granular lids; it is under the lids. The disease can only be seen when you raise the lids, but it leaves a terrible destruction if it is allowed to go on unchecked. Any form of ophthalmia may be conveyed by flies. These granular lids, true trachoma, is a distinct and specific thing. It eventually becomes a growth in the lids, invades the front of the eye, and if not skilfully and thoroughly treated for a long time, leads to partial or total blindness.

3752. To what do you attribute the cause of ophthalmia?—This form is no doubt caused by some agent of a specific character, most probably bacteria.

3753. (*Dr. Tatham.*) You would call it an infection?—Yes. It is very much like tubercle in many of its characteristics. Tubercle—consumption—is due to the presence of a specific bacillus, and this is also probably due to a specific bacillus.

3754. (*Colonel Fox.*) Is it conveyed by dust, perhaps?—Mere dust would not cause it. But it is right that the Committee should know that from this cause alone—the diminution of this disease in England which, I believe, is

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entirely a matter of cleanliness, care, and attention—there has been an enormous reduction of eye disease and blindness also. The same may be said with regard to purulent ophthalmia. Purulent ophthalmia in infants was the cause of 30 per cent. of the blindness in England.

3755. (*Chairman.*) That is from the neglect of precautions at child birth?—It is due to some sort of infection. Of course, it is neglect to some extent. These cases have become comparatively rare. Twenty or thirty years ago there were in England 20,000 to 30,000 people blind from that one cause alone. Now-a-days one, comparatively speaking, very seldom sees a case of bad purulent ophthalmia in an infant. So that upon the whole, so far as mere eye disease is concerned, I should say that there is less eye disease from preventable causes, and especially from causes implying want of care or want of cleanliness, or even want of physique.

3756. Do you include syphilitic diseases of the eye under that?—I think there are fewer, and certainly less severe, forms of syphilitic diseases of the eye than there were twenty-five or thirty years ago. I do not mean to say that there is less syphilis—I do not know. Of course I only see the later phases of the disease. I do not see the earlier stages of syphilitic disease, but I see it either in the later phases of acquired disease, or still more the congenital inherited syphilis.

3757. Have you formed any opinion as to whether eye disease is more prevalent in towns than in the country?—I do not think there are any data on which one could form a definite opinion. Eye diseases are so various and varied. The great majority of eye patients that come to hospitals really now come on account of optical defects; that is, from some cause or another they need glasses. A great many of these cases of children are brought on account of headaches, that is the explanation of so many more people wearing glasses now. I do not believe at all that there is any evidence of any increase of even these optical defects.

3758. Defects of eyesight receive attention now which they did not do before?—Quite so, and especially in connection with headaches. It is now understood that an optical defect will cause headache, and children are now looked after, whereas twenty-five years ago it was not suspected that there was any connection between the two. Then with regard to town and country, I may say I have been in the habit for years of remarking how frequently the really degenerative types of disease occur in people from the rural districts. Of course there are many explanations. There is an affection called *retinitis pigmentosa* which is an essentially degenerative type of disease and occurs in persons who have other forms of degenerative changes.

3759. Do you expect to find them in the country rather than in the towns?—Yes. I have observed more cases of this *retinitis pigmentosa* which is associated with deaf-mutism, epilepsy, and things of that kind, from the country districts. There are many explanations of that. I think very likely one explanation is that in the rural districts there is probably more inter-marrying, and *retinitis pigmentosa* is often found in the offspring of blood relations. This is the appearance of a healthy eye. (*Handing drawing to the Chairman.*) The second picture shows the degenerative progressive pigmentation of the retina which goes on to actual blindness in time.

3760. Is that partly due to the fact that the stronger types in the rural districts are apt to migrate into towns and leave only the weaker vessels to propagate the species in the country?—Yes, and I think there is also a reverse current.

3761. Debilitated people from the towns go into the country?—Yes.

3762. The country suffers in both ways?—Yes, many people in the better classes of society are told by their medical advisers that they are not fit for certain occupations and they had better lead an outdoor life and follow a pursuit which does not require so much use of their eyes; and they take to farming and things of that kind. There is a current of the better and more adventurous people into the towns and also a smaller reverse current of the feebler and less strong and fit, who are driven back to the land again.

3763. The country is both the recruiting ground and the asylum of the town?—Yes, it is.

3764. Turning to these questions, so far as they affect the enlistment of soldiers, you have some observations to make on that point?—In the table which was drawn up by the Director-General, all the rejections from defects of vision were grouped together. Of course that may mean anything—it may mean that a man is simply short sighted, and could not see the necessary type that he ought to see without glasses.

3765. Upon that point I put some questions to Sir William Taylor, I said "I observe that 'defective vision' ranks very high. In the tables you gave for rejections for 1901 and 1902, I see that the labourers' class ranks first. I want to ask you as to the method in vogue for the examination of recruits. Is it only acuteness of vision that you aim at testing?—Yes, but if a man has got a chronic disease of the eyes that is likely to be infective—altogether without the range of vision—we reject him. A man with chronic inflamed eyelids we reject"?—Diseases of the lids are placed in another group. If you have the table you will find there are defects of vision, and then another classification for diseases of the eyelids; that is a different thing. Defects of vision and diseases of the eyelids are two different causes of rejection. It may be purely an optical defect. It may simply mean that a man has got so much shortsightedness, we will say, or it may mean that he has an eye which has been unused. Many people are born with, or anyhow acquire early in life, unequally sighted eyes, and one eye may fall out of use in consequence Many of these eyes, if they were taken in hand early could be brought into use and be made useful. But, of course, the examiner for the army simply says the man has failed at this or that test, and, therefore, he is rejected with both eyes. *These* are the types that are used—Snellen's types (*the document was handed to the Chairman.*) The other is a dot test for people who do not know their letters. It is the same sort of thing. It is necessary for an officer to read *this* type, which is called No. 24 Snellen, at twenty feet or six metres, He must do that with each eye separately, otherwise he is rejected. A few years ago it was *this* type, No. 36 Snellen, which was accepted. That difference excludes many men—the difference between what is called $\frac{2}{3}$ and $\frac{1}{2}$. I do not mean to say that the present standard is too high, especially with the long range guns which are in use, but it is the fact that many men are rejected on this test, who would not be rejected with the former test. There is a good deal of difference between these two types seen at twenty feet. There is nothing in the Director-General's tables to show how many of these men were rejected for purely optical defects, such as short-sightedness, or how many were due to physical defects of the eyes, films on the eyes, or diseases of the eye. I do not think it is possible to form any idea as to what is really included, or to be understood by defects of vision. It is simply that the men cannot read that type, No. 24 Snellen, at twenty feet, or count those dots.

3766. Sir William Taylor told us that all the men he employs are specialists in ophthalmia, so that I presume a further sub-division could be given?—They simply test the man by asking him to read these letters. If he stops at *this* line, No. 36, you cannot pass him. It would require a prolonged examination of the eye to say why he cannot see more than that. It would require ten minutes or a quarter of an hour at least for a skilled person to find out whether it was simply shortsightedness or what. It would take six weeks to examine 1,000 men in that way, to find out why they could not see that type. They are simply asked what they can read. There are many of these cases which probably are improvable, if taken in hand early enough. I do not venture to offer any suggestions as to dealing in any way with these defects or mitigating them; but I think that there are many agencies at work now which are bound to lead to a good deal of improvement, both in the physique and in the condition of the eyes, although they may not lessen the amount of shortsightedness.

3767. Shortsightedness is not a proof of degeneration?—Not at all. In fact some people think it is rather an evidence the other way. The shortsighted eye is the eye of civilised races. The farsighted eye is the eye of primitive man. Primitive man wants a long range to spot his game.

3768. And to protect himself from his enemies?—Yes, whereas the civilised man mostly works within a yard of his eyes, so that a short-sighted eye, provided it is healthy,

is rather an advantage to civilised man. In the German army short sightedness is not regarded as a disqualification.

3769. So I understood. I put a question on that point to Sir William Taylor, as to whether a great many of these people would not form useful soldiers if equipped with glasses, and he appeared to think that that was too big a question to enter upon ?—On the other hand, in countries where there is conscription, short sightedness would not be a disqualification at all, otherwise half the Germans, I suppose, would claim exemption on account of short-sightedness.

3770. (*Colonel Fox.*) Do you not think that short-sightedness is the result of education—of overtaxing the eyes in the young ?—The short-sighted eye is simply an eye that exceeds a certain length. Any eyeball that exceeds a certain length is short-sighted. It is just like an opera-glass that is screwed out a certain distance. The prevailing type of eye in England is the opposite type of that, namely, the far-sighted eye. The short-sighted eye has become a large eye, a big eye, and may be perfectly healthy, and provided the short sightedness is not great it is positively an advantage for most purposes of civilised life. On the other hand, it is quite true that some eyes become short-sighted, because the coats of the eyes are weak, and they yield under pressure, under stress of work, and so on. Those eyes are often very poor eyes. They become subject to very serious degenerative changes at the back, leading to serious impairment of the sight, but simply short sightedness in itself is certainly not a sign of degeneration, and short sightedness, with healthy eyes, is rather an indication of an advancing type of race.

3771. (*Chairman.*) Arising out of what you have been saying, do you not think that the testing of the eye-sight, whether for colours or objects, should take place in childhood, and before a youth has wasted time in acquiring technical knowledge, which his faulty sight precludes him from using to the best advantage ?—Certainly; and this is being done to a large extent now, as I daresay you know, by the London School Board.

3772. Would you not approve of a medical inspection of schools, taking special note of eyesight ?—Certainly; both of eyesight and other things. Much good is being done now by the systematic testing of the sight of children in board schools, and in the high schools, and many cases of defective vision are now recognised by the inspectors, whoever they may be. These children are spotted and sent for advice. Many of these children get greatly helped, and the eyesight improved by early attention, whereas left to themselves they would not discover there was anything wrong, and they would go from bad to worse. I think a great deal is being done now. It might be possible to extend it and make the benefits more general still. As to whether the work of the school boards is doing much harm to the eyes, I very much doubt it. Of course there are many children who perhaps would be better if they were not only doing less work with their eyes, but working under more favourable conditions—I do not mean at the schools, but at their own homes. Many of these children acquire the reading habit at schools, and they go on reading in the bad and miserable lights of their own homes. It has been quite clearly shown that so far as short sightedness is an acquired disease it increases in proportion to the use of the eyes, and to the want of proper illumination.

3773. By the conditions under which they are used ?—Yes.

3774. Are there any particular forms of eye disease which you think may be due to the use of the eyes at school under the least favourable conditions ?—I should say some of these cases, which are sometimes called malignant forms of shortsightedness, might be but not the true physiological type of eye. But I do not think there is much actual disease produced. I think it is far more the case that these children get headaches and get irritable eyes, and then attention is directed to the eyes, and advice and treatment are obtained. I do not think there is any evidence of definite disease being produced.

3775. How about the use of different sorts of light—gaslight and electric light; have you formed any opinion of the effects of those agents upon the sight ?—No, I have not. Provided the room is fairly well lighted, I do not think it matters what the illuminant is. Good daylight is preferable, of course, but for many weeks in the year we cannot get that anywhere in London. I do not think it matters what the illuminant is, provided it is well placed and there is enough of it without being too much. *Mr. Tweedy.*

3776. (*Dr. Tatham.*) With regard to the subject of syphilis, according to your experience is there an increase in the amount of that disease in this country ?—No, my experience is rather the other way, but, as I have said, I only see the later phases of it. Of course, whether there are more or fewer cases of primary syphilis I do not know, but my strong impression is that there is nothing like the same amount of secondary and tertiary disease, or disease transmitted to the children; I am quite sure of that. I have been struck with it myself, and only a few days ago I was talking to one of my assistants, who has worked with me for over seventeen years, and he quite confirmed me in that respect, especially with regard to inherited syphilis. There is a very remarkable and peculiar disease of the eye which is essentially a disease of inherited syphilis. I am sure these cases are enormously less than they were—what is called interstitial keratitis, that is far less frequent than it was. Whether that is because there is less syphilis or not I cannot say—probably not. I think it is largely due to the fact that the parent is probably more efficiently treated and cured, so far as you can say a case of that kind is cured, and I think now that all surgeons, even those who are not experts in the treatment of syphilis, would always caution a man that he ought not to marry within a certain time, and not till after a prolonged course of treatment and certain period of absence of symptoms. So that it is quite possible that it may be from the improved treatment in the parents one sees less inherited syphilis in the children—certainly as regards the eyes.

3777. I daresay you are aware that so far as the statistics of mortality will help us, syphilis is at any rate a very much less fatal disease now than it was twenty years ago ?—I do not know that specially, but that only confirms what I believe, as a matter of observation and experience, that syphilis is nothing like so malignant as it was.

3778. (*Mr. Lindsell.*) You would strongly advocate some sort of systematic examination of school children ?—Very strongly.

3779. Could that preliminary examination—I mean the tests—be satisfactorily conducted without calling in expert assistants ?—Yes. Anybody could employ those tests; it is not necessary to have a medical man. I daresay you know that the London School Board does employ certain young surgeons ?

3780. I know they do, but, of course, there is the question of the rates. You say it could be done in its initial stage without the necessity of employing medical men ?—Yes. These are the recognised types on this sheet, and all that is wanted is to measure off the distance and ask what the children can read. This line is to be read at 20 feet, and the others at 30, 40, 50, 70, 100, and 200 feet. If a person can read the smallest type of letter at 20 feet he has got normal acuteness of sight, and his vision is said to be 1. It means 6 metres, which is practically 20 feet. On the other hand, supposing a person at 20 feet could only read this big E—the largest type—his vision would be called $\frac{1}{60}$. That is, standing at 20 feet he can only see an object which a natural sighted eye should see at 200 feet or 60 metres. If you look at those types you will see they are made up of little squares, a fifth of the height and a fifth of the breadth. The basis of those letters is what is called the minute angle. The smallest object that can be seen by the healthy human eye is an object which subtends an angle of one minute at the optical centre. Two stars, for instance, can only be differentiated as two if there is an interval of a one minute angle—it does not matter if it is one hundred million miles away or one foot away, the minute angle is just the same. This gap in the letter E gives a minute angle at 200 feet, 60 metres; just as this gap in the Z gives a minute angle of 6 metres. That is the basis of the whole test. The whole letter gives a five minute angle, but the gap is one minute. That is all that is wanted as regards the mere test of sight, to find out what letters a person can see.

3781. It would only be necessary to send a child to an expert examiner if he failed in the test ?—Just so. If a child can see the last line of letters it is all right; if he cannot there is something wrong, and you must find out what it is. That is really all that the examiners of the London School Boards do. They find out the child's sight and then, if faulty, they say it must be treated. They

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do not treat the children in the Board School, they send them away to be treated. Any person could conduct that examination ; it is just as easy as teaching the time by the clock. It would involve no expense whatever, and it would be a good thing, perhaps, if every child when he went to a school was first of all tested in that way, if he knew his letters, and then at certain intervals of a year or something of that kind.

3782. (*Chairman.*) It might be made part of the treatment of an Infants' School, and be part of the ordinary school work ?—Yes. A great many of these children were formerly left to grow up with one unused eye which might have been saved. There are many cases of very slight inequalities of vision—the eyes being otherwise healthy—where one eye drops out of use and becomes dull-sighted simply from non-use.

3783. Colour blindness may be also detected ?—Yes ; that could be detected in a rough and ready way by colour types.

3784. Is colour-blindness increasing so far as you know ? —I do not think there is any evidence to show that one way or the other.

3785. (*Colonel Onslow.*) Very often there is an ignorance of colours ?—Yes ; a good deal of it is ignorance of colours. You mean ignorance of a colour vocabulary ?

3786. Yes ?—But that does not apply to the ordinary test that we use. There are several tests that are used. There is the test of sorting cards, and a more common test is the test by Holmgren's wools. You do not ask the patient the name of the colour, but you simply ask him to match it

3787. In the recruiting examination for the Navy, we use the colours of flags, the actual bunting ?—Yes. You ask the man the names of the colours ?

3788. Yes ?—Of course if a man says it is red, or blue, or green, or what not, that is sufficient ?

3789. We have found in cases between yellow and green, and green and blue, that a man really seems hardly to know the names of the colours, especially in the case of some countrymen ?—Blue is nearly always present. But if you test these people with the wool, you do not ask them the name of the colour, but you tell them to take a certain skein of wool and pick out another to match it. Colour-blind persons may pick out, perhaps, a green to match a red. You ask them if those two are alike, and they say that they are, but one is a little darker than the other. If a man has a good colour sense, he will pick out all shades, red and pink, as readily as possible. There are three test colours, but in a rough and ready way a person may be just asked to name certain colours. I see a good many young fellows going into the Army and Navy, and I just take a little disc of certain colours. Perhaps I show a pale red or pink and a pale green, and if he names them readily I pass him. On the other hand, if there were any hesitation I should take the Holmgren's wool test.

3790. What would you call full normal vision ?—That is the last line of letters of Snellen's type, No. 6, at six metres.

3791. What do you say as to the naval test ?—Naval men must have perfect sight. They have to spot lights at great distances.

3792. Lights and flags ?—Yes. Nowadays with fast-going ships it is necessary for sailors to have perfect acuteness of sight.

3793. We insist upon full normal vision for all classes except artisans and stokers. I have here a record of three years' recruiting in London alone. Eleven per cent. of those who were rejected were rejected for defective vision alone. In one year's record of the whole country—that is recruiting for the whole of England, Scotland, and the north of Ireland—the number of rejections for defective vision was only 7 per cent. ?—I repeat there is nothing to show what defective vision means.

3794. We classify the diseases of the eye and everything of that kind under a different head altogether, but that is simply Snellen's test ?—That is set at twenty feet away from the man, and he is asked to read it. If he cannot do so he cannot pass. The Army does not require the same acuteness as the Navy. A candidate for the Army must read the third line at twenty feet with each eye separately, that is $\frac{6}{9}$ Snellen. That is the test.

3795. Would you not think, judging from this fact, that there 11 per cent. were rejected for defective vision in the case of London, whereas only 7 per cent for the whole country, that the inhabitants of towns are liable to it more than people in the country ? I am sorry I have not the difference between the actual country districts and towns ?—I think it is very likely there is a larger proportion of short-sightedness in towns.

3796. That is owing to not using the eye ?—It may or may not be. I take the short-sighted type of eye as belonging to a higher type of person, other things being equal. The more intellectual type of people get into the towns, and there is a larger proportion of shortsightedness. It does not necessarily mean disease of the eye. That is the point—it does not necessarily mean degenerative disease.

3797. (*Colonel Fox.*) Do you not think we may infer that because there are more shortsighted people in towns, shortsightedness is caused by education and the study of books ?—I should not myself say it was caused by that ; I think it is the more intellectual races throughout the world. Whether in town or country there is a larger proportion of shortsightedness in the higher and more intellectual people than in the lower classes. I do not know that there is any proof that shortsightedness is, as it were, exactly a manufactured product. If the eyes are bad, if they are poor eyes, poor structures, then the strain of school work produces not only shortsightedness, but these very degenerative types of eye, which lead to very severe and grave changes at the back of the eye, which is a most alarming condition. What is called progressive shortsightedness in young people is a very grave condition indeed, because it is accompanied by changes at the back of the eye.

3798. Is it not attributable to want of nerve power also ?—No ; it is the poor structure of which the eye is composed.

3799. Have you any remarks to make in connection with the test of sight for recruits entering the Army ?—If you mean would I suggest lowering the standard, I do not think one could exactly do that in view of the range of guns nowadays, but I cannot help thinking that many a man would make a good soldier if he was allowed to wear glasses. Of course it is a point whether the Army people would sanction it, but I do not see any drawback.

3800. He would make an excellent soldier, just as good as another in time of peace, but in time of war there would be a great chance of his losing his glasses ?—A large number of the officers in the Army are shortsighted.

3801. (*Colonel Onslow.*) And the Navy too ?—Yes, but of course they may not have been shortsighted when they entered or perhaps they got through on easy terms. If a man could not read the third line of type I should find out why he could not. If it was simply due to shortsightedness, and the eyes were otherwise healthy and good, I would pass him even if he could only see the large letter, 60 Snellen, and let him have spectacles. Such a man who is only able to see the big letter, if his eye is good, is better off than a man who might be able to read three or four lines lower down who has not a good eye.

3802. Do you not think in time of war that men when they got a little tired of the whole game would voluntarily lose their glasses ?—I suppose they would. That, of course, is one of the risks.

3803. Do not you think a number would by accident lose their glasses and never get them replaced ? That is a serious consideration ?—But if they lose their glasses it would be at the risk of their lives, and men are not likely to do that. I think glasses would be rather in requisition, it would be more a case of appropriating other people's glasses.

3804. If it is a long campaign and men get tired, would they not make that excuse of having lost their glasses ?—I do not think they would. You cannot send a man off because he has not a pair of spectacles. He must take his chance, and if he is short-sighted he loses his glasses at the risk of his life. He would have to pay the penalty. In the South African war I know two or three officers—they were not in the regular army but yeomanry officers—who lost their lives, I believe, because they lost their glasses. One man came to see me before he went out, and I strongly advised

him not to go. I said, "If you lose your glasses you cannot tell a man from a haystack." He could not have recognised you across the table. In a scrimmage I suppose he lost his glasses, and he was killed. I advised him not to go, and he said, "It is a point of honour, I must go." But where a man has only a moderate amount of shortsightedness he might be very easily passed, if he is marked as it were for examination. Such a man might be marked out as one who would make a smart soldier, but as he could not see the required line of letters it should be found out why he could not, and if it was simply that he was a little short-sighted he should be passed.

3805. In these days, when they profess to have an army for war, you do not think it would be a bad thing to have these men?—I should go further than that, and say there are many men who are passed who have extra good sight who would be more likely to fail in action than some of these short-sighted people. For instance, there are many people who have the opposite of shortsightedness—they have over-sighted eyes. They would probably be able to read the smallest type at six metres. Many of these men in the hurry and scurry and excitement of a campaign would have to make such a forcible effort to focus their eyes that in the excitement of action they would never be able to sight their rifle or anything else. Many of these men have in the end worse sight than those who have a moderate amount of shortsightedness. I would not pass a man into the army who had much shortsightedness, but I think there is many a case where a man might well be passed if he is just a little bit below the recognised standard if his eyes are good and healthy. My eyes have had to do as much work as most people's. At eighteen years of age I could not have passed the present army test because I am a little short-sighted. I could now at fifty-four years of age, but at eighteen my shortsightedness would have excluded me with the present test. I can just do it now at fifty-four because my shortsightedness has relaxed a little with age. My eyes are good, I hope.

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3806. That is hardly a parallel case to a private soldier, as you could have a reserve of glasses?—I have now good eyes, which have served me for the last thirty-four years, and yet they would have rejected me for the army at eighteen, whereas now I could pass the army test, and see infinitely better than many a man who had natural sight at that time.

3807. (*Chairman.*) Your point is, having regard to the difficulty of getting good material for the army, it is a thousand pities to throw away good material merely because there is a certain defect of eyesight which could very easily be got over by the use of glasses?—Yes, if a man is otherwise a good man, and if his eyes can be certified by a competent army surgeon, and if he can be shown to have good healthy eyes that will last, that man although he may have a moderate amount of shortsightedness has better eyes than many persons who have passed the test at seventen or eighteen years of age—more lasting eyes.

3808. (*Colonel Onslow.*) You would advocate a closer examination?—Yes, for those doubtful cases. At present there is no examination to show why a person is rejected. His defective sight simply means that he cannot see some particular type. You want to know why he cannot. A promising young man might be put aside for further examination by some of the experts in the army.

Note.—Mr. Tweedy subsequently sent the following addendum:—

Referring to the latter part of my examination, in which I suggested that a lower standard of distant vision might be recognised for men who were otherwise fit to be enlisted. While every soldier is theoretically expected to fight, in practise many thousands of soldiers take no part in action, and there are innumerable duties to be performed during peace and even on a campaign which these men might properly perform as efficiently as those who have perfect sight.

Sir ALFRED COOPER, F.R.C.S., called; and Examined.

3809. (*Chairman.*) You are vice-president of the Royal College of Surgeons?—Yes.

3810. You represented this country at the Brussels Conference on the subject of venereal disease, did you not?—I did on two occasions.

3811. Were you one of those selected by the College of Surgeons or by the Government itself?—By the College of Surgeons. The first time I represented the Government, as well as the College of Surgeons, but the second time the Government sent their own man.

3812. That last Congress was very recent, was it not?—1902.

3813. You have considered the effect of venereal disease upon physical degeneration a good deal?—Yes.

3814. Of course it has come under your notice that a large number of persons are affected by that disease?—Quite so.

3815. Do you say that the number of persons is increasing relatively to the population or diminishing at the present time?—It is diminishing at the present time.

3816. Are you also prepared to say that the type of syphilitic disease from which people suffer in these days is less severe than it used to be?—It is much less virulent than it was before.

3817. And therefore, I suppose, less disastrous in its consequences to the offspring of such persons?—Quite so.

3818. Will you kindly describe the ravages and complications that ensue from it?—I should place insanity as almost one of the first things—insanity; idiocy; diseases of bones, producing deformity and disfigurement; diseases of the eyes, producing blindness; diseases of the ear producing deafness; diseases of the internal organs, causing defective nutrition and deficient development; diseases of the nervous system, producing insidious forms of paralysis, locomotor ataxy; and it is responsible for a large proportion of the cases of lunacy and idiocy in our asylums.

3819. These are all transmitted diseases?—Yes.

Sir A. Cooper.

3820. Have you paid any special attention to the effect of syphilis in producing lunacy? Of course you are aware that lunacy and idiocy has increased, or is said to have increased, very largely?—Certainly.

3821. Syphilis is admitted to be diminishing, so that it cannot figure very largely among the causes of lunacy?—Perhaps more from the progenitors.

3822. Then there is another point. You are aware that it is stated, and I believe accurately, that there is a larger amount of lunacy in Ireland than in any other part of the British Isles, and yet we are told that the Irish people are much more chaste and constant than any other?—Yes.

3823. In that case the lunacy in Ireland, if it is so prominent, must be due to other causes?—Yes.

3824. There is another prevalent form of venereal disease besides syphilis. Is that also grave in its consequences?—Certainly, gonorrhœa.

3825. That affects the present generation more than the future generation?—Yes.

3826. Will you state what you believe to be the effects of that?—It may be followed by grave and even fatal *sequelæ*, for example: In men, stricture of the urethra, with the consequent disease of the bladder and kidneys; severe and crippling rheumatism; sterility in women; and serious diseases of the female appendages; and in children a severe form of ophthalmia not infrequently destructive to vision.

3827. Have you means of approximately estimating the actual extent of these forms?—No.

3828. Turning to the military aspect of the question, I suppose there is such information as far as the army is concerned?—There is.

3829. You do not think that the figures on that point are altogether to be trusted?—No; for the reasons I have mentioned.

Sir A. Cooper.

3830. You believe it to be a national duty to take every possible means to minimise this source of weakness?—Yes.

3831. Can you indicate what steps you think the nation should take?—Now you come to a very important question. It is remarkable how they have stopped the disease in Germany of late years, the last year or two more especially. The Navy have taken it up more largely than the Army, but the Army is now following the Navy. Here are letters from the admirals of several of the big ships of the Navy.

3832. Do these figures you give us in your *précis* touch syphilis only?—They deal with venereal diseases generally. These are the letters from the Germans and this is the translation of them. (*Documents handed to the Chairman*). The Army and more especially the Navy use these two things—every soldier is given these two things when they are supposed to be going on the loose at all. One is an antiseptic ointment and another is an injection of protdeargol, 5 per cent. (*Handed to the Chairman*).

3833. Every soldier is given these?—Yes; and the men in the Navy.

3834. On joining?—I cannot tell you that. That is what they use. On board every ship they have one of these automatic machines, and they are supposed to use it.

3835-9. (*Colonel Fox.*) It is encouraging immorality?—Yes, it is; that is the worst part of it.

3840. Do you consider that the statistics touching the British Army compare very unfavourably with those of foreign armies?—They do, rather.

3841. At the same time there is a very considerable improvement in the quinquennial period your figures cover?—Very considerable.

3842. I think we heard from Sir William Taylor that the efficiency of the arrangements in India was so great that there was a diminution of syphilis in this country, largely from the fact that there were very many fewer imported cases?—Quite so.

3843-4. You are not prepared to attach too much importance to the value of these statistics?—No. Comparisons between different countries, different armies, and different towns are really valueless by the different conditions prevailing, and until there is an international uniformity in the method of preparing statistics very little reliance can be placed upon the figures.

3845. Can you tell us anything about the opinions that appear to have been prevalent in the Brussels Conference as to prophylactics and so on?—I understood there was some change of opinion as to the value of the system of protection which has been rife abroad?—Yes, a very strong opinion indeed against the regulations.

3846. They thought that free trade would answer better than protection, in this case at any rate?—Yes, much better; they were very decided about that. It appeared from the statistics they had, and from every source, syphilis was less in England, and where there was no regulation, than anywhere else. Fournier himself said that, if anyone wanted to get syphilis, Paris was about the best place to get it. He went so far as that. It is for this reason that many people go there to these improper houses, because they believe that they are licensed and that they will have no chance of catching the disease; whereas there is no sort of control, because a woman will very likely see five, six or seven men in a day, and the first one might give her disease and she might spread it to all the others. He thought it was quite a hot bed of disease. There is probably more of it in France than anywhere else at the present time.

3847. As an alternative against measures of that sort what would you advocate as the best way of tackling the problem?—I heard Mr. Tweedy remark that the principal way of stopping it now was educating the people more to know how to treat it. There is no doubt that there is very much less than there was.

3848. Is it the case that the means of treating it, that is to say, hospital accommodation, is anything like sufficient?—No, it is nothing like sufficient.

3849. Will you just explain what defects you think there are?—As regards measures to be taken to diminish the amount of venereal disease, one of the primary considerations must be to see that the accommodation for the relief of sufferers from such disease is efficient and adequate. Taking the case of London, it may be said without fear of contradiction that the accommodation for the treatment of venereal disease is lamentably inadequate. There is only one special hospital for the relief of such cases—the Lock Hospital—which has two branches, one for females with 135 beds, and one for males with only twenty-seven beds. In some of the general hospitals a limited number of beds is available for these cases, and a considerable proportion of the patients seen in the out-patient departments are suffering from venereal disease, or from its effects, remote or immediate. But the attention bestowed on such cases is utterly disproportionate to their gravity. The patients are not informed of the serious nature of their disease, or of the risks of contagion, or of the necessity for prolonged treatment; their attendance is irregular, and usually ceases with the disappearance of their symptoms. The amount of teaching done on this subject is very limited, so that at the commencement of their career the majority of medical practitioners are only possessed of a very insufficient knowledge of the subject. At the first visit to the hospital, the patient, who is usually completely ignorant of the dangers and consequences of the disease both to himself and to others, should be instructed in the necessity for prolonged treatment and in the importance of his running no risk of communicating disease to others; all possible methods of his spreading the contagion should be pointed out to him; if a married man, the possible result to his wife and to their subsequent progeny should be explained; and, in the case of unmarried men, the necessity of remaining so, till the period necessary for treatment has elapsed, must be emphasised. Not only should there be no obstacles placed in the way of such cases attending in general hospitals, but, on the contrary, every facility and encouragement should be held out to them, and efforts made to gain their trust and confidence at the outset of the treatment. One of the great drawbacks in inducing male patients to attend for a sufficient period is the time that must be occupied by each visit to the hospital, involving the loss of a portion of their day's wages; to counteract this, the out-patient department should be open on certain evenings of the week, when patients could attend after their day's work was over. This has for many years past been done at the London Lock Hospital on three evenings a week, when a large number of patients attend who otherwise would have to go untreated. It is advisable that there should be special departments at general hospitals for the treatment of this class of disease, and all such cases should be relegated to that department; it should be under the charge of someone specially skilled in that branch of professional knowledge; and a course of instruction in that subject should be compulsory for every student. These special departments have been in existence for years past in the majority of European countries and in America, and, further, special wards are set aside for the reception of such cases.

3850. Have you any idea why such methods have not been taken in hospitals up to this date?—Because we have not acknowledged the disease. It has been rather put aside. It has not been acknowledged in the manner it ought to be.

3851. Or is it because the hospital authorities look upon these people who are suffering from these diseases as being properly punished for their sins?—That is it in some instances.

3852. And therefore not fit subjects for treatment?—Yes. I was attached to one of the Lock Hospitals, as surgeon, and I found it was difficult to push it, because it was looked upon as a disagreeable subject, and therefore people did not like to touch it at all.

3853. Surely the risks of the community should have been given weight in considering the treatment of such a disease?—Certainly.

3854. Rather than the position of the individual?—Yes, I think you are quite right.

3855. Do you think there would be any difficulty in prevailing upon the hospital authorities to take the course of action you recommend?—I do not think so.

3856. If the advantages were pointed out to them ?—I think they would take it up. I think it is a very important thing.

3857. I suppose a certain number of men could attend later in the evening ?—Yes.

3858. When are they generally closed ?—About four or five in the afternoon.

3859. In the course of the Brussels Conference this resolution was adopted :—"The Conference requests the various Governments to constitute in each country a commission charged (a) to determine the frequency of venereal diseases among the civil population, apart from temporary variations ; (b) to enquire into the institutions actually in existence for the treatment of venereal diseases, the distribution of hospitals, the number of beds available in different places, and to propose the most efficacious measures for the treatment of these diseases ; (c) to collect opinions as to the best means for preventing and limiting the spread of venereal diseases among the civil population and to formulate conclusions upon the subject." You were a party to the adoption of that resolution ?—Yes.

3860. Has anything been done to further these objects in this country ?—I do not think there has been.

3861. To whom was it communicated ? Was it sent to the Local Government Board, or to any particular Department ?—I think it was sent to the Local Government Board—it was to the Government at all events.

3862. If, as a result of the inquiry upon which we are engaged, anything in the shape of a Bureau of Public Health is constituted, I presume the functions that this Conference suggest should be discharged by this Commission and might be exercised by such bureau ?—Certainly.

3863. And the whole matter would then be treated from the point of view of the general health of the community, which is perhaps the best point of view from which to treat it ?—Quite so.

3864. At any rate, on the general question touching deterioration, I gather from your evidence that if there is, as we are inclined to think is not yet proved, a general deterioration, it cannot be due to the increase of syphilis ?—No.

3865. Could you say anything on the general question ? Do you believe, from your observation, that there is more what is called deterioration in the lower ranks of society than there used to be ?—No, I should not say there was.

3866. You do not think so ?—No, I do not think so.

3867. Or if there is, in certain quarters, at any rate, counteractive tendencies are probably more potent and likely to become still more so as time goes on ?—I think so.

3868. (*Dr. Tatham.*) You have in your *précis* advised certain measures for the cure rather than for the prevention of syphilis ?—Yes.

3869. With regard to prevention, you know that in England, at any rate at the present time, a man may go and infect several women with syphilis and go scot free. Do you think that it would be just or practicable to make such a person amenable to the law ? That would be a matter of prevention, would it not ?—Yes.

3870. What do you think of it ?—It would be a very good thing if you could carry it not. That is what they do in Russia. I was in St. Petersburg in 1875, and they have greatly checked syphilis there. Directly there is a case it is reported, whether it is a prince or princess, or duke or duchess, or even one of the grand dukes. If one of the grand dukes gets syphilis it would have to be reported, and he would be surrounded by police regulations, and it would be quite impossible for him to pass it on to anybody.

3871. (*Chairman.*) Would you bring it under the Notification of Diseases Act in this country ?—If you could do that it would be a very good thing. I should say, yes, certainly. It is such a fearful disease that I would do everything in the world to stop it.

3872. (*Dr. Tatham.*) You think the suggestion is not an impracticable one ?—I do not think so at all. *Sir A. Cooper.*

3873. (*Mr. Lindsell.*) You think syphilis is decreasing both in quantity and in virulence ?—Yes.

3874. Still, I suppose, you would say that it is one of the chief causes of whatever degeneracy there is ?—Certainly, the most potent.

3875. The most potent of all ?—Yes.

3876. Is hereditary syphilis mainly due to the progenitor being in the primary or secondary stage ?—More commonly in the secondary stage.

3877. Is there any guarantee that a person who has been through the secondary stage, however well cured, may not at any time communicate something to his offspring ? I mean, when once a person has reached the secondary stage, is he a fit person to propagate at all, even though apparently cured ?—Oh, yes ; I should say so, if he has passed through the secondary stage and has undergone treatment for a sufficient period.

3878. There is no harm ?—No. If we prevented him from propagating we should have to stop the population terribly.

3879. *This* is a prophylactic which is sold by a penny-in-the-slot machine ?—It is an injection, really.

3880. (*Colonel Fox.*) This is for injection ?—Yes, after the operation.

3881. (*Dr. Tatham.*) Do you agree with other surgeons who think that the use of an injection is not altogether a thing which could be trusted to anyone—sometimes it may lead to harmful results ?—Yes.

3882. A careless use of injection, for instance, in the case of nitrate of silver might lead to serious results ?—Yes.

3883. (*Colonel Fox.*) This would be quite harmless ?—Yes.

3884. (*Colonel Onslow.*) I am afraid I am rather going over old ground in reference to the Contagious Diseases Acts, but it is the fact, is it not, that when they were in operation in this country before, they were confined to garrison towns ?—Very much so.

3885. Almost entirely ?—Yes.

3886. I think some towns could adopt them, if they chose ?—Yes.

3887. Do not you think that almost worse than none at all—do not you think that they ought to be in vogue everywhere ?—Yes.

3888. Did it come within your knowledge that after they were abolished in garrison towns the increase in venereal diseases was very enormous in the Army and Navy ?—There is no doubt there was some increase.

3889. I see you say that syphilis generally has decreased, and become a milder disease. That is, I suppose, due entirely to the greater care, the greater knowledge of the medical profession in dealing with it ?—I think so.

3890. I have it on good authority, from naval surgeons, that the type that they have in the home ports—Portsmouth, Plymouth, and Chatham, and so on—is less virulent? —Yes.

3891. You give statistics in your *précis* regarding the Army. I have here a rough statement of the figures for the Navy for the last year (*The document was handed to the Witness.*) ?—Yes.

3892. They compare very well with those you have given us for the Army ?—They do.

3893. You notice the peculiar fact that at home we have a ratio of 116 per 1,000 ; North America and West Indies, 115 per 1,000, leaving out the decimals ; East Indies, 134 —this is what one may expect—China, 141 ; and general—that is, ships travelling about all over the world—136 ; and Australia, 140 ; but in the Mediterranean, where the ships go to some of the very worst ports, from the point of view of the women population, it is only 71. What possible explanation can there be for that ?—I do not know ; it is very extraordinary.

Sir A Cooper

3894. In China, it is well known, the disease is very bad ?—Yes. While the Contagious Diseases Act was in force the Government used to pay us so much for half our beds at the Lock Hospital for only female patients. I never have seen such virulent cases as I saw then, sent up from Portsmouth, Woolwich, and other garrison towns.

3895. I take it that in foreign countries, say France, they do not care for these regular houses, but that does not apply, I suppose, to inspection—I mean, to introducing the Contagious Diseases Acts all over the kingdom, and insisting upon the inspection of women, and extending that to the inspection of men who may be reported by women—probably that would be the best way of dealing with it. Would that meet with the same objection that the foreigners are finding ?—I do not know. I do not think they would stand that. They were very decided in their opinions at Brussels, that any regulation of any sort or kind did more harm than good.

3896. Even this regulation of inspection ?—Yes.

3897. I do not mean licensing the houses ?—No, but inspection or police regulation. They were very strong indeed about it.

3898. The only remedy is knowledge and cleanliness ?—Yes.

3899. (*Colonel Fox.*) Am I right in supposing that there is such a law existing, but that at present it is suspended ? There was a time when it was in force, and I remember at Aldershot there was very little venereal disease, but as soon as the Contagious Diseases Act was suspended cases increased. There was not a regular repeal of the Act, was there ?—Yes, I think it was repealed.

3900. The riff-raff from the woods and ditches at once swarmed into the town ; they dared not show themselves before. Then the military hospitals were soon full of cases ?—Yes.

NINTH DAY.

Wednesday, 10th February, 1904.

PRESENT.

Mr. Alm ric W. Fitz Roy (*in the Chair*).
Colonel G. M. Fox.
Mr. H. M Lindsell.
Colonel George T. Onslow.
Dr. J. F. W. Tatham.

Mr. Ernest H. Pooley, (*Secretary*).

Dr. R. J. Collie, M.D., called ; and Examined.

Dr. Collie.

3901. (*Chairman.*) Will you kindly state your qualifications to give evidence before this Committee ?—I am an M.D. of Aberdeen University, and have been four years connected with the London School Board.

3902. Has your practice always been in London ?—For the last fourteen years.

3903. And previously to that, where were you ?—I was in Sunderland.

3904. Is your only administrative capacity in connection with the London School Board ?—You are Medical Inspector of the London School Board ?—Yes, and also a medical examiner to the London County Council.

3905. Do you examine employees of the London County Council ?—I examine all their clerks and all their employees also ; and I deal with questions under the Employers' Liability Act.

3906. That has brought you in touch with the condition of health of the masses ?—That is so. I examine all the men who are appointed to the Metropolitan Fire Brigade.

3907. Have you formed any opinion upon the existence of physical deterioration and its causes ?—My view is that there is no widespread deterioration. I have formed the impression that only a section of the community is unfit physically, and that physical infirmity is practically confined to the poorest and lowest strata of the population where children are improperly and insufficiently fed and inadequately housed, and where parents are improvident, idle, and intemperate. Those who are underfed and ill-housed (more especially if they happen to be parturient women or very young infants) must, and always will be, physical degenerates—overcrowding, insanitary environment, early marriages, large families, ignorance of the elementary principles of infant feeding, combine to keep up a steady supply of those who are physically unfit, mentally below the normal, and generally morally debased. The standard of efficiency, intelligence and education, and with it the rate of wages, has increased in the case of the skilled labourer, but the unskilled labourer, who commands at best but a small wage, is destitute when want of work or sickness overtakes him, and too often when the bread-winner has steady work and enjoys good health, a thriftless wife, a sick child, or a large family makes all the difference between bare sufficiency and semi-starvation for the household.

3908. You assign the worst effects to overcrowding of the young, I presume ?—That is so. The effect of overcrowding is keenly felt by the young. Insanitary environment necessarily produces an enfeebled body, and with the poor, an unhealthy body is generally the accompaniment of arrested mental development. They have no individuality—no character. The children of the lower stratum of society are subject to adverse influences even before they are born. The mother (if it be not her first-born or second child) is probably underfed. She lives in a vitiated atmosphere and has little or no opportunity for healthy exercise. Too often she is not sufficiently nourished or robust to suckle her child. Often she does not attempt it, knowing that in a few weeks she must of necessity go to work.

3909. Even those who are not in that case, very often neglect their duty from sheer disinclination ; is not that so ?—That is so ; a large number of them do not suckle their children. For those who cannot suckle, *crèches* (which might be self-supporting) should be established in all poor districts, and could, as Dr. Kerr has suggested when reporting on the Nurseries of the London School Board, be utilised to teach the elder children in the elementary schools the rudiments of infant management and feeding.

3910. That would remedy what you say is one of the causes—the bad condition of the food and the ignorance of elementary principles ?—That argument might be used.

3911. Could that be done on a scale commensurate with the need ?—It would be very difficult. I think not.

3912. It would be a beginning ?—Yes, and it could be done and would have a good effect, but I do not think that it could be done very largely. With the ignorant and the poor, the mere fact of maternity seems to create an impression of omniscience in all matters maternal, and yet the Health Statistics for London for 1902 show that out of every 1,000 children born, 139 died before they reached the anniversary of their birth.

3913. Have you considered what are the principal causes of infant mortality ?—I think want of nursing at the breast and injudicious feeding. I think that that accounts for a very large percentage

3914. Do you think that there is much culpable negligence ? — I do not think that it is culpable in a sense : it is ignorance.

3915. And would you say that there is indifference to the prolongation of the lives of the children ?—I do not think so. One does come across cases. I think that the maternal love for children is very strong even with the very poor.

3916. Do not you think that infant insurance has made parents very indifferent ?—Only amongst the very lowest. I have seen it in Sunderland, but it was almost confined to the criminal classes.

3917. Do you think that the extent of the evil would justify any interference with the right of parents to insure their infant children ?—I would not like to answer that, because my experience is not sufficiently large for my opinion to be of value. I used to think it did, but one has got out of that class of practice where one meets such cases.

3918. Do you think that the system of registration of births and deaths of young children should be more strengthened with a view to making the parents more directly responsible where culpable negligence exists ?—I think that that would be a good thing.

3919. To require the medical registration of the deaths of all children under a certain age ?—The death of every child is supposed to be certified.

3920. Not by a medical man ?—No—there are considerable loopholes.

3921. I understand that it is not a portion of the registration laws ?—There is a large proportion of the children not certified.

3922. Do you think that that would be useful with a view to checking parental neglect ?—Yes.

3923. You think if one or two cases of real culpable negligence were prosecuted it would be an object-lesson, and might do a good deal of good ?—I am sure it would.

3924. Now will you go on with what you consider are the principal causes of infant mortality ?—A high death-rate implies much sickness, apart from that which has actually raised the death-rate.

3925. That means debilitating effects upon the survivors ?—That is so. The majority of infant deaths are the result of want of proper feeding, and there remains a large proportion of those improperly-fed who survive. Later, these enter the struggle for existence with bodies physically deteriorated, and are sadly handicapped in the struggle for existence. Thus the majority of infants of the poor get a false start in life. It is impossible to overestimate the importance of proper feeding in infancy. Most children are apparently healthy when they are born, and, if they got fair play, would grow up strong—I should say the majority would. Those who are not breast-fed, are as a rule improperly fed either on various proprietary articles or other forms of farinaceous food, and active disabling disease is directly induced. As a matter of fact, these children suffer from a debilitating form of diarrhœa, and the parents do not understand it.

3926. In infants it acts as an irritant ?—It acts as a poison—as an irritant. They do not understand, and they generally say it is marasmus ; that means that a child has some obscure internal disease ; whereas, as a matter of fact, it is defective feeding. The chronic digestive disorders of early infancy (the result of improper feeding) and subsequent defective nutrition, lessen the power of resistance to tubercular infection. Mal-nutrition is the cause of most of the physical, and many of the mental, disabilities of children attending elementary schools.

3927. You say in your *précis* that most children are apparently healthy when they are born, and that accords with what we have heard in evidence from most of the witnesses. You know Dr. Eichholz ?—Yes.

3928. I have a letter from Dr. Eichholz, in which he says : " I have to-day interviewed Dr. Sunderland, the Chief Physician to the Royal Maternity Charity, the largest thing of the kind in London, who tells me that the medical officers working for the charity report to him with practical unanimity that from 80 per cent. to 90 per cent. of their new births are healthy. He says that he has similar information from other parts of London. Would that be consistent with your view ?—I am not prepared to dispute it. Perhaps it is so. But he was apparently dealing with the children at the moment of their birth only. For instance—when they have syphilis—many are born are apparently healthy, but many of the degenerative changes commence soon after birth.

3929. So that the appearence of health at birth may be deceptive ?—It may be. I cannot help thinking that it is. I discussed this point with Dr. Eichholz.

3930. Then you are not prepared therefore to go so far as he does ?—No, it is only surmise.

3931. Have you considered the effects of tea drinking among other elements of defective mal-nutrition ?—I consider it most deleterious.

3932. It is given to very young children, we understand ?—Yes ; the other day I asked, at a mentally defective school, in the case of thirty children, how many had had bread and tea for dinner, and sixteen hands were held up. Tea is a stimulant, it appeases the appetite for the time being, but is not in the least nourishing. They use an inferior tea very strongly infused.

3933. And it has stood for a long time, I suppose. Would you describe the condition of the children that survive ?—They are pale—anæmic. They have a half-starved look and have very little resistance to disease, especially zymotic disease. Half starved, I think, describes them to a great extent. Many of those who survive the improper dietary of the first three years of their lives are to be found in the children's wards of our hospitals and infirmaries, suffering from tubercular affections of the hip and other joints, from spinal and from lung disease. I examine the physically defective schools for the London School Board, and I see a large number of these there. Thousands are to be found in attendance at day schools—open-mouthed, stupid-looking children, the result of adenoid overgrowth brought about by improper feeding combined with insufficient fresh air.

3934. Are there any special arrangements for their education ?—Yes, we have " Mentally Defective " schools and " Physically Defective " schools.

3935. Is the curriculum in each case adapted so far as it can be ?—Yes, very much so. We are very particular about it.

3936. You have something to say about physical occupations ?—They have manual work in the afternoon and elementary teaching—reading, writing and arithmetic, in the forenoon. The physically defective are instructed very much as in the elementary schools, but the arrangements are more particularly adapted for their position. Some of them lie on couches, and they all have comfortable chairs. Many of them come with splints.

3937. Is the form of education that they receive adapted to the purpose, or do you think that it wants still further development ?—We do not cover anything like the ground, and the London School Board is opening fresh centres every month. There is not a sufficient number. The accommodation for the physically and mentally defective is being constantly increased.

3938. Will you tell us what you have to say about that ? —Large numbers of these children are sent to the special classes of the London School Board. While undeniably mentally defective within the meaning of the Elementary Education (Defective and Epileptic Children) Act of 1899, their mental disability is not only preventable, but in many cases is curable. In a large number of instances, after the careful individual attention and mid-day dinner of the special schools, they are returned after from six to eighteen months to the elementary schools with a new lease of mental vigour. These children are functionally mentally defective. Their brains are starved, and naturally fail to re-act to the ordinary methods of elementary teaching. In the absence of proper provision for feeding ill-nourished children, these special schools in London are fulfilling a very useful function, although one (judging from the form of certificate demanded by the Board of Education) hardly intended by the Legislature when it framed the Act of 1899. I ought to explain that the form of certificate that we are asked to give is : " I hereby certify that A—— B—— is not merely dull and backward, but is mentally defective." Now to all appearance these children are merely dull and backward, but as a matter of fact one finds that the teachers have been endeavouring without any success to instruct them for

Dr. Collie.

long periods of time. Only yesterday I asked a teacher if he would be prepared to certify under the Board of Education rules that a certain little lad was not dull and backward but really mentally defective. The teacher said, "Yes." I asked why, and he said, "The boy is ten years of age, he has been in the first standard for three years, and there must be some obscure mental defect at the back of his condition, but I cannot categorically tell you what it is." That is what I mean by saying that many of these children are apparently only dull and backward, but they are really functionally defective. And in a certain proportion of the cases it is the result of semi-starvation.

3939. Under better conditions of feeding, does the brain recover?—Yes, after sixteen or eighteen months they get a fresh start with feeding.

3940. (*Mr. Lindsell.*) You might have a child physically defective but with a perfectly bright intellect?—Quite so. We certify them under the same Act, we certify them simply as physically not mentally defective.

3941. Are they embraced under the same Act?—Under the Elementary Education (Defective and Epileptic Children) Act, 1899.

3942. (*Chairman.*) Do you think enough attention is paid to the preparation of girls for their duties as mothers?—I do not. The "Domestic Subjects" centres of the London School Board are 353 in number, of these 183 are cookery, 142 laundry, and 28 housewifery. The number is being increased. Each centre supplies several schools.

3943. Will you give us your views on the subject?—Every girl should be instructed upon the elementary principles of infant feeding and management, and should undergo a course of housewifery before she leaves school.

3944. Is nothing said about infant feeding and management in the present code?—In the housewifery centre there is the syllabus which embraces this subject. Each school should have a cookery centre attached to it large enough to cook dinners for all underfed children. The elder children should, under supervision, take it in turn to cook the food. The plain everyday cooking which would be the fare of the children is exactly what they ought to know. I only speak of those half starved.

3945. Do you think that it would be possible to work the two into one another, because when Dr. Eichholz was under examination here, and I asked him could not the two be so adjusted as to help one another, he replied he thought you could not get the quantity cooked in the time?—I do not understand.

3946. The supplying of meals to underfed children, and the instruction of the elder children in the elements of cooking?—I think that that could be arranged.

3947. He appeared to think that the amount of food could not be got for the number of children who required it?—There is not a very large proportion of children who are actually half starved; it is only in some districts, and those actually requiring dinners would be comparatively a small proportion to the attendances in those particular schools.

3948. By those requiring, you mean in the sense of being half starved?—Yes.

3949. Would it not be a useful thing in a good many cases if the children could be supplied with food at the schools and the parents paying for it?—In that case I would agree with Dr. Eichholz. It would be very difficult to fit the two things in: if you provide several hundreds it would be out of the question.

3950. But to deal with the underfed alone it would be practicable, you think?—I do think so.

3951. The worst feature of the evil is that they come in the morning with a very inadequate or improper breakfast. Would you propose to give them anything then?—Yes, I certainly should.

3952. Would you say a basin of porridge?—They could not have anything better than porridge and milk.

3953. But how are you going to deal with the question of parental responsibility in a matter of that sort; if they are led to expect a basin of porridge, such little sense of duty as they do have might disappear altogether?—I think that they ought to pay a very small sum.

3954. Do you think that they could do that in most cases?—I think that they could. If they were charged a penny—it must cost them nearly that to feed them at home probably more.

3955. Do you think that it would be possible in the case of those who send their children to school underfed to treat the parents as you would treat them when a child is improperly clothed or dirty—could you not exclude the child from the school, and bring the parent up for neglect?—Yes.

3956. Is that practicable under the existing law?—Yes. I think it could be done with very little pressure, for frequently I have on my own responsibility (apart from my position as an officer of the Board) reported cases to the Society for the Prevention of Cruelty to Children, and an officer is always sent, with the result that in almost every case I find an improvement for a time.

3957. Do you think that one or two prosecutions for not sending the child to school in a case of that sort would have a salutary effect?—I think so.

3958. You think that a school kitchen should be provided in every school under the building rules?—I do emphatically; so that the underfed children should be fed.

3959. That is to say in poor districts?—Only in poor districts; plain food cooking is exactly what the children want to know.

3960. I suppose you would give a good many hours to the cookery lessons, and probably at the later stages of the girl's career at the school?—I think that it oughtto be given to older children.

3961. You think that it is of special importance in the case of girls who in the course of a few months will leave the school probably to do domestic work in their own homes?—That is so. As a matter of fact, in the Board Schools we get children beyond fourteen, and, as happens occasionally, they are anxious to have more instruction in housewifery and cookery. We get them beyond the school age of fourteen.

3962. The parents are pleased at that, are they?—Yes, they like it.

3963. (*Colonel Fox.*) Does not this cookery generally affect the better class of girls. The ones you want to get at are the poorer classes, and they do not attend these cookery centres I gather?—I do not know.

3964. The most promising are the ones most advanced in their studies, but the poorer ones do not attend?—I am not aware that any are debarred at any time from any cause except from want of accommodation.

3965. Yes?—If that were so it would be a very serious matter, but I really have nothing officially to do with it.

3966. I understand that the most advanced pupils attend?—Yes; all girls are expected to atetnd a centre on one half day a week for special instruction in domestic subjects as soon as possible after they have arrived at the age of eleven years, irrespective of the standard or class in which they may be placed in the ordinary schools. The courses of instruction commence at the end of August and the beginning of February, and cover a period of three years.

3967. I do not mean to say as regards age, but the poorer classes that you want do not attend, and I am informed they have to pay?—I think not.

3968. I think they have?—All the elementary education is free in the London School Board.

3969. I am told that the backward children as regards age—those who have not got on in the different standards, owing to their mental capacity, do not attend?—I am not aware of it.

3970. (*Chairman.*) One feature of the School Board system in big towns, which is rather inconsistent with carrying out this scheme of yours, is that such are taught not at the schools themselves, but at the centres?—That is so. My suggestion is that a kitchen should be attached to each school.

3971. You think that would be very much better?—I do not know how it would work practically, but I do think that there would be more chance of the children being fed if there were a kitchen at each school.

3972. In the case of the poorer schools, but it would not matter in the case of the better class of schools?—It would not be wanted in the better class. The sub-committee of the London School Board which looks after the cookery are keenly alive to the teaching of the infant feeding. Last winter four lectures on infant management were delivered to the housewifery teachers, and they were much appreciated;

3973. The teachers themselves are not as well qualified as they might be to give instruction, are they?—That is the feeling, and that is why the lectures were given. Almost in every case a small sum of about one penny (for which a good dinner could be provided) would be willingly paid, and as the teacher, kitchen, etc, are a necessary part of the school equipment, the plan would therefore be practically self-supporting. Voluntary effort would more than cover the expenses of those who could not pay. The plan adopted in Dundee, where the soup supplied is taken with bread brought by the children, would help to take the edge off the eleemosynary aspect of the transaction, the idea that they are being fed by charity. Bad nutrition and normal brain development are incompatible, and, if some such scheme were adopted, we should hear less of mental deficiency, and see fewer undersized children with flabby muscles and bent spines, and the teachers would soon find that the children's attention during lessons would be more concentrated. A check might then be put upon the increasing number of the (somewhat expensive) physically and mentally defective schools.

3974. What further instruction do the young mothers require?—I think, infant feeding and the management of very young children, and what would come generally under housewifery, cleaning and scrubbing, and lastly the vast importance of serving food properly.

3975. They do not know how to select the food, you mean?—I believe they do make an attempt to teach that. Some of the children are sent out to buy provisions in order to get an idea of the value of food stuffs.

3976. Do you think that the sanitary authority might issue leaflets for the guidance of parents in these matters? What is learned at school is very often forgotten. It is done in many places you know?—Yes. The medical officer of Battersea has issued leaflets, but he says they are not read, except by the better class, and those who ought to learn either think that they know or won't trouble to read them. Nor is a sufficient supply of food all. The average working man's wife is lamentably ignorant of the value of the different food-stuffs, and her unintelligent selection, and bad cooking, amount practically to underfeeding, even though the bulk to all appearance be sufficient. The Legislature makes special provision for the education of those who cannot see and hear, and for those who are deficient physically and mentally. Can we reasonably expect a little boy of, say, seven or eight years of age, coming to school without his breakfast, to really benefit from lessons in mental arithmetic or physical drill? Yet under the Elementary Education Acts he is forced to attend school. If he happens to be starved (from whatever cause) surely it is the duty of the State to see that the child has his education given under circumstances in which he is capable of receiving it.

3977. There my suggestion of overcrowding in case of children comes in?—Yes. We feel that then there is the question of uncleanliness. Dr. Kerr started a campaign with reference to uncleanliness amongst the children. First he introduced a class for the uncleanly, they were put by themselves, and this class is called a dirty class. The parents of the children felt the disgrace of this, and the question is being considered whether or not eventually we shall not exclude those children altogether and start a prosecution of the parents.

3978. Do not you think that the same principle might be meted out to the children who are wilfully underfed?—Certainly.

3979. Could the Society for the Prevention of Cruelty to Children take it up?—There would be so many cases it would be impossible.

3980. But they might take up one or two test cases?—Yes.

3981. Will you go on with the rest of your evidence?—My impression is that no time should be lost, even from an educational point of view, in teaching the rising generation in a simple, practical, forcible way the laws of health, and a beginning might be made by teaching the children in properly warmed and efficiently ventilated class-rooms.

3982. Is that intended as a reflection upon the existing class-rooms?—Yes, it is. Intellectual progress would be more rapid if more frequent intervals of relaxation were instituted. The present lessons are too long and should alternate with brisk physical exercises. The next generation would have larger lungs, straighter spines, and would probably know more, and make better citizens. *Dr. Collie.*

3983. Do you think that there is much change required in that direction?—Yes. I do not think we have a sufficient number of intervals in the school lessons.

3984. (*Colonel Fox.*) In connection with your remark, I may inform you that, under the recommendations of Dr. Kerr, we are impressed with the importance in the new syllabus for physical training—the necessity of having certain intervals in the morning and in the afternoon devoted to exercises which will rouse the circulation of the children, and during those intervals all the windows will have to be opened for ventilation?—I agree with that emphatically. You will see from what I have to say later that I have made that experiment, and I will give you the results of it in one school.

3985. (*Chairman.*) Would you explain your ideas about schools for mentally deficient children?—In the mentally deficient schools of the London School Board, each lesson lasts for half an hour. At the Edinburgh Road Mentally Deficient School I have carried out the following experiment:—For the last four months the head teacher, at my request, has limited each lesson to twenty-five minutes, the last five minutes being devoted to physical exercises, which are performed by the children when standing between their desks. Attention has been particularly directed towards movements which develop lung capacity and increase the circulation. When those short intervals are added to the usual break in the middle of the forenoon, etc., the total amount of the time occupied with physical drill at this school is over two and a half hours per week. A few days ago I examined the school and was impressed with the result. The children, although all mentally deficient, drilled with marked alacrity and precision; indeed, it was in many ways quite as good a performance as I have seen at the ordinary elementary schools. The teachers were unanimous in saying that the children had improved physically and mentally, that they obeyed more promptly, that discipline was more easily maintained, and above all, that, after the short brisk exercises, the attention of the children was more easily maintained than formerly during the lessons. The want of power of concentration is the great drawback in the teaching of our mentally deficient centres, and the teachers pointed out to me that these short breaks in the lessons had distinctly helped them to maintain the children's attention during instruction. So that the experiment has been a marked success.

3986. (*Colonel Fox.*) This means that a more constant supply of blood is sent to the brain for its proper nourishment?—Yes.

3987. (*Chairman.*) You have something to say with regard to the decay of teeth?—One of the many direct effects of imperfect nutrition is the early decay of teeth. Where mal-nutrition is not a factor, the poor lose their teeth through want of proper cleanliness, and from the almost universal rule of extraction when pain ensues. As adult life or middle age is reached, the absence of teeth makes mastication impossible, and indigestion and all its attendant disabilities follow.

3988. Do not the dental hospitals provide them with false teeth?—No. At the dental hospitals the poor are asked to defray half the total cost, and a set of teeth costs a great deal for those people. As was pointed out lately by Sir John Gorst, the duty of a class teacher should not end with teaching. In many districts the school is the only humanising, and the class teacher the only refining influence under which these children are brought. It ought to be the duty of the teacher (and in a very large number of instances this duty is recognised) to take a personal interest in those children who are literally outcasts, whose parents provide no shelter worthy of the name of a home, and whose daily supply of food is insufficient to nourish the body, and allows nothing for growth and development. The educational authority should instruct all teachers to examine and report upon all such children. To such and many others the ordinary physical drill of the schools is inappropriate. For instance, recently I found a lad, who had but a few weeks previously undergone the operation for appendicitis, drilling with his fellows.

3989. Do you think that the teachers should be made responsible to the medical officer for this sort of neglect—

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that they should act under the direction of medical inspectors in all cases of defective physique or defective mental equipment ?—Certainly. In many doubtful cases the teachers do refer the matter to the school doctor.

3990. You think the medical inspection should be made general ?—Yes.

3991. (*Mr. Lindsell.*) Before physical exercise ?—Yes.

3992. (*Chairman.*) Have you any observation on this point ?—Each school, or group of schools, should have a medical man attached to it, whose duty would be to advise, in consultation with the teacher, what cases are suitable for ordinary physical exercise, and which children should have special attention paid to them. Most of the physical disabilities of children, such as commencing spine disease, glandular swellings, impaired hearing, adenoid overgrowth, lateral curvature, etc., obstruct or retard mental as well as physical growth, and should be noted by the teacher, and be the subject of report and subsequent enquiry. It is not suggested that the medical adviser should treat any illness, but my experience is that parents readily avail themselves of hospital treatment when a medical man indicates the necessity for it, more especially if the class teachers show an active interest in the child. Apart from infectious diseases, mal-nutrition is accountable for nine-tenths of child sickness. School teachers should take an active interest in the neglected children of the schools. Much could also be done by action and co-operation with existing benevolent organisations. Parental responsibility could in many cases be aroused, and more active steps would follow to protect those who are powerless to protect themselves, but the teachers must first themselves be taught.

3993. Assuming that the teacher has the knowledge, I suppose in the first instance it would be sufficient to entrust to him the duty of reporting to the medical inspector the case of any child who on admission appeared to him to be suffering from any physical or mental defect?—That is so.

3994. And the medical officer, I presume, could attend occasionally for the purpose of receiving such reports from the school teacher and examining the child, and then the condition of the child would be reported to the parent, and the parent would be left to take such steps as he liked, or would any pressure be brought upon the parents ?—That is exactly my view. It is part of my duty to make notes in the family history books in the mentally defective schools. When I find children suffering from adenoids I note it, and on subsequent visits ask what steps have been taken by the teacher with a view to have the child taken to the hospital by the parent. This alone often has the desired effect.

3995. Is the medical staff sufficient in the London School Board ?—In my opinion it is wholly inadequate.

3996. Then, of course, the consideration of cost comes in, and it is very considerable, is it not ?—Yes.

3997. What is the cost of the medical department of the London School Board ?—I cannot tell you.

3998. What is the cost of the whole system ?—I do not know.

3999. You do not know what proportion it bears to the cost of the Budget of the London School Board, do you ?—I do not.

4000. Young doctors who have not got much practice could be obtained to do the work at the outset of their careers for a very small sum, could they not ?—But it would be better still not to have a young man, but men of experience, and only employ them part of the time.

4001. (*Mr. Lindsell.*) Have you thought of the certifying surgeons ?—No, that never occurred to me.

4002. The possibility of working it in with them in the Home Office ?—That did not occur to me. I think however that they are already very busy men. Of course they cover the ground.

4003. (*Chairman.*) Well, I suppose the burden of the system would fall upon the doctors who had to inspect the poorer class of schools ?—Yes.

4004. The great bulk of the schools contain a class of child that does not make any large demands for medical advice : is that so ?—That is so. I think that good men could be got in many districts to pay visits once a week, or what was thought necessary, and the cost would not be very much.

4005. And do you think that it ought to be the duty of every educational authority to have some system of medical inspection of schools ?—Most emphatically I do.

4006. I suppose the recent Act would facilitate that now that the educational authority is the sanitary authority in most cases ?—Yes. The Royal Commission in Scotland recommended that.

4007. Has the London School Board done anything to promote a knowledge of the laws of health ?—The Evening Continuation Schools Committee of the London School Board has quite recently instituted in the evening schools a series of health lectures. A few months ago the Evening Continuation Schools' Committees allowed me to draw up a Syllabus for a course of instruction in what may be termed "Popularised Hygiene." Twenty experimental health classes were opened, and the Committee have given me permission to open sixty more ; so that we have opened eighty of those classes taught by fully-qualified men. I have a staff of one hundred and sixty-eight doctors who lecture in those evening continuation schools of the London School Board, and about forty-eight nurses ; the nurses teach Home Nursing and the doctors First Aid and Home Hygiene.

4008. This all refers to the teaching of teachers ?—No, they are not teachers. They are young people from sixteen years onwards. We have a large number of married men and women.

4009. Would it not have been useful to encourage teachers to go to those classes ?—We did issue a notice in the *Gazette* that teachers would find these lectures useful but only a few of them are attending ; I believe the view they take is that it is far too elementary for them.

4010. It is the elementary character of the lessons that would make them of such value, is it not ?—Quite so.

4011. In order to communicate them to the children ?——Yes.

4012. I suppose they thought it was beneath their dignity to attend ?—I think so. I hope to open special classes with a somewhat different syllabus, but practically the same teaching.

4013. (*Dr. Tatham.*) You say in one part of your evidence that each school or group of schools should have a medical man attached to it whose duty it should be to advise, etc. ?—Yes.

4014. Have you in your mind the establishment in connection with such an appointment as that of a register of sickness amongst school children ?—No, that was not in my mind.

4015. Are you aware how much time is lost by school children because of the prevalence of infectious disease ?—I do not know the statistics, but it is a very large amount.

4016. Do you think that if such an appointment as you suggest were made, and if the register of sickness were established, that it would probably meet the case, because you would be able to save so much time which is now lost by the children ?—Yes, I think that it would go a long way.

4017. With regard to the decay of teeth, you mention that as one of the direct effects of imperfect nutrition. Do you think that it is practicable amongst the children of the poorer classes to insist upon the cleaning of the teeth, or the use of a tooth brush ?—No, I think not. If you cannot get them to feed their children, I do not think you will get them to clean their teeth.

4018. How do you propose that the decay of teeth in that case could be prevented ?—In a roundabout way, by teaching the children the value of it and when they become mothers, the hope is that they will see that their children's teeth are looked after.

4019. With regard to overpressure in schools—does educational overpressure in schools, in your experience, exist to any great extent ?—I have never noticed it. I think that the methods in the infant schools are not sometimes very judicious. I think that they allow the children to do too fine work ; to give them too precise work to do, and they are not careful in keeping the work far enough from them, and I think if there is overpressure, it is in the infant departments. But I have not noticed the effects of overpressure in the children. My impression is, that most children at school are very happy.

4020. Have you any reason to believe that tuberculosis is on the increase amongst children of school age ?—I have no reason to believe it ; but I often think that those children suffering from pediculosis, and who eventually get their heads into a very disagreeable condition, are

necessarily irritated so that they open sores, and that tubercular infection gets into the open wound and affects the glands. There is one prominent hospital surgeon who tells me that a very large number of children who attend the hospitals have tubercular glands, which he believes is the result of direct infection of tuberculosis in this way.

4021. And you think that much harm results to the children on that account ?—Undoubtedly.

4022. I mean in a large proportion of cases ?—I do not know sufficient of it. I have not enough cases before my mind to say definitely ; but theoretically, I can quite see that it would materially affect the health of the children.

4023. Do you think that the aggregation of children in school for a considerable number of hours together would increase tuberculosis amongst them, or do you not ?—I do not ; I do not see why it should at all, if the school-rooms are ventilated.

4024. Do you think that the ventilation of schools is sufficiently good to obviate the risk ?—I think it is not.

4025. You think that could be improved ?—There is very much need for improvement, and that is one of the many things that those medical men who would inspect the schools would have an eye to. I do not know why, but teachers do not look after the ventilation.

4026. You consider that a very important point ?—It is an absolutely important point to my mind.

4027. Is syphilis on the increase amongst children ?—I do not think so. There is not a very considerable amount of it. It shows itself about the ages of twelve and fourteen, and is found largely in the blind schools of the Board.

4028. Is that where you notice it ?—Yes, in the blind schools. Then I think syphilis is not so severe a disease as it was ; and it may be present causing only mal-nutrition without having the definite disabilities of eroding bones and so forth, and still it may be there in an obscure way.

4029. Have you any experience of the work of female health visitors amongst the poor ?—No I have not.

4030. You do not know anything about the Ladies' Public Health Society of Manchester, which employs a large number of female health visitors on its work ?—I know of its existence, but do not know their work.

4031. Do you think the general extension of the system would be advisable ?—Yes, I think that anything that brings home health teaching to the poor is of great value.

4032. Do you think that the cost of the general establishment of a system of health visiting amongst the poor would be desirable in the interest of the poor ?—I do think so. As far as the educational authorities are concerned we would recoup ourselves as there would be better attendance at school.

4033. (*Mr. Lindsell.*) You state in your notes of evidence that you have formed the impression that physical unfitness is confined to a section of the community ?—Yes.

4034. You base that upon a knowledge of the average working man and woman, and Health Statistics ?—Yes.

4035. You know, of course, nearly all the schools both of the lowest strata and of the better class ?—Yes.

4036. Does the general condition of children of these schools bear out the opinion you there form ?—Yes, it does.

4037. That given a school where the parents are in receipt of good wages, and live in fairly healthy surroundings, although in a town, the children are as a rule in fairly good condition ?—Yes, I think so.

4038. Whereas, if you go to the very crowded and poverty-stricken regions the children in the school are the reverse ?—That is so

4039. I suppose if, as it is an admitted fact, that the persons who present themselves for recruiting in the Army, are found to be in such large numbers physically degenerate and unfit, it follows that they must be drawn mainly from those very poorest strata of the society ?—That is my opinion—that the lowest stratum is tapped now, and has been for a long time.

4040. And that fact, rather than any national physical degeneracy, is the cause of the unsatisfactory condition of modern recruiting ?—That is my impression.

4041. Among the causes of this unsatisfactory condition in the lower strata you attribute to a very large extent the unsatisfactory conditions of the food ?—Yes, I do.

4042. Do you think that that condition is confined to the poorest of the population or is there not, going into the lower strata of the working class population, a lamentable ignorance in England of the proper conditions of good food and so on ?—Yes. I think they are very improvident ; they are extravagant ; they could live very much more cheaply.

4043. And the materials that they use are not satisfactory ?—No, they are not.

4044. You attribute the falling off that there is in this respect, mainly to the enormous facilities for getting tinned meats and other foods now compared to what there used to be ?—Yes, and especially tinned milk.

4045. So far as this is due to bad feeding—not so much deficient feeding, but bad feeding—it would be a very difficult matter to induce improvement by legislative action of any sort, would it not ?—I should think it would be impossible. The only way, to my mind, would be to teach the children for the benefit of the next generation.

4046. So far as it is due, of course, to overcrowding and insanitary conditions, that is a matter for the sanitary authorities ; and even in the worst localities, considerable improvement is steadily being effected in that direction, is not that so ?—Yes. There is the question of whether or not schools could not be put in the outskirts, and the children go out by tram-cars and so forth, that is a question that might be considered ; but it is a large one.

4047. You think that a good deal might be done by better teaching to improve the maternal instinct in girls and so on ; that they could be taught what a good mother and a good wife ought to be, while they are still at school ?—I do think so.

4048. Of course, as far as extreme infancy is concerned, that is not a matter so much for the care of the educational authorities as for the care of the sanitary authority ?—That is so.

4049. It would not be part of the duty of any educational authority, whether in the future or as it exists at present, to undertake the care of children up to, say, the age of three ?—No.

4050. The establishment of those crèches you spoke of would not be a part of their duty at any rate ?—No I do not think that it would.

4051. You rather suggest that the School Board should take it up ?—Well, it did not occur to me except that inasmuch as it would be material for teaching the children.

4052. Yes, you might have school crèches you think ?—Yes ; and these crèches might be utilised.

4053. As part of the apparatus ?—As part of the plant.

4054. When we come to the children who survive the first three years of their lives, you say that now the London School Board is strongly taking up the exercise of the powers given them under the Defective Children's Act ?—Yes.

4055. One of the difficulties that seems to strike you is the question of drawing the exact line between a merely dull child and a mentally defective one ?—Yes.

4056. But you are inclined to think that where a child is found to be consistently dull in school for some time, it might be fairly regarded that that dulness is due to some mental defect ?—Yes.

4057. And might therefore be treated under this Act ?—That is my view.

4058. When I was dealing with evidence that I had before me on another Committee, their attention was attracted a great deal, not merely to any defect in the child, but to the fact that it was probably made to work before it went to school. The children come to school tired already by overwork, and possibly want of food. What is your view ?—The children that I have to report upon are all aged about seven.

4059. And therefore too young to be employed ?—Yes.

4060. Have you noticed any improvement since the passing of the Employment of Children Act, as to the con-

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dition in which children come to school?—No, I have not noticed it.

4061. It has hardly had time to be noticed?—Quite so.

4062-3. You mention that physically defective children cannot be dealt with under the Defective and Epileptic Children Act?—They are dealt with under the Elementary Education (Defective and Epileptic Children) Act 1899.

4064. Do you know the Orthopædic Hospital of London?—Yes.

4065. Are you aware that the School Board made an attempt to deal with the children there as part of a Board School?—A most excellent idea.

4066. And it is at work now?—I have not been there yet.

4067. Are there any other forms of special schools which might with advantage be adopted. Dr. Eichholz mentioned schools of industry, some special centres for industry?—My impression is that we are wasting a lot of our energy on these mentally defective children—to try and teach those children reading, writing, and arithmetic, and that sort of education is futile. I think we should teach them to use their hands—that is my impression. Their education—except for what mental development it necessarily brings with it—the education *per se* is of very little value.

4068. That, of course, is a matter rather for the local authority to consider in the curriculum—it is perfectly open to the local authority, you know?—To give manual instruction?

4069. Yes?—It is.

4070. Yes, especially for those schools who adopt the curricula of the particular school which those children are attending?—Quite so.

4071. And of course, you know, as far as the Board of Education is concerned, the code now gives full facilities for a local authority or school authority to give those special courses in housewifery and hygiene, and so on?—To children or to teachers?

4072. To children?—That is so.

4073. Are they being availed of by the London School Board?—We have 28 housewifery centres.

4074. And are they attended by children in the elementary schools?—Yes, by 45,000 children.

4075. Apart from the evening schools?—Apart from them.

4076. You cannot begin too young to train them in those subjects, can you?—I think you can. They will get more good from it at the ages of thirteen and fourteen.

4077. But you cannot make them come after they are fourteen?—Thirteen, I mean.

4078. You would make it the last year of their school life?—If you start too young they forget what you have taught them. If you instruct them in housewifery between eight and nine, they forget it when they come to use it, and I think the later you teach them this in their school life the better.

4079. It would give them some inclination to go on in the continuation schools if they had instruction in the last stage of their work in school life?—I most emphatically agree with it being taught.

4080. With regard to cookery you will agree that the essential thing in teaching in these cookery centres is that it should be absolutely practical?—Of course.

4081. That what the girls should learn is not the theory of cookery, and to make specialised dishes, but to be able to keep a comfortable home when they grow up?—That is so.

4082. Do you notice any deficiencies in the present system with that end in view?—I do not know it sufficiently well to criticise it.

4083. But you have an idea that those cookery schools might be worked in with the notion of providing food at the schools for children?—In the comparatively few schools that it would be necessary for the half starved children.

4084. (*Chairman.*) When you say the comparatively few schools, I think it was stated here that as many as 33 per cent. of the children of London schools come to school under-fed?—Then it is larger than I thought, if that is correct.

4085. (*Mr. Lindsell.*) There might be that percentage in particular districts?—I was really thinking that the kitchen might be put in poor schools. Centres might supply those schools where there were only a few underfed children.

4086. (*Chairman.*) Dr. Eichholz said that about 33 per cent. of the children in three of the winter months would require feeding—that is, one-third?—Quite so.

4087. (*Mr. Lindsell.*) But you would localise this 33 per cent?—Yes, they would be all in the East End.

4088. And perhaps Battersea?—Yes, Battersea, and one school in Chelsea, Notting Dale—I am wrong in saying that you should localise it to the East End. They are really in those other places, too. It might be of assistance to you if I give you those statistics. With regard to the new Anerley Blind Schools. There are fifty-three children, and of those, thirty-eight are resident pupils and fifteen are day scholars, and the point is the increase of weight within a year of those children going into school. The comparison given there is not good, inasmuch as the day scholars receive dinner and tea, otherwise we would have got a very good comparison of how a child, properly fed, compares with one improperly fed. Even with the allowance by the local committee of dinner and tea, there is a marked difference in the increase of weight within a year. The child at fourteen years of age normally increases eleven pounds. The thirty-eight resident pupils gained on an average twelve pounds in the year, and the children of this class do not as a rule increase at a normal rate. All the fifteen day scholars have gained nine and a half pounds. The greatest gain amongst the resident pupils was one lad, aged fourteen, who gained twenty-three pounds in one year. All children put on weight at a very considerable rate when properly fed.

4089. I think that this is rather in your mind, that these kitchens should be open to particular schools as a part of a school restaurant, irrespective of its educational value?—Primarily the restaurant idea is in my mind, and that they should be used also for teaching purposes.

4090. But your primary idea is that there should be attached to the school a means whereby food at the school should be supplied to the scholars?—That is so.

4091. And you are in favour of making it, if possible, self-supporting; if not, that there should be a payment?—I think so. There ought to be a payment.

4092. In the case of the absolutely destitute, it might be met by some charitable agency?—Yes.

4093. And the children might be supplied with a ticket supplied by the charitable agency instead of the penny paid?—That would be an excellent idea.

4094. That would avoid the difficulty which always surrounds these things, of weakening the sense of parental duty?—Yes, that is so.

4095. There is always a danger that parents who can afford to keep their own children should take advantage of such a thing?—That would inevitably follow.

4096. You seem to lay great stress upon the want of good ventilation, and you seem to rather imply that the schools are not so well ventilated as they should be. Do you attribute that to the defect of planning or to the want of attention to the question on the part of the teachers?—To both—chiefly the planning.

4097. Of course, the London School Board is supposed to have the best architectural advice. Is not that so?—That is so.

4098. And the same thing may be said of school boards in large towns?—Yes. I think it is that no good method has been discovered, and I do not think that anyone is to blame.

4099. You have read the latest edition of the building rules brought out by the Board of Education, have you not?—No, I have not seen them.

4100. You could not express an opinion as to whether the rules for ventilation there are sufficient or not?—No.

4101. (*Chairman.*) You think that better mechanical ventilation is necessary?—In a few schools it is very defective—in Deal Street, for instance.

4102. (*Mr. Lindsell.*) Is there a want of appreciation of plenty of air amongst some classes of society?—I am quite sure that the lower classes do not appreciate it.

4103. They like to be warm, and prefer the warmth to having fresh air?—In their homes it is the only way to be warm.

4104. Now, as regards this question of recreative intervals, or physical exercise intervals. Do you consider, except in the case of physically defective children who require special treatment, that in an ordinary school it would be conducive to better health, or to the discipline of the school, to have more drilling intervals than one an hour. You see at present, in a meeting of more than two hours, a quarter of an hour is allowed to be reckoned as an interval for recreation; and in a meeting of two hours, ten minutes. Is that insufficient?—I think that once an hour there should be a break of some sort.

4105. That is practically what is allowed in the Code at the present time, and that irrespective of physical instruction as part of the school curriculum?—I did not understand that.

4106. At present they are bound to give ten minutes at least in a meeting of two hours, and more if the meeting is longer. But that does not include any time which may be set apart for the physical training. It is part of the regulation school relaxation, and would be irrespective of ten minutes' relaxation altogether?—Yes, but my point is that it should not be accumulated, but at the end of every hour a distinct break, not necessarily in the hall, but physical drill as they stand, lasting say five minutes, to expand the lungs and get the blood to circulate better.

4107. (*Colonel Fox.*) I suppose you mean that it should be done between the desks to arouse the circulation, and to get rid of the fidgets that the children have when they are kept at work too long?—Yes.

4108. I have tried it in a great number of schools, and it is surprising how it rouses up the children who were apparently dull and stupid and listless?—Yes; I made an experiment in Edinburgh Road to have these exercises every half-hour, because the mentally defective children only work half-an-hour at a time, and I have elicited from the teachers that the children can give much better attention to their lessons afterwards.

4109. (*Mr. Lindsell.*) I quite admit, in the case of the mentally defective, that that special provision is required; but in the ordinary public elementary schools is it your impression that they are not given enough of this sort of thing at present?—It is.

4110. You think that ten minutes' relaxation in the middle of the physical instruction may be given besides?—That could be given probably at the end of the lessons or the beginning of it. It does not always come in the middle. My idea is that at the end of every hour the children want to alter their posture, and for the sake of revivifying their brains, and of expanding their lungs, those drill exercises should be given for a few minutes every hour, and that will materially improve their work.

4111. (*Colonel Fox.*) We divide the physical training into two parts; the one, which is supposed to be half an hour at a time, in the playground, we call educational and disciplinary, and the other, which consists of five minutes work between the desks during school hours for the purpose of rousing the circulation, we call nutritive exercises?—They are nutritive.

4112. And those are for short periods to shake off the long periods of mental strain?—Quite so.

4113. (*Mr. Lindsell.*) As regards the teachers it must be recognised that a very great deal of the influence for good on the part of the teachers must depend upon their personal influence?—Yes.

4114. And that you cannot lay down any express rule as to what they would do with regard to influence over children outside school hours?—It would be very difficult to make it part of their duty.

4115. It struck me very much that at any rate teachers who gave evidence before us were manifesting very great interest both in the outside life of the children of the school and in their future career?—Well, the ordinary elementary school teacher is expected to assist the children in this way.

4116. You would agree that it would be impossible in those schools to place any duties on the teachers to make it any part of the condition of their employment?—It would be impossible.

4117. You would not be in favour of it?—It would be impossible.

4118. Owing to strong pressure it is now an article of the code that the teachers should not be required to undertake any duties outside the school hours?—Yes.

4119. That is a concession obtained by the teachers themselves?—I think it would be impossible to turn the teachers into charity organization inspectors.

4120. Now, with regard to the medical examination of schools, at present how far is that done at all by the medical inspectors of the London School Board?—I think Dr. Kerr inspects a school every afternoon. Recently six ophthalmological surgeons were asked to systematically report upon the schools; then there is the work I do of inspecting the mentally deficient children three afternoons a week.

4121. You do not have anything to do with the ordinary school?—No, except that I go in occasionally to examine the children. Seeing so many mentally defective children, one has occasionally to correct one's standard. I am expected to go occasionally into those schools, but it is a small part of my duty.

4122. Would you think that the same man could be entrusted to go into the question of the teeth, and eyesight, and general physical condition?—I think the same man could be entrusted with it. Very often the question of eyesight is a special one, but most qualified men would be able to do the whole.

4123. Do you think there would be any difficulty in getting over the objection of parents to having their children physically examined?—I do not. I think if it were done judiciously and with common sense you can always get these people to agree to it; they are quite willing to have anything done when it is shown to them that we are taking interest in the children. There will always be some few who object, of course.

4124. It would require a very large staff of surgeons, would it not?—You refer to the full statistics as to what is the height, etc.

4125. That is a further question still. But merely, I mean, to look over children to see whether they have got spine disease, glandular swellings, impaired hearing, adenoid overgrowth, and those sort of symptoms?—No. I do not think a very large staff would be required. One medical man would have under his care a group of schools, and the teachers would assist. Those diseases are easily diagnosed, in fact the teachers would diagnose them, and bring forward the cases to the doctor who would examine them, and that would be all that he would have to do, to point out whether the child had this disease or not, and whether the parents' attention should be drawn to it.

4126. There would be no attempt at treatment on the part of the inspecting doctor himself?—That would be illegal.

4127. Now with regard to these evening continuation classes, you seemed to consider that much useful work has been done in the teaching of hygiene?—Yes.

4128. Has cookery been dealt with in the same way?—We have 5,562 scholars attending 178 evening continuation schools of cookery.

4129. At present, I think there is a little difficulty about the establishment of these classes as to whether they are legal altogether?—I have not found it so.

4130. I think the County Council have power to authorise the continuance of them, but it is rather difficult to establish new classes and they only legalise those already in existence?—My committee have instituted the health classes since the Cockerton judgment.

4131. Is that the School Board or the London County Council?—The London School Board. It is part of the teaching of the evening continuation schools.

4132. Yes; in the school already allowed but not a new institution?—No.

4133. When we have it under one authority, all difficulties of that sort will entirely disappear?—Yes, I hope to have them instituted at the Polytechnics.

Dr. Collie.

4134. *(Colonel Onslow.)* With regard to those hygienic classes which you spoke of, what class of people attend them. You told us about young men and women—but what class?—They are mostly the poorer shop assistants and seamstresses, and that class of person.

4135. I suppose it does not touch quite the very lowest, does it?—No, it does not.

4136. Who really so very much want instruction?—No, it does not touch them—you cannot get the loafers.

4137. Do I understand that it is under some authority?—It is under the London School Board.

4138. For instance, as to the medical inspection of schools, would not every medical practitioner be an authority to a great extent on the matter of teeth and eyesight and all those things—it would not require a specialist, would it?—I think you would not require a specialist.

4139. If he found anything beyond his powers, just as one goes to one's doctor, who says, "You ought to see an oculist," he would be able to refer you to someone else, would he not?—Yes; the chief medical officer of the Board.

4140. It would not require a large number of doctors then?—I think not.

4141. It would not be necessary for a medical officer to inspect the school more than once a month, or once a week, or once a fortnight; or at what interval would it be necessary?—It would be difficult to say off-hand, but not more than once a fortnight or once a month.

4142. The teachers would be on the look out for the ordinary indications of sickness, and would inform the medical man, would they not?—Yes; they would send the children home.

4143. Would lady doctors be useful for that purpose?—Yes, they would be useful.

4144. For examining girls?—I really do not think it is necessary to specialise because of the sex.

4145. But would it not be possible to bring also into it the anthropological statistics?—Yes.

4146. The idea that we have had before us is that it is very necessary that we should endeavour to get some statistics regarding the physique so as to tell whether disease is going up or down?—Yes.

4147. Would not these medical officers be able to deal with that question?—Yes; but it would involve a very much longer amount of time. You cannot take these statistics at a school without expending a very considerable amount of time.

4148. But assuming that the boys and girls attendance at the school is constant, say in the month of January, and the medical man examined as many as he could and gradually went through them, in three months he might examine the whole lot?—Yes.

4149. And take the measurements?—Yes.

4150. He would have no more to do with them, except new ones coming in, until the following year?—That is so.

4151. That would be possible?—Yes, that would be possible;

4152. To work the two together?—Yes.

4153. The instructions to the school children about cooking and maternal duties and so on, must interfere, to a certain extent, in the case of girls leaving school at so early an age, with other instructions, so that it would be difficult at present to increase the amount of instruction in household duties, would it not?—We have only 45,000 children attending domestic subjects, and I suggest that every child should be taught.

4154. I understand that these girls have to leave at fourteen?—Yes.

4155. Would it not be better for them to remain another year?—Some of them do voluntarily.

4156. With a boy it is more necessary that he should get out to earn some wages earlier; is it not so?—Yes.

4157 But it seems to me that even fifteen is young for a girl to go out to work?—Very young.

4158. Would not an alteration of the law be advisable?—Personally, I would keep them longer at school.

4159. You examine the employees for the London County Council?—Yes.

4160. I would like very much to know what are the defects most common that you find they suffer from?—I find very few defects. They are generally very healthy.

4161. What class do you deal with—are they of the actual labouring class?—A few. I examine them all, from the Technical Instruction Board's teachers and inspectors down to, occasionally, some of the working men when they want to join the County Council's Superannuation Fund.

4162. They are really of a superior class then?—Yes.

4163. The London Fire Brigade are some of the finest specimens of men, are they not?—Yes, as a rule; they are sailors. The only thing I have to reject firemen for is rupture and varicose veins, and occasionally for heart disease.

4164. You have no common defect with them?—No.

4165. You were mentioning just now, with reference to the strata from which the majority of the recruits to the army come, that they have touched the lowest ebb, or gone down to the lowest strata?—That is so.

4166. I can say that that is not the case with the naval recruiting, mainly from the very fact that first of all they come from the seaman class; and the boys are of respectable parents. They have to be vouched for with good characters and you can trace their history back; and it is seldom that we take any one who might come from the lowest stratum. The stokers and marines come nearer to the lower class, but for years past we have insisted upon a long record of character prior to their joining, and they cannot be of an inferior class; in exceptional cases one may have been let in with a false character, but the very large proportion of the navy are skilled artisans, and yet we have an enormous number of rejections for exactly the same reasons. How do you account for that?—I cannot account for it.

4167. I maintain that there is a physical deterioration not only in the lower strata but in the other strata?—I cannot account for it.

4168. Is not a great deal of that owing to the want of care of mothers in bringing up their children, not only in that strata but in all classes, in proper feeding, for instance?—My impression has been always that it is only the lowest class that is degenerating; the type of men I get for the fire brigade are not affected by degeneracy.

4169. But they have gone through the mill?—They have.

4170. You do not get the young from fifteen up to nineteen and twenty?—No.

4171 By statistics of the navy we learn that the artificers, who are skilled artisans, must have been at work for three years at their trade as apprentices, and they have as bad a record as anything?—There is one thing; the type of man who wishes to go to sea and the type of man who joins the army, because he can do nothing else, is very different. They drift into the army.

4172. But at the same time there are three or four strata who all seem to have the same similar defects, principally teeth, eyesight, varicose veins, and so on, and particularly matters that seem to show bad nutrition. One cause you alluded to here is that the mothers who cannot suckle their children, and who feed their children improperly, use a great deal of proprietary articles in their food. Is not that so?—Yes.

4173. Would not it be possible to have some check upon those proprietary articles, either by means of taxing or an inspection by analysis?—That would be excellent.

4174. There is practically none at present?—Anyone can advertise theirs as the best; and there is a class of person who believes whatever he sees in print. They feed their children upon those things. If anything could be done in that line it might be useful.

4175. Would you extend that to the sale of those tinned products—tinned fish and lobster, for instance?—Yes, and tinned milk especially.

4176. You would have constant inspection of them?—Yes.

4177. I suppose sanitary authorities can inspect?—Only if it is suspected of being bad.

4178. (*Chairman.*) With regard to these patent foods, cannot some of them be dealt with by the food and drugs Act if they were found to be actually deleterious?—I do not think that they are deleterious in themselves, but only deleterious to the special cases in which they are given. They make excellent food for an invalid, and I sometimes recommend them, but I never dream of feeding infants with them.

4179. (*Colonel Fox.*) Are there not a great many non-nutritious tinned foods?—They are not nutritious to infants. Most of them are made from wheaten flour and oatmeal. The point is this: Under six months of age gastric and other juices do not convert farinaceous food, and therefore, if you put farinaceous food into a stomach that cannot digest it, it acts as an irritant. After six or nine months it is really a food, because it may be converted by the various juices in the stomach and made use of in the animal economy.

4180. Am I to understand that in a child up to six months of age the ordinary processes of changing the starches into sugar do not go on?—They do not.

4181. You said just now that you attach great importance to the training of girls between the ages of thirteen and fourteen, not only in the art of choosing proper food, but in the knowledge of how to cook it, in order that they may, when they become mothers, we will say in four years' time, know how to bring up their children worthily, and how to nourish them?—Yes.

4182. Thus producing a better and stronger race?—Yes.

4183. But do you not think that the teachers who have to deal with them—1,000 teachers go to the training college—ought to be better trained physically, both male and female?—I do.

4184. That they ought to be taught simple hygiene at the training college, and everything else that is necessary in the way of health?—Yes.

4185. In addition to learning the art of physical training which is required of them when they arrive in the schools, they would also have greater mental vigour on account of their physical power being greater—is that not so?—Yes.

4186. And more vitality, and greater power of imparting the knowledge they possess to the children?—Yes.

4187. A great many teachers, both male and female, are below par as regards their physical condition—is not that so?—Yes.

4188. And they become rather slack, and have not the power of imparting the knowledge that they possess?—That is so.

4189. Do you think they would have a much greater power of imparting knowledge if they had healthier bodies and in that way healthier minds?—I am sure they would do their work better.

4190. My point is that this should be done for them at the training college?—They ought to have the theory as well as the practice of it.

4191. (*Chairman.*) With regard to the teaching of girls in the latter part of their school life, do not you think that during the last years of a girl's school life, a great many of the literary subjects might be put in the background, and attention concentrated upon those branches of instruction which would tend to make her useful to her mother when she comes back to her home, in the way of attending to the younger children, and rendering her better equipped when she becomes the head of a household herself?—Most emphatically I think so.

4192. And you might go further and institute a system of half-time attendance at fifteen when the children may be employed practically in their homes half the day in household work, and half the day in school, improving themselves in such subjects at the same time?—Do you mean to extend the age for school attendance?

4193. Yes, to fifteen. Those up to fifteen might attend half-time?—In the case of girls only?

4194. Girls only, with the view of improving them in household management?—Yes. I think that would be an excellent thing. I think that they would get more instruction and be able to apply it better.

4195. They would be able to apply the instruction at the same time that they were receiving it?—Yes.

4196. With regard to eyesight, would it not be easy for teachers to ascertain the ordinary defects of sight by the use of Snellen's type, and colour-blindness might be detected even more easily?—Yes.

4197. So that defects might be detected in that way?—The teachers do that now, and the ophthalmic surgeons simply go round and check it off, and see it done properly.

4198. Have you considered the deleterious effects of cigarette smoking among boys at all?—I think it is very deleterious. I have added "cigarette smoking" to the syllabus for lecturers to point out the evil effects of smoking at all, and cigarette smoking especially.

4199. Have you ascertained what the effects are?—It produces mal-nutrition and stunts the growth.

4200. Now with regard to the very young children, and the difficulty of obtaining suitable nourishment, I presume the milk question is at the bottom of it?—Yes.

4201. From your knowledge of the classes we have been discussing, do many of the children get milk? Is there an opportunity of their getting it, even if their parents were willing to obtain the milk?—In their homes?

4202. Yes?—I do not think that they get nearly enough milk.

4203. Is that due to ignorance or to disinclination to get it, or to the physical difficulty of getting it?—I think it is the price. Milk is dear for the poor: it is not the difficulty of getting it.

4204. Do you know any London boroughs besides Battersea where an attempt has been made to organise a milk supply for the poor?—Last year, when I was on the Borough Council of Paddington I started the subject and it is under consideration.

4205. We have heard of several provincial towns where it has been done?—I do not know, but I think there is another borough besides Battersea.

4206. If it could be started upon a sufficient scale do you think that it would become self-supporting?—The medical officer at Battersea tells me that it could be made self-supporting.

4207. And at the same time the milk can be placed in the hands of the parents at a price which they are prepared to pay?—Yes, you would get it cheaper and better in that way.

4208. And all that is required is organisation and not any eleemosynary treatment of the problem?—No, I think that a proper milk supply would be the explanation to a very great extent of the improper feeding of infants.

4209. Because it touches the first six very sensitive months of their lives?—Yes. From the statistics of Dr. McCleary, it would appear that he has already reduced the death-rate very largely in Battersea.

4210. Do you think that there is a sufficient number of cases of growing and wilful neglect by mothers of their children in this stratum of society to justify the State in taking them from the care of their parents, and making them liable for their maintenance in either public nurseries or homes of a special type?—I would not like to take the responsibility of answering that question, but I will say that I have seen many cases where parents are neglectful of their children, and that it would be better, and in fact it would be only fair for the State to remove them from their custody.

4211. Would you agree with a view to the enforcement of parental duty that such an obligation should be undertaken by the State in the interests of society?—Undoubtedly.

4212. And that the local authority should be empowered to obtain a suitable contribution from the parent?—Yes; and the effect of the officer of the law—say, a policeman in uniform, calling upon them for a small sum—would have a very remedial effect upon them, and would, in a measure, prevent a recurrence of the offence. The effect of a man calling upon them from the Education authority, especially in uniform, would degrade them in the sight of their neighbours?

4213. And it would have a similar effect upon any neighbours that might be inclined to act in similar ways?—Yes, and certainly upon the delinquent not to repeat the offence.

Dr. Collie.

4214. (*Dr. Tatham.*) From a remark which fell from you just now, I am induced to ask whether you have any definite experience of the differences to be found in the schools according as they are in the country or in the town?—No.

4215. You have no personal experience of the country?—No.

4216. Because you spoke just now, as I thought, appreciatively of the suggestion that schools should be taken to the country, and by cheap means of transit it would be possible for the children to attend somewhere outside the towns?—It is simply on broad hygienic grounds that I consider the country is very much better. My mind goes to a very healthy Scotch school on Deeside, where the children are very much healthier than the children here.

4217. I thought probably you had some personal experience?—Not beyond what I have stated. It does not require very much personal experience of a school to enable one to say that a child would be very much healthier living at Highgate or Streatham Hill than at Hackney Wick or Stepney.

4218. Then you make the statement on broad commonsense ideas?—Yes.

4219. (*Chairman.*) Have you anything more to say?—I have here an interim report on the hygiene classes. Here are statistics with regard to nourishment in the school at Anerley. The trouble is that the numbers are so very small, but it shows a very marked improvement in the health from proper feeding. (*Handing in the same.*)

4220. These are very interesting facts to have. This is one of the defective schools, I suppose?—No; the Anerley Deaf Schools.

The Rev. W. E. Edwards Rees, M.A., called; and Examined.

Mr. Rees.

4221. (*Chairman.*) You are a member of the Salford Education Committee, are you not?—Yes, and I am the Chairman of their Anthropometric Sub-Committee.

4222. That is the committee under the new Education Act?—Yes.

4223. You have been in that part of the world for a long time?—In Salford itself six years, and eight months; in Lancashire ten years. I was vicar of a pleasant suburban parish before I came to Salford, so that previous experience scarcely counts.

4224. You have had, therefore, very considerable opportunities to estimate the general conditions affecting English physique?—Yes.

4225. Could you state what they are?—Do you mean the conditions special to Salford?

4226. No, the general conditions?—I should say that the most potent influence at work is the condition of the air. There is very little sunlight—only some two-fifths of what there might be under other conditions, and there are a great many deleterious elements in the air.

4227. Which are specially destructive to teeth, I understand?—Yes, and to metal and brass goods, for instance. That is the worst condition. There are other conditions. For example, here is one. There is a great deal of female factory labour still, and the Manchester woman does not turn very readily to domesticity, and, consequently, when she gets married, as a rule her domestic skill is decidedly below par.

4228. She is unsettled by factory work early in life, I suppose?—Yes. It is not her *métier* at all. She does not like domestic service.

4229. Is the number of women in factories increasing in proportion to the population at large?—No, perhaps they are not increasing. I should say that there is no very material difference in proportion between now and fifty years ago.

4230. I suppose the conditions in which they work have very considerably improved?—They are better.

4231. So that that would be among the ameliorating agencies?—Yes, but you are only now beginning to feel the effects.

4232. The adult classes at the present time are suffering from bad conditions of the past still?—Yes.

4233. But that all makes for improvement in the immediate future?—No, I do not think so. I am perhaps going too fast, but it does not appear to me that you may reasonably look for improvement until you deal with the causes which are operating now, some of them more strongly than ever,

4234. What causes?—The pollution of the air, for instance, is worse than ever. You have stopped not all, but some of the most flagrant abuses, but the amount of abuse is greater than ever it was; and if I might explain a little more in detail, I may say that there are people in Manchester who systematically pollute the air, and systematically pay the fine—the ridiculous fine that is imposed: it is a mere bagatelle. It is much cheaper to pay the fine than to put up new plant. There are people in my parish, for example, who at almost any time in any day, if anyone cared to visit the neighbourhood, may be seen pouring thick volumes of black smoke into the air.

4235. How often are they liable to fines?—Very frequently. I think there is no limit to the number of times that people may be fined.

4236. Can you specify the parish?—I can. My parish is St. Thomas's, Pendleton; it was at one time a residential parish, and still is to some extent.

4237. To a diminishing extent, from what you describe, I suppose?—Yes.

4238. What effect does that have upon the physical condition of the people?—Well, that I think is a physiological question, is it not?

4239. Yes?—I should trace much of the anæmia to the deprivation of sunlight and to the lessening of the vivifying qualities of the air; and I should also say that the majority of the people of the working classes in such neighbourhoods are generally tending to be below par in the matter of vitality.

4240. But you are prepared to testify to a general improvement of vital statistics, are you not?—Yes, of vital statistics, but I attach very little importance to that, because, as I point out in my *précis*, it is simply raising an inferior limit.

4241. At the same time infant mortality remains as great as ever, you think?—Its average is slightly larger than it has ever been. It shows a diminution in the last year.

4242. Some Lancashire towns are particularly bad in that respect?—Not nearly so bad as Leicester, for instance; but they are bad enough. The infantile mortality is about double what it is in the open country—it is about 180 per thousand.

2443. Do you think that is due to general causes affecting the health of the children, or is it due to parental neglect?—It is directly due to parental neglect and indirectly to want of stamina in the parents.

4244. Which is inherited to some large extent, I suppose?—To a great extent.

4245. Do you think that there is any progressive deterioration of the type in Lancashire?—There is a great conflict of opinion upon that. I have studied the question with some care, but I should not be prepared to give a definite opinion upon that point. I am inclined to think it is progressive, and there are people, for instance, most medical officers of health, who maintain that in the last thirty years, if anything, there has been a great improvement.

4246. What do you think to be the best accredited test of physique?—I hold that it is the anthropometric test of weight and height taken together.

4247. And other physical character general?—As a rough test; I should not go into other tests.

4248. You are of opinion that it is enough to take height and weight, but is not there some fixed correspondence between height and weight so that height and weight are not necessary?—I think that correspondence could be worked out, and that it would vary with different races. The type in Manchester, for example, the male ought to be 5 feet 7½ inches in height and about 154 lbs. in weight, but it is very far from reaching that in the majority of the working men.

4249. The failure of weight is proportionate to the height—you find the same correspondence, do not you, as a general rule?—The failure in weight baffles one to a great extent. For instance, the failure in weight is greater than in height in school children in inferior districts, but is very unequally so. For instance in one of the schools where one expected to find a considerable falling off in weight there is not so much as one anticipated, but there is the usual falling off in height.

4250. What general conclusions would you draw from such anthropometric values of the English people as are available?—That we fail to participate in the general movement in the right direction; that while the continental people generally—all except the French in the last few years—are improving the type, we are not improving the type.

4251. We are in certain classes surely?—Yes, but they only represent 8 per cent. or 9 per cent. of the population.

4252. When you say that those industrial classes show deterioration, do you take the army at all as an example of the condition of the industrial classes?—On that point there is conflicting evidence.

4253. We have had some evidence in this room to prove it?—One can only go upon the dictum of experienced army medical officers, and they, or some of them, hold that the Tommy Atkins recruit is just an average type of his class.

4254. Yes, the slum class?—Of the class from which he is drawn, 50 per cent. of our people. But 35 or 40 per cent. of our people live in slums.

4255. You admit that the slum population is smaller than it used to be?—No, I do not: it is much larger.

4256. We have had evidence as to the progress in the great towns in clearing slums?—And that is perfectly true, but the area of closely packed houses is increasing, and for all practical purposes a great many streets in Manchester which the medical officer of health would not classify as slums, for our present purposes are slums, because they are too narrow and too sunless.

4257. We were told in this room not long ago that all the back to back dwellings in Liverpool were entirely extirpated—all the cellar dwellings, and these conditions are more favourable for bringing more sunlight and air to those places, are they not?—Yes, but there are 170,000 people in Salford who live in streets which do not exceed thirty-six feet in width, and this solid area of streets is very little broken up by open spaces. Now there is plenty of testimony to show (I have some here), that you cannot breed a vigorous race in such a place—you cannot do it. You may have pure water, but you have neglected the purity of the air.

4258. Quite so, but then surely the conditions of the past were just as adverse?—No, for this reason. Take sixty years ago, when the last Royal Commission investigated the conditions of Manchester and Salford. There were then only 40,000 or 50,000 living under such conditions in Salford. It is true that perhaps 10,000 out of 40,000 were living in worse conditions than any you may select out of the 170,000 of to-day, but then the average is no higher to-day than then, and the number of people submitted to the deteriorative conditions which I have mentioned is very much larger.

4259. That arises from general causes, what you call the urbanisation of people?—Yes.

4260. I have a statement on the authority of Dr. Niven in which he says that "during 1891 to 1901 the number of one-roomed tenements in Lancashire, containing more than two persons, decreased from 5,007 to 4,256; the number of two-roomed tenements, containing more than four peasons, from 16,004 to 10,227; and the number of three-roomed tenements, containing more than six persons, from 8,704 to 6,437." Surely that is a marked diminution in the condition of overcrowding which would have an effect?—But I would point out that all that may be perfectly true. In ten years you have a diminution of two-roomed tenements to the number of 1,000, but in those ten years you would have massed together 20,000 tenements, shall we say, averaging four rooms—20,000 houses inhabited by people who formerly lived in the country, or at any rate lived under better conditions; 20,000 more families submitted to deprivation of sunlight and air, which I have mentioned, and though you have filmed the ulcerous places very nicely by improving 1,000 of the houses, you have put up 20,000 more.

4261. But those 20,000 have probably been built more under modern conditions—under building regulations of a more sanitary character than in the past?—That is quite true, but the streets in Salford and Manchester—(those covered by the curtain of cloud that over hangs—this is the material point)—are still commonly not over thirty-six feet in width. I mean the new ones. Now a German municipal authority will insist upon sixty feet at least, and in Cardiff it is the same, to take an example of an English town, which shows good results.

4262. When you say in your memorandum that the statistics of the industrial classes show deterioration, what proof have you of that?—The proof that I have of that is such as this. I have questioned police superintendents and they tell me that they cannot get men in the Manchester area big enough.

4263. That is not the case here in London?—Is it not? Well, it is in Manchester. I have questioned scores of policemen themselves. I find one man is born in Derbyshire, another in Westmoreland, and it is very rare indeed to find one born and bred in the urban area of Manchester and Salford. Then as to the volunteers—Well, you know better than I do that the standard of the volunteers has been lowered repeatedly in recent years and that even so there is a difficulty in manning the battalions. There is a piece of evidence of Mr. Trippel's, who will probably be here to give evidence; he mentions a case in which out of thirty-one young men who offered themselves on a recent occasion in Birmingham, for example, twenty of them were rejected as being not up to the standard.

4264. That is for volunteers?—It is very difficult to get precise information, because, naturally, the volunteer officers have a certain *esprit de corps*, and they are a bit jealous about washing their dirty linen in public, but when pressed they admit that it is difficult to get the right sort of men in Manchester and Salford, and when they have got them they do not always retain them if they work them too hard.

4265. (*Colonel Fox.*) As regards the London police force, some of the best of them are enlisted from the Guards, and a great many of them from the navy?—Yes.

4266. (*Chairman.*) You consider that the Manchester area is an especially suitable one for inquiry?—Yes, because as I point out, it is the type of an industrial community, which is becoming more and more the type of English communities. As I pointed out, you have in Manchester all the effects of the amelioration that you may expect from your present system. You have a splendid water supply. You have admirable drainage, and you have execrable air for the people to breathe.

4267. That is due to setting at defiance the laws on the subject?—Not so much the violation of the laws, but the public conscience is not awakened to the keeping of the air pure.

4268. You say that in Manchester and manufacturing towns they are in the habit of throwing foul vapour into the atmosphere?—That is true.

4269. In direct contravention of the laws on the subject?—That is so.

4270. We have not got the full benefit of the ameliorating agencies in Manchester, you think?—That is also true.

4271. And that is touching the point where you say degenerative effects come in most prominently?—That is true. I am anxious to make this point clear. The reason why the laws are not enforced to their full extent is that the conscience of the community itself is not awake to the danger of the pollution. People do not care to be hard on manufacturers, they do not realise what a tremendous evil they are inflicting upon the community. If they dealt with the drains in the same way—I mean, if the same sort of effect were produced underground which is produced overhead, the conscience of the community would demand very drastic penalties at once. But we are not, as a people, alive to the evil, as other peoples are; and in industrial communities like Manchester we are less alert than you are in London to the necessity of keeping the air pure.

Mr. Rees.

4272. I thought it was an elementary fact, and that anybody would have appreciated it?—But they do not.

4273. (*Colonel Fox.*) The mischief is that there is dense smoke and it is dreadful?—Yes.

4274. And that is because the law is not enforced?—Because the law is too cavalier in its treatment of an offence of that kind.

4275. I have often heard that those manufacturers who are fined, go on repeating the offence?—Yes.

4276. (*Chairman.*) But if the maximum penalty is repeated at sufficiently frequent intervals it would have some effect upon them, surely?—I forget what the penalty is, but it is not serious enough to make it a real deterrent.

4277. It might be made so, though, might it not?—Yes.

4278. Would that involve the necessity of the manufacturer altering his plant?—There is conflicting testimony upon that, but most experts say that it would not involve the manufacturer in any serious expense.

4279. But they do not take the trouble?—At any rate they succeed in Germany.

4280. (*Colonel Fox.*) I remember going to Solingen, the Sheffield of Germany, and I expected to find a second Sheffield, but I found no smoke, and every house was painted white, with green shutters, because the laws were in force against noxious vapours?—Yes, and the German has seen what we have not seen. We saw the necessity, before any other people, of making the drainage right: other continental peoples generally have seen the necessity of keeping the air pure before we did—we have not yet seen it. Perhaps I might say that the difficulty is not likely to be speedily remedied, because the people who would cry out about it are going away from it—the manufacturers themselves are clearing out.

4281. (*Chairman.*) At the same time you will admit that the remedy is one of easy and not of expensive application?—I think one might fairly say so.

4282. Is that in your opinion the main cause of the deterioration of the races in Manchester?—I should call that the main cause. There is another cause which I mentioned. It is the cause which is most easily dealt with; the other cause is want of physical training.

4283. And of proper nutrition, I suppose?—Well, yes; but I attach more value to the lack of physical training than I do to the other. For this reason; after all has been said, our people are as well nourished as any other people. There are great deficiencies certainly, but, after all, the Manchester working classes are better fed than the working classes of, shall I say, Dusseldorf.

4284. Is that so?—I think so.

4285. It may be that the material which is available is superior, but the question is whether the parent, the housewife, has the same talent for the selection and preparation of food as the housewife in Dusseldorf?—No; I do not think that the Manchester women would have that That is admitted.

4286. That is the point. It is more the selective capacity of the housewife than wages and domestic resources?—That is so. But I think the whole discussion of this subject will go wrong if it attaches supreme importance to food, because one could quote example after example of splendid races who are most inadequately fed. That has been long ago recognised by anthropologists.

4287. But the probability is that the food that they do get is of a proper kind?—It is this way, three pints of food per diem to 24,000 pints of air; and, after all has been said, Brocca and Gould must have been right when they attached the first importance to the air. I am anxious to make that point, because medical officers of health in England, not elsewhere, are almost unanimously in favour of pressing the food question to the fore.

4288. You think that they overlook the other?—I am sure they do.

4289. Do you think the comparison of physique of school children in Manchester with any other towns would be to the disadvantage of Manchester?—Certainly.

4290. You think Manchester is specially bad, even among the towns of Lancashire?—Well, one expected to find the other towns in Lancashire better than Manchester, but the only town in which the school children have been tested is Rochdale, and that is even worse if anything—slightly worse.

4291. That is very near to Manchester?—It is twelve or thirteen miles away.

4292. (*Mr. Lindsell.*) Are the smoke conditions the same?—They are nearly as bad, not quite so bad.

4293. (*Dr. Tatham.*) It is a smaller town?—Yes. But nowhere in South Lancashire have you really air—it is all town.

4294. (*Chairman.*) And these comparisons show to great disadvantage compared with the best types, you think?—Yes. I have summarised them for you in these statistics. And you see, if you compare school boys at eight, ten, and thirteen, which are good ages to compare, you have the singular thing that up to eight the Salford school boy is only an inch shorter than a public school boy, so that you have an argument against pressing the point about early nutrition too much.

4295. You think that it shows that at eight years old they are not so backward as they are when they get older?—That is so.

4296. (*Colonel Fox.*) Are the statistics of which you speak those taken by Dr. Roberts?—Yes, partly.

4297. He weighed the boys in their clothes, and the other boys are not weighed in their clothes?—But if you take Mr. Vines's or Dr. Almond's, or the figures given in the Scottish Report, you will find that they show improvement in the public school boys in the last twenty or thirty years. I think that fact is incontrovertible. They show a decided improvement. The point I was dwelling upon at the moment was this, that at eight years of age the slum Board school boy of Salford is only an inch, or an inch and a half, less in height, and perhaps six or seven lbs.—I can give you the exact figures—less in weight than the Marlborough boy, for instance. But, when the lads pass beyond eight years of age, the disparity becomes more and more marked, and the inference I would draw from that is this, that up to eight years of age, though the other boy has been very much better fed and better cared for, the Salford boy has held his own, and if he has held his own you must not attach too much importance to early nutrition, as people are very apt to do. No doubt, early nutrition is very important, but it is not all important. If it had the importance they are disposed to assign to it, you would expect the boy at eight years to be even worse in comparison with the other boy at eight, than he is at thirteen compared with the other boy at thirteen.

4298. Have you had any experience of the Jew population?—No; I should be inclined to doubt Dr. Hall's, of Leeds, results; and, so far as they are sound, there is one factor which I think he has omitted, namely, that the Jewish is a sub-tropical race and they mature more quickly. At thirteen you would expect a Jew boy to be more advanced than an English boy, just as you find the English boy relatively more advanced than the Norwegian boy.

4299. You would account for the two inches in height, and 7 lbs. more in the weight, by race more than anything else?—You will find that the Jewish girl attains the age of puberty earlier than the English girl, and so with the boy.

4300. But we gather that the Jewish children do not get the same amount of air, and that they are more closely packed than the English children, so that is opposed to your argument?—I account for that by pointing out that the comparisons are not *in pari materia*.

4301. You are not trying to prove the point?—No, I have weighed the point. I say that is a point which needs investigation, but it will be found that the Jewish boy matures quicker; he is a man at seventeen, and the English boy is not a man at seventeen.

4302. Is it your experience when the Jewish boy has arrived at man's estate that he is not superior to the English?—He is not at all. You will find a Bengali girl is bigger than an English girl at twelve, but not at eighteen; and it would be a very fallacious inference to draw from that to say that the Bengali girl is a superior animal to the English girl.

4303. (*Chairman.*) Do not you attach any value to the superior nutrition of the Jewish child?—Yes, but not so much as Dr. Hall makes out.

4304. (*Colonel Fox.*) Do you admit that they are better fed and better looked after?—I tried to investigate the case, but I am rather astonished at Dr. Hall's dexterity. In Salford we find a sentiment against the examination of Jewish children, and we have not been able to do it.

4305. (*Chairman.*) The Jewish population is very much larger in Leeds than any other part of England, save Stepney, I think?—Yes. We have not examined any Jewish children, but we have to fight against that sentiment.

4306. (*Colonel Fox.*) Has it come to your knowledge that the Jewish mothers are more thrifty?—Yes.

4307. And they have better knowledge of how to feed their children?—I think they have better knowledge, but I speak from hearsay, merely from inquiries I have made in my own parish.

4308. And that same fact is recognised in London?—I see. Well I should say that that is perhaps so from the few Jewish families that I know; there are not a great number in my neighbourhood, but certainly they are well nourished, and I have noticed that at thirteen to fourteen they are heavier, plumper and better developed than English children; but they are not so five or six years later.

4309. (*Chairman.*) When you say there is not a healthy conviction of the evil, no public conscience in the matter of the air in Manchester and its neighbourhood, may I ask what the Manchester and Salford Sanitary Association have been doing for the last few years?—They have been working hard at the question, too.

4310. And not producing much effect?—I am a member of the Executive Committee, and I may say that they are regarded a little as faddists; that is not the fault of the Association, but of the Manchester people.

4311. They have to trim their sails to popular prejudice?—They are regarded as crotchet mongers, disturbers of the peace, and so on.

4312. Have you enjoyed that character yourself?—No.

4313. You do not enjoy that character?—No, I think not. At any rate, the proof of the pudding is in the eating; if inquiry were made, I do not think you would find that I do.

4314. You do not share the suspicions under which the society apparently suffers in the estimation of your fellow-townsmen?—I do not think so. I remember that the Manchester newspapers jeered at me some three or four years ago when I proposed to anthropometrically measure the children, but they are entirely of a different opinion now.

4315. They are?—Yes; they now talk of the magnificent work done by the Salford School Board.

4316. Do you see any prospect of local opinion dealing with this air-pollution nuisance adequately?—I do not think so—not within a reasonable time.

4317. Does not that point to some defect in the operations of this Society, that, what you call the principal cause of physical degeneration, has not been touched by its propaganda?—They are shouting to the void, to people who will not listen—partly because they have got a character for being faddists, and that is partly due to one or two of the prominent members being in advance of their time. If the Manchester manufacturers' conscience were touched in the Manchester area, you would find a very different state of things in a very short time.

4318. What opinion have you formed as to the contributory causes?—I mentioned the two principal causes—the pollution of the air, and the lack of physical training. I hope you have taken note of the fact which I now point out—and I have a good deal of testimony to support me—the Manchester children are losing the instinct of play.

4319. From want of places, or is it from want of encouragement?—There is no space to play in.

4320-1. Have not the Manchester schools playgrounds?—But they are not open except for a few minutes every day.

4322. (*Chairman.*) Have not you got any open spaces in Manchester?—We have, but not anything like enough.

4323. Could they be obtained in the vicinity?—I cannot obtain a cricket pitch for my lads for love or a reasonable sum of money.

4324. (*Colonel Fox.*) The school you are speaking of is a Voluntary school, is it not?—We have five Voluntary schools in my parish.

4325. As a rule Voluntary schools are very badly off?—We have five playgrounds: we are better off than the average of Provided Schools, it so happens, in my parish. They were provided, most of them, when land was cheaper, long ago. You come up against the land question whenever you deal with this matter.

4326. When you say "land," do you mean the rating question?—I think so—it is the land monopoly—the question of the unearned increment.

4327-8. Is the unoccupied land mostly in a few hands?—Yes, in our neighbourhood it is largely in the hands of one gentleman who does not even live in the neighbourhood, and does not, so far as I am aware, contribute a sovereign to the benefit of any philanthropic movement that is being carried on in the neighbourhood.

4329. (*Colonel Fox.*) You attribute the want of physical training in your district to the lack of playgrounds and of drill halls—I should say that we English people in this matter, as it has been our history in other matters, depend upon chance for what other nations look to system to do. Consequently we allow our children—or have allowed them until quite recently—to depend upon national instinct for games, forgetting firstly that in these large towns there is no opportunity, no space for games to be played; and forgetting, secondly, that though a large minority possibly of the children will play games anyhow, in any conditions, another large section—and they, perhaps, the children most in need of games or training, will decline on marbles; marbles is a great resource.

4330. The weakly and the timid ones, you mean?—Yes, consequently you may tinker with the question if you like, but there will be no remedy until the question is taken up whole heartedly, and not only as to the case of the air, but to compel every boy to undergo a certain physical training.

4331. Have they not started that?—Yes, they have, but there is plenty of testimony to show that after thirteen or fourteen the boys deteriorate when they leave school.

4332. They have already started physical training in elementary schoools—have the boys benefited?—Undoubtedly.

4333. Would you like to see more of it?—Personally, I should like to see them trained for three hours a week.

4334. What you are complaining of is not so much of the elementary schools, although you would like to see that time increased, as of the continuation schools?—I want to see the children when they leave the schools, between fourteen and eighteen, submitted to a healthy drill exercise, willy-nilly.

4335. The boys' breakfasts are good things?—They are admirable, but they are only touching about 6 per cent. of the boy population.

4336. How do you propose to do it—by private enterprise?—No, I should call in the agency of the State. The Lancashire working man is not afraid of conscription for example—he is not afraid of a modified conscription. Some people seem to think that conscription would be very unwelcome to the working man, but it is not so. It might be unwelcome to a large number of them, but, for example, the great majority of those who are advanced thinkers would accept this modified conscription very readily.

4337. (*Chairman.*) For home service?—I think so. I have tested the question. I have addressed audiences of working men, and I have always found them in favour of it. I do not think it is due to my persuasive eloquence.

4338. You attach some importance to that latter, do you not?—No, but, I find an overwhelming number in favour of some form of training, and that training will have to come.

4339. (*Colonel Fox.*) As a means of improving the physique of the nation?—Yes. I do not now enter into the question of national defence.

4340. But as a means of improving the physique of the nation?—Yes, and inculcating habits of order, and precision, and cleanliness.

4341. Which is so badly wanted in this country?—Yes, anything in the shape of barrack conscription would be hopeless—it would not have any chance;

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4342. (*Chairman.*) You were about to tell us what were the contributing causes, you think that they are of minor importance ?—Drink, for example, is a contributory cause.

4343. Do you think that is diminishing?—"Drink," says Mr. Charles Russell, who knows more of Manchester lads (after school age) than anyone else, "drink is not a frequent cause of degeneration," and at any rate we must remember that drink was a much more fertile cause in past generations. In 1740 we drank nearly six times as much as we do to-day.

4344. Was not the drinking mostly confined to the upper classes, then ?—The others drank, too.

4345. (*Colonel Fox.*) Have you considered this, that the individual does not drink so much, but that there are more people who drink now ?—I do not think that that is so. I think there are more women who drink now. So far as drink is a differentiating cause it is the drinking of women.

4346. Do you think it is not the case that more people drink now ?—No, because there are fewer men who drink. There are a very large number of teetotallers.

4347. I have heard it frequently stated that the majority of people do not drink so much, but there are more people who drink?—I do not think that is true, unless you include women—there are perhaps many more women who drink.

4348. (*Chairman.*) That affects the offspring both directly and indirectly, does it not ?—Yes.

4349. She brings the child into the world deteriorated, too ?—I should say that the effect is more indirect than direct. It leads her to neglect her household.

4350. (*Colonel Fox.*) Have you a remedy for this evil ?—No; I am afraid that any remedy that I would suggest would carry us on into another line entirely. I should like to see, personally, the drink question dealt with in a large way.

4351. You think that the conversion of public-houses, as they now exist, simply beer halls, into restaurants would be the means of preventing those evils ?—I do not think so. I can only hope that it will have some effect in the distant future. I must not regard that as a practical remedy. I would rather go in the way of having a high licence as an immediate remedy, and I would license the man as well as the house.

4352. Have you considered what has been done for cabmen's shelters ?—Yes.

4353. You rarely come across a drunken cabman, whereas when there was no place to go to but a beer-house, it was a very common thing to see a drunken cabman?—Yes.

4354. In the shelters, they can get eatables and they can drink anything they like, and have tea and coffee. If that has done good in the case of cabmen, surely this form of restaurant, which Earl Grey has started in the shape of the Public-house Trust Company, would be useful?—I am entirely in favour of any agency of that kind.

4355. You think that does not count. It may be after we are dead and gone ?—I recognise the solution of the drink evil as practically coming in different ways. I should like to see the reduction of licences, and I should give all my support to public-house trusts, and I should like to see the experiment of municipalisation tried in two or three municipalities.

4356. (*Chairman.*) Would you enumerate what the principal remedies are that you think should be applied to the present condition of things ?—Well, universal training. I should begin by fixing two hours per week of physical exercises in all elementary schools. I do not regard two hours a week as sufficient, but I should begin with two hours a week. I should raise the hour which is now prescribed by the Code to two hours to begin with. But I should like to see it three or four hours a week. I should like to see an organised use of the parks made in half holidays.

4357. (*Colonel Fox.*) That, I conclude, is for the recreation of the children ?—Yes.

4358. How would you control the recreation ?—I should require the teachers to do so.

4359. The teachers have their day's work, and they want, like all of us, to go to their homes for a little rest ?—I know, but I should meet that in this way. I should not require the same classes to go to the parks on the same afternoon. I should not tumble all the children of Salford into the two or three parks available in the same afternoon, but I should have an alternative use of the parks, and of course of the teachers, too.

4360. You mean to say that you would strike the children off their class work, and march them down to the parks ?—Yes. We are too keen on merely giving them a certain minimum of book learning. We are altogether wrong in that point, in my opinion. The great majority of them will never profit much by the book learning, but all would profit by the physical training and the habits of discipline that you inculcate. Then it would mean shortening the curriculum, being a little less ambitious than we are now, when you aim at bringing every child in elementary schools up to a certain standard of literary accomplishment. I do not think that the loss would be material, because the children would gain in alertness somewhat.

4361. It would give their brains a chance of growing I suppose ?—But even if there were a loss, I should be prepared to accept the loss. Then I should compel boys, at any rate, to undergo a system of physical training, and if a system of summer games could be combined with it I should rejoice ; but I am now advocating a remedy which the people of this country would accept. I think that compulsory continuation classes, with a certain elasticity in them, would be of immense advantage. At present no form of physical training can even earn a grant in a continuation school—you cannot even get a grant for it.

4362. You said just now that all boys ought to undergo a course of physical training, but is not it equally necessary for the girls ?—Quite so.

4363–4. Even more so for the hopes of future generations ? —But I am dealing with what I can get carried into effect. I should compel every child up to the age of seventeen, unless he was being otherwise educated, to attend continuation classes on three evenings in the week; and on two of those evenings, or one at any rate, I should make physical training the main feature of the work done on that evening, or two evenings if it were thought practicable, and I should include swimming.

4365. Now you know that a vast number of boys are messenger boys and telegraph boys, and bring grist to the mill, and they take money home—that is why they are sent to work—have you considered what would be the effect of stopping those boys from doing this work. Would it not be most unpopular ?—Not every evening in the week, but three evenings in the week they would be available for the service of their employers. The other three evenings in the week they might be withdrawn at seven o'clock to attend their continuation classes. But I think that would be perhaps a feature that ought to be reckoned with. It would cause some little dislocation at first, but the gain in the energy of labour that would result on a national scale would more than compensate the loss that you inflicted upon individual employers. If you are to deal with this question at all, you must tread on some corns.

4366. (*Chairman.*) What kind of lessons would you have ?—I should have obligatory lessons on the simple principles of hygiene. It seems very strange that there should be no such lessons obligatory in the Code. It seems marvellous that, for girls at any rate—it is amazing, if you will permit me to say so—that hygiene and cookery are not universally taught.

4367. You mean household management generally ?—Yes, it should be regarded as the *pièce de résistance* in the girl's curriculum for the fourth, fifth and sixth standard.

4368. That includes the management and feeding of children ?—Yes, you want a reconstruction of the Code, so far as it applies to the girls.

4369. Particularly at the later stages of their school life?—I should not pretend to have such subjects until the fourth standard is reached.

4370. Then the last two years you would concentrate them rather to the subordination of other subjects ?—Yes, I would give up nearly half their time in the last two or three years of their school life to these subjects.

4371. Have you thought of encouraging girls attending two or three years longer, in order that these subjects could be applied in the home ?—It would not work.

4372. Perhaps there is too much factory labour ?—There is too much demand for child labour.

4373–4. (*Mr. Lindsell.*) Surely the local authority could make it compulsory ?—Now they can, but the members of the educational authority would probably welcome such an insistence as that. But the difficulty is this: that they would be afraid of possibly an increase in the rates, and afraid possibly of incurring a great deal of censure, and they would hesitate to do it, and where they did it would be in a very tentative and half-hearted way. But if the Board of Education were to suggest that it should be compulsory they would accept the lead, as they always do. The action of the Board of Education would make a conscience for them in the matter.

4375. But might there be places where it would not be desirable or possible to have it ?—I cannot conceive such places.

4376. Do not you think if the power were given to the local authorities to exercise their discretion that they would avail themselves of the power ?—I suppose you would have to do it in that way. After the recent new departure you can only recommend to them.

4377. There is an Education Committee in Salford; why do not they make it a condition of the curriculum ?—I have been very anxious to do it, and I think we could carry the point easily enough if it were not for the feeling with which many members of the Education Authority greet a new thing, they are always afraid of something new; I mean to say it takes some time. They want to walk round the subject a bit, don't you know. I have no doubt one could carry it here and there. In fact, perhaps, a great many educational authorities would be willing to take up that attitude, but the point is this, if you want it done expeditiously and thoroughly you want a direction from headquarters. A great many educational authorities would not move for the next thirty years.

4378. (*Colonel Fox.*) But is it not a case of such importance that you ought not to fear treading upon their corns ?—That is true. We can do it in Salford, and we shall do presently whether we get direction or not. We are doing it now, but it is not obligatory. But the point is this: that for one Education Authority that made a move forward there would be ten others who would be content to mark time, whereas, if action were taken on the part of the Board of Education it would accelerate the movement. The next point I have down in my memorandum is the inclusion of cookery as an obligatory subject. Well, I think the only obstacle to that is that in many of the voluntary schools, most of them, there is no apparatus. In perhaps the majority of the board schools, too, there is none, but we in Salford are already considering the policy, and we are going to give effect to it.

4379. (*Chairman.*) Have you school kitchens in those schools ?—Yes, in a very large number of schools.

4380. (*Colonel Fox.*) Are you considering the question of restaurants ?—No, but obligatory lessons in cookery.

4381. I mean where they can buy food at a very nominal sum ?—We have toyed with the idea.

4382. Do you think those would be self-supporting restaurants ?—Well, it is difficult to revolutionize the system in a moment.

4383. (*Chairman.*) Do you think a scheme of girls' cookery could be worked into a system for feeding those who come to school underfed or who are willing to pay for food ?—The teachers themselves eat the food cooked now.

4384. But that is on a very small scale. The question is whether it could be done on a big enough scale to make the two things interact ?—Yes, I think so. But in Salford and Manchester the children who come underfed to school are few. They are only two per cent. of the whole.

4385. We find in London that it is 33 per cent. during some months of the year ?—It is only two per cent. in Salford. We have instituted a system of free breakfasts for those who need it during the winter. We find that out of 42,000 only 800 children need them, and many of them only need them temporarily, from the father being temporarily out of work or some other temporary cause.

4386. That points to the industrial conditions of this area being extremely good ?—It brings you back to my contention that it is not a feeding question so far as Salford and Manchester are concerned.

4387. It may be misdirected feeding. It is not inability to feed children properly, but it may be misdirected energy ?—Yes.

4388. Or ignorance ?—Yes, there is misdirection, I know, and, as I have already said, I am sure there is misdirection, and a very great deal of it.

4389. And then you wish to correct it by those means ?—But there, again, I have to say this: I have made enquiries amongst the local grocers, who are unanimous in testifying to this, that the working classes eat more oatmeal and more brown bread than they did twenty years ago. There are many more customers for the better class of food than there were twenty years ago.

4390. Is the milk supply good ?—Yes, and the quantity of milk in the Manchester area is increasing more rapidly than pro rata of the population.

4391. Has this slum population got access to a proper milk supply ?—There is no lack of the supply of milk in the Manchester area.

4392. (*Colonel Fox.*) Is it milk of good quality ?—Yes, and cheap. The Co-operative Society at Pendleton, for example, has, I think I am right in saying—I am speaking off the book—about seven thousand members in Pendleton itself; that is to say, about 10 per cent. of the population are members of the Pendleton Society. The society sell milk at 2½d. per quart, and good milk, too.

4393. What would be sufficient for a baby ?—At what age ?

4394. An infant in arms ?—A pint and a half per day. That is a medical man's question, but that is my judgment.

4395. We have heard at well regulated schools that it costs 2½d. for an infant per diem ?—It would not in Salford. Give each infant a pint and a quarter; that is, three halfpence.

4396. How is it that a Salford baby can be fed for that ?—Because the milk is cheaper. It is well organised. All other agricultural produce brought into Manchester is dearer than in other places, but the milk in Manchester is cheaper than in most places because the dairy system is well organised.

4397. (*Chairman.*) It is not organised municipally ?—No, not yet.

4398. It is in Liverpool to a certain extent ?—Yes, and in St. Helens.

4399. (*Colonel Fox.*) It is on account of the proper organisation that the milk is cheaper ?—That is my evidence, but the remarkable thing about it is, you probably know, that the farmer would be glad to get something like 1d. per quart *in loco*. There is an enormous field for cheapening the milk supply by proper organisation—an enormous field. There is no reason why milk should not be sold at 2d. per quart.

4400. (*Chairman.*) And the supply comes pure ?—Yes. There are two prices. I pay, for example, 3½d. per quart for my milk. I do not think that it is any better, and I have frequently examined the milk, than can be obtained in back streets; in fact, it is the same milk to all intents and purposes. But they make those who are better off pay a little more for a little extra civility, I suppose.

4401. (*Colonel Fox.*) Is it sent out in bottles ?—Yes, in bottles—sterilised, but it is usually sold in the ordinary way from cans. There is a very excellent depôt for sterilised milk at Old Trafford; it is a suburb of Manchester which adjoins Salford, and they send sterilised milk everywhere.

4402. (*Chairman.*) Have you anything further to say ?—I believe that the Co-operative Society of Pendleton are now embarking, I do not say that it is so positively yet, but they are about to embark upon a scheme of sterilisation. I have got as far as the opening of play-grounds of schools in summer evenings and on holidays. That is most important in my judgment.

4403. But there are not enough to be of much use, you think ?—There are sufficient in our neighbourhood to

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be of very great use. I believe there are sufficient to supply about half our needs if they were opened.

4404. That is for the people in whose custody they are?—Yes, only the caretakers must be paid, and I do not think that the Education Authorities could pay caretakers without being surcharged.

4405. (*Mr. Lindsell.*) You are aware that the Municipal Authority could?—Yes, I suppose it could.

4406. Under the Public Health Act?—But you will be kind enough to remember that many Municipal Authorities as yet look with suspicion upon a progressive policy initiated by the Educational Authority.

4407. They might initiate it themselves.—Yes.

4408–9. (*Chairman.*) They are one and the same thing?—As people say in Lancashire they will need some shifting. Next I come to the prohibition of the sale of tobacco to young people.

4410. Is not there a further thing to be done, ought not the sale of cigarettes to be prohibited in all shops like sweet shops and other shops frequented by the young; that is where the great temptation comes in?—Yes.

4411. It is a great temptation to the boys when there is tobacco to be sold over the counter?—That is true. I did not think of it when drawing up my *précis*, but you would have to decline giving tobacconists' licences to shops in which sweets are sold.

4422. You could get the Inland Revenue to ask what their occupation was, and if it was discovered that they were selling sweets or toys that children were in the habit of buying, it ought to be declined?—That is quite right. That is quite my view. I need not detain the Committee on that subject. My next subject is that of further and more complete medical inspection of schools. That is not my own recommendation so much as that of the medical members of the committee over which I preside.

4413. We have received a great deal of evidence on that, and we think that something of the sort should be done?—I quite assent to it, but it is not a question to which I have given special attention. Then my next subject is, the provision of swimming baths in the basement of a certain proportion of all new schools. That proportion would vary much according to the area. In some districts very little provsiion would be needed, in others, as in Salford, considerable provision of that kind would be desirable. It depends very much upon the locality, whether there is a good clear river running through it, and whether it faces on the seashore, and what provision has already been made in the way of municipal baths.

4414. Have not baths and wash-houses been adopted to a large extent in Manchester and Salford?—Yes, and we encourage our boys to swim, and give them prizes. In fact, you will find that the report of one of our schools shows that in point of physique we do very well indeed. It is quite up to the Roberts' average for English boys—the Grecian Street school. This modern boys' school is in good working order. A great deal of importance is attached in it to the systematic teaching of swimming. But we have not yet been able to encourage the girls to swim also, because it implies a mistress to teach them. The teachers cannot swim themselves in the great majority of cases, and there, again, we have been baffled up till now by the expense involved in getting special teahers.

4415. (*Mr. Lindsell.*) You are aware, of course, that in a great many schools boards they supply swimming baths in connection with their schools?—Yes.

4416. And since the passing of this Act it has been held as a function of the Education Authority to supply swimming baths?—Yes.

4417. There is nothing to prevent this last recommendation being carried out?—The difficulty is, how to enforce it. There is a practical difficulty, the difficulty of enforcing a regulation of that kind.

4418. The difficulty, I find, is to check them in multiplying them unnecessarily in some areas?—I wish that were my experience. Then, finally, I have a recommendation which I did not insert in my *précis*. It is most desirable that the early closing of shops should be enforced. One of the great contributory causes of physical deterioration, which I ought to have mentioned earlier, is the fact that the children do not get enough [illegible]—they are up too late. They participate in the life of the street too late at night. There are, of course, as you know, social grades among the working classes: now the working class aristocracy send their children to bed, in the majority of cases, at reasonable hours, but the lower social grades in the working classes do not much mind that, do not attend much to it, and do not realise the importance of it.

4419. If the children were sent to bed they would not sleep, because the houses are small and over-crowded, and the atmosphere is full of noise and so on?—That is a difficulty; but people in a working class district get accustomed to noise, and they sleep in conditions which you would find it impossible to sleep in. It is asking a great deal to enforce an early closing Act of that kind. One general observation I ought to make on this point: people who consider the working class as a whole are apt to make the great mistake of thinking of them as being more or less homogeneous. There is as great a social gulf fixed between some working class neighbourhoods in my own parish, and some others, in fact a much greater social gulf fixed than between my own social plane and what shall I say?—the Duke of Devonshire's; people who do not know the working classes intimately are apt to forget that. That is why a great deal of what I have said applies—most of what I have said appljes—really to the lower grades of the working class communities. But, unfortunately, they form in industral towns the great majority.

4420. (*Chairman.*) What average wage would those people have, would it be under 30s.?—Well, I should rank people who either earn a small wage, or earn a bigger wage irregularly and precariously, in that class. The carpenter, the joiner, the turner and planer, or the lithographic printer is an aristocrat; but the dock labourer, and the casual labourer is not, of course.

4421. He is the lowest in the scale?—Yes.

4422. (*Colonel Fox.*) Are you aware that the man employed in clerical work, or the shop-keeper, looks down upon the skilled artisan?—Not so much in Manchester as in London.

4423. That is so in London?—Yes.

4424. For several reasons; because they do not soil their hands for one thing?—That feeling is fast disappearing in Manchester: I have a large class of working men. They nearly all belong to the aristocracy of labour. There are commercial travellers among them, clerks, lithographic printers, joiners, cabinet makers, grocers' assistants and down to colliers, but there is no sense of social division between the clerk and a pattern-maker, for example. If there is, the patternmaker is as often as not the superior being.

4425. That is not so in London. The skilled artisan, who is really a better man, is looked down upon?—He is by far the better man. Now we have got beyond that, to a great extent. We have disabused ourselves of the prejudice in Manchester to a great extent. I may say that a friend of mine who is a solicitor in Manchester tells me that if he advertised for an office boy twelve or fifteen years ago the next morning he would have a street full of applicants. If he advertises now he might get one or two replies to his advertisement, and it is very difficult to get office boys in Manchester.

4426. For the reason that they get situations as messenger boys and telegraph boys?—No, but the ideal of the Manchester boy, the parents of the working class boy, is to make their sons into artificers, craftsmen, and so on. They do not care for the messenger boy opening. The messenger boy is on a lower social grade because they recognise, and they are coming to recognise it more and more, that the work of an errand boy lands a boy at seventeen in a *cul de sac*. There is no future for him, and I have done my best to enlighten them upon that point.

4427. (*Dr. Tatham.*) I am very much interested in what you have said in respect to a part of Manchester in which you live, because I know it pretty well myself. With regard to the public parks that you speak of, in your district you are better supplied, are you not, with public parks?—Yes, in my own parish we are. We have Sedley and Buile Hill Park within 400 yards of us. But all the same we cannot get a cricket pitch. There are some cricket pitches but they are at a prohibitive price. There are not many.

4428. Not even in the vicinity of Seedley Park ?—That is in my parish. You have Barr Hill fields, they are all taken up and they are very inferior, and the prices are high. You pay £10 for a pitch.

4429. It is a question of high prices which you cannot afford ?—The boys cannot, the men do in some instances.

4430. The Manchester artisans are quite capable of paying anything they wish for themselves, I suppose ?—Yes, but the boys who need it most cannot get access to a cricket pitch.

4431. Am I correct in saying that in Manchester, more probably than in most places, young fellows earn a good deal of money at an early period of life, say at seventeen and eighteen ?—That is so. But it is not so much so as it used to be. A man goes into cotton weaving where he can earn a man's wage comparatively early. But it is not so in the trades. It is not so much done as it is sometimes thought to be.

4432. Many years ago that was the case ?—Yes, but it is not so much there now.

4433. You spoke of the tendency of young men to become artificers of various kinds. Is that becoming an increased tendency now as compared with the past ?—Yes, and it has been increasingly difficult. The Trades Unions are very exclusive; they are in their own way as exclusive as the House of Lords. They do not give a wide welcome to intruders into their preserves. Many years ago the tendency, at least at the time when the cotton trade was probably more prosperous than it has been lately, was for the young men at the age you speak of to get into the various warehouses or become clerks in offices.

4434. Yes ?—They are not quite so eager for that as they used to be.

4435. There is a tendency towards the artificer class of work, is there ?—Yes, a decided tendency.

4436. With regard to swimming baths, did I understand you to say that there are no public municipal facilities ?—For baths in Salford, yes there are, and we use them; it is those that we use, and I am very happy to remember that the Salford Corporation encourages the bathing of school children. I am speaking again without my book, but I think that the charge is a halfpenny for a swimming bath for a schoolboy or girl accompanied by its teacher, and consequently classes are taken regularly.

4437. They have not got to the extent of making them perfectly free ?—No.

4438. Have they done so in Manchester ?—No, I think not.

4439. Then you made the statement that in your experience young children were losing the love of playing ?—Yes.

4440. Do you mean because of the circumstances in which the children are brought up ?—Yes.

4441. They have not the opportunity of following their instinct ?—Yes, the desuetude produces a loss of taste. It is the same law that operates always; they are losing it primarily for want of opportunity, but it is becoming, and I think very many trustworthy observers agree, a settled apathy to play.

4442. And you think in that respect things are getting worse in Salford ?—I believe so.

4443. With regard to the question of physical deterioration, I should like to ask you whether you think from your own experience that there is evidence in your own parish of progressive physical deterioration in any part of the community ?—I do not think there is clear evidence of progressive physical deterioration. The physical unfitness —I will not use deterioration—is perhaps not greater than it was fifty years ago when old Douglas, as he was called, penned the children in hundreds in the mill—you remember the circumstances perhaps. But the point is this, that for one child who lived in Salford in old Douglas's time there are fifteen who live in Salford now. The area of the operation of the cases has been greatly extended. They may not operate more detrimentally now than they did but they operate over a wider area, and they affect a much larger percentage of our people May I say upon that point I have the figures that I have here collated which were intended to supplement those I have included in my *précis*—I have them now ready. I think those ought to be included (*handing in the same*).

4444. (*Chairman.*) Yes, kindly let us have them ?—They are more significant than the other, I think. They show the falling away from the normal very much more than the others do.

4445. (*Dr. Tatham.*) And you said too, although you had no evidence to show it, that up to the age of thirteen there is not any marked deterioration amongst the people, but after that age, from fourteen to eighteen, you notice a very marked deterioration ?—I am afraid I did not intend to say that—what I intended to say was that up to eight the child in the slum school holds his own with the child in the Manchester grammar school or any middle-class school, or very nearly holds his own on an average, but when he becomes four or five years older, at thirteen, then the boy is not as good as the grammar school boy would be. Now the deteriorating influences do not show strongly until the approach of thirteen. He is, as these last figures show you, 4 ft. 5¾ in. in height, whereas he ought to be 4 ft. 9 in. in height. He has lost more than 3 inches and 17 lbs. in weight as compared with the normal boy. You may put it like this. Fifteen thousand of our Salford school children, that is about one-third of them roughly speaking, will be, when they reach thirteen, 7½ in. shorter than the Rugby boy at thirteen, and 33 lbs. lighter. It will take three boys from Salford and from that type of school to make two Rugby boys. The figures are there, I have original measurements.

4446. (*Colonel Fox.*) Is that for the corresponding number of public school boys, 15,000 ?—Oh, no. Take the average boy, the type of boy, the mean boy. There are 42,000 school children in Salford, and 15,000 of them are in the type of school which I have classified as being in the poor working class quarter; 15,000 more are in a medium sort of quarter, and about 10,000 are in a better quarter. Now take the lowest quarter here, they are here, as a sample. Here are some measurements which we have taken quite recently. At thirteen the John Street schoolboy is 4 feet 5⅔ inches in height. The figures are better given in that *précis* of mine because I include all other results there. He is only 65 lbs. in weight. Now if he was at Rugby or a Rugby boy he would be more than 5 feet in height, but I am speaking from memory. At Rugby at thirteen he would be 5 feet 1·6 inches in height, that is 8 inches taller and 98 lbs. in weight, that is 33 lbs. heavier. Take the medium type of school:—In a medium type of school the boy will be at thirteen, 4 feet 7·76 inches in height; that is 2 inches taller than a slum boy but still 6 inches shorter than the Rugby boy and an inch shorter than the boy of the artisan class ought to be according to Roberts—4 feet 7·6 inches in height, 68¾ lbs. in weight, that is to say, an inch shorter than he ought to be according to Roberts, and about 8 lbs. lighter. He is 1½ inch shorter than the London School Board boy according to the Scottish Commission Report. In the best type of Board School in Salford he is 4 feet 9·3 inches in height, 79½ lbs. in weight. If you compare these figures you will find that he is just an average boy. Our best type of boy reaches the average of the artisan class of England as given by the British Association Anthropometric Committee's Report thirty-one years ago—and he is also just equal to the London School Board average boy. The London School Board's average boy appears to be normal, just what the British Association figures would require him to be. Our best type of school only just touches that level

4447. (*Dr. Tatham.*) Are the boys that retain this standard country-bred boys or Salford-bred ?—They are bred in Lower Broughton and in the Langworthy Road district the best part of Pendleton.

4448. You spoke just now of the evil effect of air pollution in Salford. You also said, what one knows to be true, that the water supply of Salford and Manchester, and the district, is probably the best in England ?—That is so.

4449. Certainly quite equal to the best ?—Yes, and plentiful.

4450. I understood you to say that the Corporation of Salford have been very active indeed in many branches in improving drainage and other sanitary conditions of health ?—They have.

4451. But do you think in the matter of air pollution they are a little lagging behind ?—I am certain of it.

Mr. Rees.

4452. Would not it be in the power of public bodies, like those you represent, to bring some pressure to bear upon the Sanitary Authorities; they are all powerful in the matter, and, as you say justly, they have the power to abate the smoke nuisance absolutely?—It is difficult to make any bird foul its own nest, and these people have a tenderness for the manufacturers. They are not large-minded enough to see that an evil is being done which cannot readily be compensated. They know that if they enforced the law quite strictly, they would need more inspectors—they have too few—and they would set their faces against it, and, besides, I think they would listen to the pleas of the manufacturers that they were damaging trade with their absurd experiments. That is what the manufacturers would in some cases say. One firm put it this way: "Well, if we were to do what you ask us to do, we must put in a new furnace, and it will cost us some £3,000. If you are going to enforce that we shall have to reconsider our position." That is the way the thing works

4453. To put it plainly, I suppose it comes to this, that until public opinion is strong enough to influence the civic authorities, you think that it is hopeless to hope for an improvement of the Manchester and Salford atmosphere?—I think so. Only I think that public influence might be be educated, perhaps by an enactment, or by a permissive law, it might be, fixing higher penalties for infringement. The penalties are very low, and I think it is 5s. and costs for the first offence, and I believe it never exceeds £5. I am again on a subject, the details of which I am not intimately acquainted with, but I think that is the case, and they do not mind such a fine and costs.

4454. (*Chairman.*) But a prosecution once a week, followed by a fine of £5, would be something, and you could fine them every day?—The greatest offenders I know, I think I have pointed out, have been offending time after time, and I think they have been fined twice—they have offended twice every day.

4455–6. (*Colonel Onslow.*) You have a Smoke Abatement Association to deal with that, have not you?—Yes, but it is not very active. They are all more or less engaged in smoke making; they do not realise what they do. I am glad to have an opportunity of saying something on that point.

4457. (*Dr. Tatham.*) We had evidence from Dr. Eichholz a few days ago, and in the course of some very valuable information which he gave the Committee he made this remark. The children of the poorer population "appear to be of unusually low stature at the limit of school age in Manchester and Salford. This is in accordance with an old established anthropological fact as regards South Lancashire, and is not a new fact in the way of degeneracy. The school population in the poorer parts of Leeds appears to be of a sounder type than the poorer populations of London, Manchester and Salford." Would that be in accordance with your experience?—I must say that Dr. Eichholz took a more roseate view of their condition than the teachers took. But as for the anthropological fact there is no doubt a large Celtic substratum in the Lancashire population, but I am afraid that the inference from anthropological fact is to be regarded with suspicion, because the averages of the children in Lancashire are even below the Welsh averages, for example in the lower parts of Manchester and Salford. But the point is this: If you travel out of Lancashire into Halifax—I have some Halifax figures here—you will find that the children are no better; they are not a bit better than ours, for instance, in the West Riding. I mean, for instance, the Halifax boy at ten may be, if he is in a slum school, 4 feet 2·7 inches in height, in a better type of school 4 feet 3½ inches. Now that corresponds pretty closely with our average Salford school boy; in other words the Halifax children are no better than our own. Our best type of boy is slightly better than the best type of boy in Halifax at ten years of age. So that I do not think that Dr. Eichholz's view will hold. You do not find support for it when you travel out of Lancashire into Yorkshire. I may say also that our averages correspond pretty closely with those of Edinburgh. Our averages, as I point out, are below the normal: so are the Edinburgh averages. It will not, therefore, do to say that it is racial. It is not racial in Edinburgh and in Halifax.

4458. (*Chairman.*) There is a racial cause in Edinburgh as compared with Aberdeen for instance, is there not?—Yes, but the celtic element which Dr. Eichholz speaks of is not present in Edinburgh.

4459. No, I do not think it is.—He talks about the anthropometric and the historic inferiority of the South Lancashire people because of the Welsh element, but it is not so. You find the same inferiority in other manufacturing towns, Halifax, and according to Dr. Hall, Leeds. Dr. Eichholz's statement is in direct contradiction to Dr. Hall, because Dr. Hall finds the Leeds children no better than ours. I have his figures here somewhere. The poor district Board School boy of Leeds averages 3 inches in stature, and 2 lbs. less in weight, than the factory lad thirty years ago. I doubt the accuracy of this statement. But still it must be accepted as proving inferiority. It is worth as much as some other statements on the question because it is made by a man who lives on the spot, and who has done a great deal of measuring. The Leeds average according to Dr. Hall in all classes of school is 4 feet 5·7 inches in height at twelve.

4460. And 77 lbs. in weight; that is the average?—I beg your pardon, according to Dr. Hall that is the best type of Leeds school. Now that best type of Leeds school shows you slight superiority as compared with our best type of school. It is 2 lbs. in weight, and ¾ inch in height. The average, according to Dr. Hall, in Leeds at thirteen is 4 feet 5·7 inches in height; that is positively below our average, and the average weight is 72·2 lbs. It is 4 lbs. better than our average. In other words, the Leeds average is no better than our own. In weight the Leeds boy is slightly heavier, and in inches slightly shorter.

4461. I have no doubt the important comparative figures you have given us you will allow to be printed in our Report?—If there is anything I can do—I have collected much material of all sorts, from all sources, though it is not all readily available, but if I were making a written statement I could tabulate it, and anything I can do in the way of supplying figures I shall do.

4462. Your evidence will be submitted to you in proof, and anything that you feel disposed to add in the way of comparative figures the Committee would be glad to have? I shall be very glad to have any opportunity of that kind because I am concerned in endeavouring to awaken the public mind as to the facts of the case.

4463. (*Mr. Lindsell.*) With regard to the anthropometrical record, you are keeping a very regular one now?—Yes.

4464. How far do they go back?—Two years ago only, when we started. The Manchester Grammar School figures go back twenty-three years, but they are not ours.

4465. Only the grammar school?—Yes. They show an average type of boy inferior to the public school boy, speaking generally, by 2 inches in height and about 10 pounds in weight, but quite equal or slightly above the Roberts normal for the average English boy.

4466. Would you be prepared to say that, given all conditions of water, drainage and air to be as satisfactory as they could, there is no necessary connection between urban life and physical unfitness. Is it the nature of things which remedies can only palliate, and not altogether remove?—You are aware that anthropologists say that the townsmen in Belgium are better than the rurals, and Dr. Gould points out that Londoners are on the average 1½ inches taller than the men of Hertfordshire. But the general rule is a distinct inferiority when you come to towns. For instance, Ayrshire rurals, according to the British Association report, are 4·15 inches taller and 36 pounds heavier than natives of Glasgow. Dr. Beddoe points out that the men of Exeter are 1½ inches shorter and 15 pounds lighter than the men of South Devon in their neighbourhood. Natives of Newcastle in the Northumberland Infantry Militia average 5 feet 6·2 inches in height. The natives of Alnwick and Morpeth average 5 feet 7·19 inches. The rurals average from 5 feet 8½ inches to 5 feet 10 inches in height in the same regiment. That is, according to Dr Beddoe. The cutlers of Sheffield are below the average of the cutlers of the villages; the men of Bristol are below the average of the

rural inhabitants of Somersetshire; Flamborough fishers, according to the British Association Anthropometric Committee, are 2·9 inches taller and 24·3 pounds heavier than the artisans of Sheffield, and so on. Town life has two very deteriorative physiological effects. It interferes with the physical development of women; it develops heads, it develops crania without developing the pelvis correspondingly. I need not labour that point. And secondly, you have what the Registrar General reports a steady increase of still births. They have increased 300 per cent. in the last thirty years, and among those who survive of course you must have a larger number of weaklings brought to birth in towns than in the country. But having said so much as that, I might say that, after considering all the evidence that I have been able to get, I am convinced that the inhabitants of a good town, of a garden city for instance, would positively be better than the inhabitants of the country physically

4467. Therefore you do not despair of the urban life?—No.

4468. Provided that the conditions were all as good as they could be made?—Yes.

4469. It is not an absolute necessity that urban life should be worse?—Urban life needs many precautions. It needs an attitude of vigilance, which rural life does not require. It is a more difficult attitude; it is a more difficult pose, from the point of view of physique, than life in the country. But being more difficult it is not an impossible one—it is not impossible to secure superiority.

4470. There are more incentives for things that are bad for the race in all ways?—Yes.

4471. With regard to this pollution of the air, do you think that it is worse in Manchester and Salford than elsewhere in those other towns, such as Leeds and Halifax?—I lived at Halifax for a time. I was a schoolmaster in the immediate neighbourhood, and I am bound to say that the air of Manchester is very decidedly worse.

4472. In places like Halifax people can get much quicker to the very fine moorland country, and they cannot do so in Manchester for they would have to go miles to do it?—Yes.

4473. With regard to your view that football probably occupies too high a place in the minds of the working classes, is that a mere gambling instinct?—The instinct that takes a man to see a football match is not the playing instinct. It is not the spontaneous outputting of energy in playing, it is the love of excitement and speculation on the chance.

4474. Do not you think that they go to improve their own play for the next local game?—No, I think that it is the love of excitement.

4475. Are not there football matchs in every place now?—There are. But, as I say, they again only affect the small proportion of the youth. I should suppose that in my parish, which is, perhaps, a better place than the average Lancashire town parish, not one youth in ten belongs to a football club. I might say not more than one in ten, at any rate.

4476. Are there any opportunities for carrying on football in connection with the schools?—Yes, we have recently organised a football club in one of the schools, but the difficulty has been to find places to play on. A club has very kindly placed its field at the disposal of a certain league of clubs which has been formed in Salford in connection with elementary schools to play football matches, and it has been very kind of them: but the practice games have to be played in the restricted area of the school playground.

4477. I think I heard you say that you thought that too much importance, perhaps, is attached to the food problem?—No, not too much importance—too much relative importance. What I am anxious to guard against is this: the tendency that betrays itself among people who consider this question and fasten upon the food question as being the primary—the all important one—whereas I am sure it is the fact that it is secondary to the other two I have mentioned.

4478. Perhaps in Salford you have not a large number of children who go to school without breakfast?—As I pointed out, we have only 2 per cent.

4479. That is very different from London?—But your average boy in London is bigger; as a set-off, you have better air than ourselves. You think that your London air is bad, but I think it is superb as compared with ours.

4480. You think that the food problem is of greater relative importance before children reach school age?—Yes.

4481. The feeding of the infant is more important relatively than the feeding of the child of ten?—That is true.

4482. Now as to the remedies. You seem to think that considerable extension of the compulsory education of the youth is desirable—I mean you would extend the present compulsion, which, of course, is strictly speaking reading, writing, and arithmetic?—Yes, I think the extension is inevitable.

4483. Would you raise the compulsory school age at one bound for school purposes from fourteen to seventeen?—Yes.

4484. Because if you make the compulsory attendance of physical training extend to seventeen you at once extend the principle of compulsory education up to seventeen?—I think so. I am not afraid of it.

4485. You would be glad to see an Act of Parliament which enforced attendance at evening continuation schools from the existing school age for elementary schools up to an age approaching the limit of secondary education?—That is so.

4486. And gradually approaching compulsory secondary education?—No. So far as evening continuation schools are concerned I should use that compulsion, and if it were thought too much to expect the child to undergo a four years' evening continuation period at once, I should begin with an instalment, and compel the child to attend continuation classes to the age of sixteen. Continuation classes, as you probably know, are absolute failures at present. The people who are on the inside know that they are failures. You cannot enforce discipline. If you do the members tail off. They impose upon people, who think they are doing something, but they are not doing much. One of the great drawbacks is, that there is a hiatus between the school age and the age at which a lad very often begins to attend continuation classes. That fatal hiatus we want to bridge over.

4487. There is pressure being brought to bear of a more drastic nature to bring all education together and co-ordinate it more under one authority than before?—Yes; but the very lads who ought to go to continuation classes are the lads who do not go. When I want to prepare lads for Confirmation, I find that they are all attending continuation classes.

4488. It might be done in this way, that unless a lad at the end of compulsory school age could obtain some sort of leaving certificate, he would be bound to go on with continuation schools until he did?—That is an excellent suggestion, if you gild the pill in that way it would be swallowed. It would then appear that you would have a great solicitude for education as designed to give every lad his chance.

4489. Then you propose to extend the obligatory curriculum to lessons in hygiene and feeding and cookery?—Yes.

4490. You will be putting rather a heavy burden upon the girls as compared with the boys, will not you?—No.

4491. The girl has to obtain exemption for the right to be employed and will have to pass under the future Board of Education bye-laws and satisfy the same conditions as the boy?—That is a mistake. I would knock off some of her arithmetic; she cannot learn too much, of course; but we now insist on more than is absolutely necessary.

4492. You would like to see as a condition of employment proficiency in some of the other subjects substituted for the existing proficiency tests?—Yes. I should not vex girls with so much arithmetic.

4493. Now, again, you are on the School Committee of the Local Authority; you probably will have the making of new bye-laws to take the place of the School Board; that is a point you can bring before the Committee?—I know. In five years, perhaps, these views of mine might prevail in Salford.

Mr. Rees.

4494. In a rural district that I know of, one of the new local authorities has made a difference entirely for girls as to the condition for taking a certificate in these very subjects ?—That is excellent.

4495. You can do it yourself ?—It would be admirable if you gave them a lead, and held up the mirror.

4496. You will see these bye-laws commented upon as an experiment in a good direction. I mean anything like undue pressure from the central authority upon the local authority in these things would be likely to do more harm than good. I suppose you have formed a very strong opinion upon the pernicious extent of smoking amongst the youngsters ?—A very strong one.

4497. Have you any complaints in Salford of further evils arising from the sweet shops, about the practical encouragement to gambling by these slot machines ?—I have heard of it, but I have not come into contact with it.

4498. Now about swimming baths. You know, of course, that all these things enormously add to the rates ?—Yes I do.

4499. What is your opinion of the view that is now adopted, that the provision of the swimming bath hardly comes within the scope of the Education Authority in view of the great powers that the municipal authorities possess under the Washhouses Act ?—Well, I have no opinion to offer upon the legal question, but I think it is a pity that the Educational Authority may not deal with school swimming baths.

4500. When they are building large new schools, and think a swimming bath desirable, they can go to their own Council of which they are the Committee and say, we think that it is very expedient that we should have a swimming bath, will you do that part of the work under the Washhouses Act ?—Yes, a swimming bath in a place like Salford would be necessary, perhaps in one school out of every four.

4501. Is that another compulsory subject that you would recommend ?—Yes, I should make swimming compulsory. It is compulsory at a public school, and why not at the workmen's public school ?

4502. It is only compulsory if you want to be a boating man ?—Yes, at some public schools but not all ; I would sacrifice a little parsing and analysis for it in elementary schools.

4503. (*Colonel Onslow.*) About this compulsory physical training up to the age of seventeen ; you do not mean military training, do you ? You mean physical drill, not necessarily military drill ?—I am not afraid of the use of a rifle.

4504. But you have to bear in mind, have you not, the very strong feeling there is against what is called the spirit of militarism amongst a certain section of people ?—I think that they need educating, and a great many of the socialistic English leaders of the working men think so too. Nothing would tend to suppress the jingo spirit more than the training, and nothing would tend to promote peace more.

4505. Anyone who knows realises that ; but a very large number of the lower orders particularly have a great horror of anything military ?—I think, personally, if you will forgive me saying so, that is an exaggeration of the facts.

4506. I was surprised to hear you say that in Lancashire, amongst the working classes, they appear to be prepared for conscription ?—Not for barrack room conscription.

4507. But for a sort of general training ?—Yes.

4508. But that sort of training, or anything like that, would not that counteract the disinclination for children to play, You say that children are losing their inclination for playing ?—Yes.

4509. If they went in for more physical exercise, that would make them more active, would it not ?—Yes, it would counteract that disinclination for playing.

4510. Would not you think that going to football matches would tend to a desire to partake in the game ?—No.

4511. If they were trained physically they would feel the necessity for using their physical energies ?—In a great many cases they would

4512. I should like to know about those weights. Were those weights taken in the natural nude body or with the clothes on ?—The first batch were taken in the nude, and the second batch was taken with a pair of trousers on and shirt, for which some allowance was made.

4513. And then the chest measurements would be taken? —The chest measurements are made on the enflated chest.

4514. How were they taken ?—Over the nipples and shoulder blades, except where there is a distinct "winging" of the shoulder blades.

4515. There is very great difference in the chest measurements, by their being taken in different ways you know You said you have asked several grocers, and they find there is a greater demand for such healthy things as brown bread ?—Brown bread and rolled oats

4516. Did you find that they were customers of the lowest class who asked for those things ?—No, it is only the aristocracy of labour who purchase those things.

4517. Not people from the slum parts ?—No ; but stil the demand is greater.

4518. Generally in most cities in Scotland porridge is going out of fashion ; have you heard that ?—I am sorry to say I have heard it. Lord Meath traces the decay of the people of the North of Scotland to the abandonment of porridge.

TENTH DAY.

Monday, 15th February, 1904.

PRESENT.

Mr. ALMERIC W. FITZ ROY *(in the Chair.)*

Colonel G. M. FOX.
Mr. J. G. LEGGE.
Mr. H. M. LINDSELL.
Colonel GEORGE T. ONSLOW.
Mr. JOHN STRUTHERS.
Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY *(Secretary.)*

Mrs. JOSCELINE BAGOT, called; and Examined.

Mrs. Bagot.

4519. *(Chairman.)* You are the wife of the Member of Parliament for the Kendal Division of Westmorland?—Yes.

4520. You have had experience of dealing with the physical training of boys, have you not?—I have had experience for the last nine years of the physical training of boys.

4521. Mainly in London, I believe?—Yes.

4522. But you know something of the condition of boys in the country as well?—I have had a lifelong experience of boys in town and country, though not of the physical training of boys.

4523. Will you explain for the information of the Committee the way you have got hold of these boys, and the treatment?—Certainly. In the first place, I re-organised a club which had fallen to pieces.

4524. Is it a parochial organisation?—Yes, but I had no assistance at all from the clergymen or anybody at all. The first thing I did was to find good apparatus for the gymnasium and the providing of an instructor, and I had also to provide myself with a working-man secretary, who has worked under me entirely. Then, the club developed from various causes. In the first place, the secretary used to go to the Board Schools and get hold of boys who had a tendency and a liking for gymnastics, and they joined and they brought their friends, and gradually the number increased.

4525. Are the boys of the slum class or of the superior class?—They are of both. To continue. The Secretary also used to get a great many boys of the slum class by going to the corners of streets where they were practically in gangs, and they called themselves cliques. He used to get hold of their leader; if he got hold of their leader he usually got them all.

4526. They have recognised leaders, then?—Yes.

4527. Are they predatory, are they engaged in thieving?—Not by any means.

4528. Are not some of them?—What these boys really like is fighting, so that we get them into the club and have them trained in boxing. We get some assistants, in the way of working-men assistants, purely, who have taught them the art of boxing, and they learn to do it properly. But there was never anything like real fighting there. Then we also attracted more boys by displays, as they call them, by competitions in gymnastics. Many of them compete and the displays get reported in the local weeklies. This attracts those lads, and keeps us well supplied with members.

4529. What number have you in each year?—The actual number is between 80 and 100, but those engaged in gymnastic training are not so many as in boxing.

4530. They do not all undergo this training?—It is by no means compulsory; it is entirely voluntary, that is the whole point of it.

4531. What kind of training is it?—It is gymnastic, wrestling and boxing, and it results in a great many loafers coming in.

4532. Is there any recognised system of gymnastics?—Yes, we have a paid instructor. That I have always insisted upon, and they go through a regular course. They have certain apparatus, parallel bars, and horizontal bars, and rings, and a vaulting horse. Most of them go in for all, but they are not forced to do so.

4533. You insist upon personal cleanliness amongst the members of the club, I suppose?—They insist upon it themselves.

4534. And you have a certain amount of drill?—No, only what I have described.

4535. I suppose they are rather rough material to deal with?—The boxing element is the roughest, and the gymnastic element is quite distinct from the boxing element, that is very peculiar.

4536. How many years are they under your superintendence?—Sometimes they only remain a month, but I have got a lot of married men who cling to it very much. We used to have more younger boys than we have now, we have really very little room, and we have them now from about sixteen to twenty-two years of age.

4537. Have you noticed in the course of the time that you have given attention to this matter, any change in the physique for the better or the worse of the boys from the time they come to you?—I notice a most distinct change.

4538. For the better?—For the better.

4539. When they come to you they are very raw material, I suppose, do you think that the raw material that you have dealt with for the last eight or nine years has improved in physique, or are they inferior to what they were?—I cannot say; I do not think that there has come about any marked difference.

4540. You think there is no difference one way or the other?—I cannot say that I have noticed it, they are mostly very small in stature.

4541. That is in the North of London?—It is. This club is in Lisson Grove, and they are mostly very undeveloped and puny altogether when they come to me.

4542. Are they, most of them, Londoners?—They are all Londoners.

4543. Have you any idea as to whether they are descendants of people who have lived in London any number of generations?—I could not say the number of generations that they have lived in London.

4544. They would be confirmed Cockneys at any rate, would not they?—Yes.

4545. To what do you attribute their puniness?—To their antecedents as children entirely, and also to the surroundings in which they live.

4546. Would you say what you have to tell us upon that point?—Well, as children, of course, the trouble is that they get no rest at night to speak of—only a few hours. The children in my particular part are playing until twelve o'clock at night from about the age of four years.

4547. That is when their parents go to bed?—Yes; they never think of going earlier—the living rooms they have are so few, it is a very rare thing for any family to have more than one room.

4548. This neighbourhood is composed principally of single-roomed tenements?—Yes, with rare exceptions.

Mrs. Bagot.

4549. How many inhabitants are there in a single room?—It depends upon the size of the family.

4550. Is there any limit in the size of the families allowed in those tenements?—No; I should be sorry to pledge myself, because I do not work in the houses. I work entirely in the club.

4551. And the boys and girls will spend their time in the street until they go to bed?—Yes, the place is alive with them at night. I knew somebody who lived in these places for some years, and he said that he could not sleep at night, the noise was so great, particularly in summer, because many of them sleep in the street then.

4552. You mean they lie on the steps?—Yes. Their rooms are so hot, you know; they are overcrowded. This person said that the night was awful.

4553. They are badly fed too, I suppose?—The feeding is wretched.

4554. Is that from necessity: are the parents earning very poor wages, or what is the cause of it?—I think that a great many of them are poor. Few of them do much cooking; they get all their food at fried fish shops.

4555. Is that the staple food?—Eels are a tremendous thing with them; they get bad fried fish, things off barrows and ices.

4556. Everything that is polluted?—Much is unfresh and nasty.

4557. Have you made any investigation into the actual physical condition of the people; have you taken measurements?—No, but the change is so perfectly apparent that there is no need to do it.

4558. Do you not think that it would be interesting to have them, to show whether improvement is made in the course of a few months, or not, as the case may be?—I think it would. I have very few helpers and one has to do everything one's self.

4559. I suppose there would be room for fifty of these clubs in that place?—Yes, in that part of London.

4560. There is a large proportion that you cannot touch, I suppose. Do you know Mr. Douglas Eyre, who is a leading man in connection with clubs, and he said that a small part only was touched by the voluntary agencies?—Certainly, it is very small indeed, but the difficulty is that they are such loafers we have to deal with. They may come to my club and like it very much, and the next night they have gone somewhere else. It is the London disposition for change.

4561. Is that due to the parents shifting about?—Well if they make wages, a good many of them go to Music Halls.

4562. They want a change for their mind and body?—Yes.

4563. Do you consider any great moral change has been effected as the result of this club. Does it cultivate habits of application and materially assist to make the lads better citizens at the end of the course?—Certainly, there is not a doubt about it. They improve in their deportment and in their energy.

4564. Does it develop character as well as physique?—Yes. Their whole character is quite changed.

4565. And do they become self-respecting?—Absolutely, and the language improves in the club. I can only speak of the club itself. There is no such thing as bad language in the club. The members check it themselves.

4566. When these juvenile boxers get outside, does not it lead them to be rather dangerous?—No, they are less dangerous than before. They would not care to fight unless they found a man who could defend himself.

4567. It inspires them with a certain amount of chivalry then?—Yes.

4568. Do you take any trouble to keep in touch with these people, or do they report themselves?—I do. I have known a lot of them for years.

4569. Do many of them enlist?—Yes. That is one of the things I have noticed most, that as they improve the men have gone into the army when they have lost employment.

4570. It is not their first idea?—No. It is on the loss of employment they turn to the army. One reason of that is very clear, as far as I can make out. In the army, what is a great terror to the recruit is the gymnastic training—they are frightened of it; when they have had a certain amount of training in our Club they do not fear it at all. We always find that they pass the test quite easily.

4571. A great many of the idlers who go to the recruiting sergeant, would shrink from any physical training, I suppose?—They would. I do not believe that these men would go into the army if they did not like the idea of it. I think a London boy is always sharp and considers before doing anything.

4572. You mean he looks before he leaps?—I am sure of it.

4573. Unless he is led to it through sheer desperation?—Yes. But I have known men leave very good situations to go into the army.

4574. Do you think that the improved conditions of military service are beginning to tell upon the military instincts of this class?—I do not think that they realise that the conditions have improved. I have noticed men going into the army.

4575. The children are not from parents who live by casual labour?—Some are. I have a great many of the lower labouring class, belonging to the boxing element entirely.

4576. They may be the children of casual labourers?—Some may be. The better element, the gymnastic element, belongs to the respectable working class, and they live under quite different conditions.

4577. Do they object to associate with the rougher class?—No, that is very striking. You can see very little of that kind of thing. But we bring them up with the idea that they are to improve their fellows, and that has been a great idea throughout, and these boys encourage that sort of thing. I only started with the rougher element, and I have always stuck to it, that they must form a part of the club.

4579. (*Colonel Fox.*) You say that these ragamuffins are afraid of the ordeal in the way of gymnastics in the army?—So I am told.

4580. You consider that your gymnastics give them more confidence in going up for enlistment?—Yes, I do.

4581. Of course, it is quite new to me that these boys are afraid of the terrible ordeal of gymnastic training?—Yes, they do not like the idea of it very much.

4582. Because it is very popular to-day at the depôt, and they prefer it to any kind of drill?—They used to fear it, there is no doubt of that.

4583. And these gymnastic exercises take out of their minds the fear of the ordeal they imagine they have to go through?—That is so.

4584. (*Chairman.*) Do you know something of the Church Army Labour Homes?—Yes, I do, one particularly for youths.

4585. Is that in the same part of London?—In Notting Hill.

4586. On what system do they deal with lads and young people there?—On the gymnastic system.

4587. They are supposed, are they not, to get hold of boys that have left school?—The boys they get hold of are chiefly first offenders and vagrants, and destitute boys of the very lowest class.

4588. Have you seen their system in operation?—Oh, yes. I know the labour they do is very monotonous. It is principally wood chopping and laundry work. Their life is very monotonous, so I suggested a gymnasium and started it, and got a little help outside, and I have got as an instructor one of the leading members of my club as a volunteer, and he has instructed them ever since it began.

4589. I suppose physically those boys are even worse than the material you handle in your club?—Physically I do not think they are very much inferior, but as regards mental dullness and independence of manner, and certainly expression of faces, they are very inferior. I notice a great difference.

4590. Are they what you call defective mentally to any extent?—On the whole they are. I should call many almost mentally deficient. That is the reason of their want of success in life.

4591. Have you formed any opinion as to what that depressed condition is due to? Is it hereditary causes, or what is it due to?—I do not know their antecedents sufficiently, and therefore I could not say.

4592. Do you think from what you know that alcohol has much to say to the depressed condition of the physique of these boys?—I have not any doubt about it.

4593. You would attribute it to that from what you have seen?—I should like to say a word about that. I have not the slightest doubt about it. That really is the chief cause. When I mentioned food I did not mention drink, but I am quite sure that they are affected by that. Throughout childhood they are subject to its influence. The whole atmosphere reeks of drink. Drink makes them very deficient in physique, and that is where the gymnastic exercises tell more than anything.

4594. You mean in diminishing the taste for drink?—Yes, the taste for drink, because it is impossible for a man to be a good gymnast and athlete if he drinks, and they know it. It is an obstacle to attaining proficiency in the gymnasium, and that is one reason that I am enthusiastic about gymnastic training.

4595. How long does it take to diminish the taste for drink?—If they do gymnastics they drop it. If I lose a member it is simply because the member has taken to drink, not necessarily to any extent, but he finds that his muscles and powers for gymnastics are gone, and he disappears.

4596. Do many of those men who come under your influence fall out of the ranks and go to the bad—about what percentage?—A great many disappear. Whether they go to the bad one has to guess.

4597. In many cases the tendencies of early youth are too strong?—Yes, but on the whole we keep them in touch, and a good many of them we know. I do not think on the whole that many go to the bad, that is, youths belonging to the club. They cling to and occasionally visit the club, but it is impossible to keep them all right.

4598. And you are satisfied that those agencies are the best means by which superior influences can be brought to bear on the young between school age and adolescence?—Yes, certainly. One of the difficulties is in the older working boys, who have never done anything of the sort before; they shrink very much to expose their weakness and ignorance, and therefore hesitate to take to gymnastics. I find if they have done something of the sort as boys, which is, of course, rare, and if they have had any training in school they would take it up much more readily.

4599. You consider that there should be much more help given in the future towards bringing to bear a consecutive system of gymnastic training in schools, and you think it would introduce a great improvement?—It would be a great gain to us.

4600. The standing difficulty is the funds, I suppose, and the question of getting people who are interested in the work?—Entirely.

4601. And that is the obstacle to its expansion?—Yes, that is the whole obstacle. I cannot get anybody to work regularly, and never will.

4602. Would you suggest a State subvention—would that be useful if the club could be carried on, as an evening continuation school of a physical type, for instance?—Yes. They would take it up, and an enormous amount of what is given in evening continuation schools of the mental type might be co-operated with.

4603. They do introduce gymnastics, you know?—I believe they do.

4604. There is no reason why you should not have schools of gymnastics?—Not the least.

4605. Is there anything more you wish to say upon this point?—May I say a word about deportment, because I hold that those who are training are absolutely different in their ordinary deportment to the others; they throw out their chests naturally, and hold their heads up.

4606. Do they breathe through their noses?—We do not teach them that. We notice a great improvement in their manners. When they first arrive at the club they push past one, but very soon they never think of passing one without shaking hands or smiling, and they are quite different very soon. That improvement in manners, of course, lasts; and their appearance changes. You may say that it is not due necessarily to gymnastics, but I think that that change in their deportment improves their manners, and it must follow that it is from the gymnastics.

4607. (*Mr. Lindsell.*) The work which you carry on in your club is entirely gratuitous?—No.

4608. You make no sort of charge, do you?—Yes; every member pays a penny a week. Of course, that does not cover expenses, but it is good for their self-respect, and they appreciate it more for paying.

4609. Have you noticed in the course of your experience any improvement in the general health of the young men who come under your guidance?—I do not think I have noticed any special change. I very seldom hear of them being ill at all—very rarely.

4610. That would scarcely come about unless their health were fairly good?—I should hear about them if their health was bad, and then I should go round to visit them. But on the whole they do keep well; whether it is due to training I cannot say.

4611. In the course of the work among people of this class, do you make a practice of visiting the families of those who come to you?—No; I do not go unless a boy is ill, or has hurt himself, and then I go at once. I do not go regularly round to families—I have not time.

4612. Have you lady assistants to help you?—No, I have never had any help at all. One man volunteered to help, but he left directly he found that it was not entirely religious.

4613. (*Chairman.*) Was he a clergyman?—No, I do not remember where he sprung from, but I did all that I could to keep him, as he might have done excellent work.

4614–15. (*Mr. Lindsell.*) Have you any assistance from the municipal authorities?—The only thing we have is this; we pay rent for our room, it is a mission hall belonging to the parish.

4616. Have the municipal authorities established anything in the way of swimming baths?—I believe they have in Marylebone; there is a large bath, I believe, belonging to the municipality. They have a very large gymnasium. I do not know on what principle it is carried on.

4617. Do you know whether the establishments are free?—I do not know. I know that my men go in and compete in their competitions and win a good many of their medals.

4618. Would you attach great importance to the facilities for swimming on a large scale?—Yes, I think that swimming is very important in the summer. It is almost the only thing they can do in the athletic way in London. I have got a list of the trades that these people pursue, if you would like to have it. (*Handing in the same.*)

4619. (*Chairman.*) Those are the trades of the parents? No, the actual members. I have very few boys; they are all in work, they are all of working age.

4620. What is the average age?—About twenty.

4621. (*Dr. Tatham.*) Speaking generally, do the boys that come to you belong to any particular grade or occupation?—Half of them belong to the labour grade, and the other half more to shops; we have a few van-guards, and railwaymen and postmen; in fact every occupation. I cannot say anything specially. We have a fair number of costers. But that list is representative of all the trades.

4622. And I suppose a great many are of no trade at all?—We have generally a few of the unemployed, but not very many, because they cannot pay their penny. A well known member out of work is sometimes a little in arrear with his subscription.

4623. Do the unemployed, when they come to you, if they ever come to you, remain as long as those who follow any particular trade?—No, certainly not, they get tired of it.

4624. They are not satisfactory candidates?—No, they are not. Of course, we lose more owing to the early

Mrs. Bagot.

marriages of these boys, and another reason is the walking out. We lose a fearful number because they walk out at a very early age.

4625-6. What do you mean?—They walk out with their young ladies.

4627. And they neglect the club?—Yes.

4628. Are you aware that the age at which these young men marry is much later than it was some years ago?—I should think that it was not. Our average age is from twenty to twenty-three for marrying, that is not very young for them.

4629. That is very high?—Yes: I have to judge of this by my club chiefly; but I should say on the whole they represent the lower class and that is a fair age, from twenty to twenty-three. They marry on nothing, you know.

4630. (*Mr. Lindsell.*) Where is this club?—At Lisson Grove.

4631. Is that in Marylebone?—Yes.

4632. Have you any downward limit of age?—We should not have any under fifteen.

4633. And that is out of the school age?—Yes; we used to have school boys.

4634. Have you any in employment, if they are lucky enough to find employment?—Yes. We have not room in our quarters, which are limited, there is such a demand now, and we keep the small ones out. We used to take them, but now they are all working-men that we have.

4635. And the social grade spreads over a very large area, some earning very good wages, and some only casual workers?—Some are only casual workers, perhaps they get a day or two's work in the week.

4636. You do not find any difficulty in getting the different classes to amalgamate?—No, I have not allowed "class distinction" to operate—it is understood.

4637. (*Mr. Legge.*) I take it that this club is mainly composed of youths from the unskilled labour class rather than the skilled?—Yes, chiefly, I should say; there are some skilled.

4638. Most of them are not what one calls skilled, though some of them are?—Some of them are, some of them are postmen and van-men.

4639. Those are not skilled labourers in the sense that a fitter is, or a man in railway works?—No. This gives you an idea of the men who come under the training.

4640. At what age do you get them to come into the club Never before fifteen.

4641. So that when you get them they are a sort of survival of the fittest, probably, physically?—Yes.

4642. And therefore you cannot throw much light upon the problem which has shown itself as important to us, whether gymnastics as a matter of fact are of any use in developing a poorly nourished class.

4643. (*Chairman.*) But I understood you to say they were most poorly nourished?—Yes.

4644. (*Mr. Legge.*) If they come to you at fifteen and they are fit to go through gymnastics, they are a survival of the fittest of their class, are they not?—But a certain proportion do not take to gymnastics—they are not fit to do it.

4645. What food do you provide at the club?—None—we have not room.

4646. They cannot get, say, a basin of soup or a cup of coffee?—Well, that I hope to do for them in time if I enlarge the club.

4647. You could not run a stall in connection with it in the street outside?—If they need food there are so many shops all round that they can run out and get it.

4648. Is this an independent club, or is it associated with any other?—No, We are not associated with any others—we have been lately asked to join with the Athletic National Society.

4649. Do you know anything about the Twentieth Century League?—No, I do not.

4650. Have you had no communication with them?—No.

4651. But that was started two or three years ago with a very flourishing meeting at the Mansion House with all sorts of people on the platform, and its object is to harmonise all such efforts as yours, and to assist them?—Yes.

4652. And not to interfere with their independence, but to give them the weight and influence that is gained by combination?—I do not know of it.

4653. You know nothing at all about it?—No.

4654. (*Colonel Ondaw.*) Those boys are not exactly the very lowest Hooligan class.—Some of them are, many of the boxing element are pure Hooligans.

4655. I should have thought from that list that you have handed in that they are hardly the pure Hooligans?—We have some good specimens of Hooligans.

4656. How do you manage your instruction?—I pay an instructor a sum weekly. He is well paid; I cannot get an instructor under 6s. a night, and these boys very often turn into instructors themselves. I find they always turn their knowledge to account afterwards.

4657. Does the clergyman of the parish help you at all?—The clergyman looks in now and again, but up to quite lately we never used to see him.

4658. You have not assistants?—I have no assistant except the working-man secretary, who is invaluable.

4659. Do you find that those very young ones come in smoking much?—A great deal, but not much during practice—practically none.

4660. Have you noticed anything of the effects of smoking in youth?—No, I cannot say I have. I know the little tiny boys smoke, in fact everybody is smoking.

4661. Do they think that smoking affects their capabilities in gymnastic work?—I find on the whole the loafers who hang around are the ones who smoke, while those who do gymnastics smoke less.

4662. (*Mr. Struthers.*) Do you allow smoking in the club room?—To a certain extent.

4663. You do not forbid it?—I think there is a rule which forbids it during practice, but I am not quite certain.

4664. Those who are not taking part in the performance may smoke if they like?—Yes.

4665. I suppose your numbers vary from time to time?—Yes, about eighty is the average.

4666. From the very lowest to the fairly respectable, you have them, I suppose?—Yes, because we have a very wide division between the gymnastic element and the boxers. We encourage everybody to take up gymnastics, but the lower in calibre they are, the less they are inclined.

4667. What proportion of them would belong to the boxer class of society; would you say a quarter?—No.

4668. Would you say one-tenth?—Nearly half.

4669. You described the condition in which people in the district live; that is to say, the difficulty from living in one room and their getting insufficient sleep?—Yes.

4670. And their food is also very unsatisfactory?—Very unsatisfactory.

4671. The lower class which you have, do they live under those conditions of insufficient sleep and bad food?—The lower class do.

4672. Then you said that they improved?—Yes.

4673. Does that apply to the lower class also?—I think that it applies to the boxing lower class.

4674. Not the physique?—Perhaps it does to a little extent, but it is more marked in the gymnastic work, you actually see their physique develop.

4675. There is no change in the manner of living or the character of the food they get?—No.

4676. Most of those lads, apparently, are occupied all day in fairly heavy work?—Yes.

4677. How often is the place open?—Twice a week.

4678. And they come on evenings of their own choice?—It is only open on Tuesdays and Fridays. We could only get the room for those days.

4679. And they must come on those two days in the week, or not at all ?—Yes.

4680. After a long day's work do you find that there is any reluctance to come ?—In some cases there is. It does a little depend upon the work. But still there are a great many who are at very hard work and they are very keen upon it. I notice the ones working in a bad atmosphere, and in restricted surroundings find it a great relief to come and take these exercises. They seem to have a longing for it, but the ones running about, like railway men, are not so keen on the exercises—they are tired.

4681. The other people are not so tired, the people in bad atmosphere ?—No, those in restricted surroundings and bad atmosphere, I notice, are keen at gymnastics.

4682. Are they equally fit—they may have a great desire to do gymnastics and yet not be in a condition owing to the bad atmosphere they have been working in ?—I cannot say that I have noticed it.

4683. I suppose that most of them have been through denominational or Board Schools before they come to you ?—Yes.

4684. Of course, for a good many years in London schools there has been no gymnastics but drill and physical exercises, and that has been a systematic part of the course in every Board School. You know that ?—Yes.

4685. You have not noticed the effect of that on your members when they joined ?—I do not think that it has had a very marked result.

4686. There must be a little interval between the time they leave school, and the time when they come to you ?—That is quite true. Of course, when they do give up any exercises they quickly fall back. I notice it in the summer months.

4687. Do not you think club work is specially wanted in the younger lads, younger than you are speaking of, in the interval between their leaving school and getting such employment as most of them have ?—Yes, I think that it is needed.

4688. But you cannot get them ?—I do not say that I cannot get them. I do not try. I have no room. I must deal with the older ones first.

4689. You may have a greater difficulty in getting them at that age in that case ?—I think it would be so. Quite nine years ago I did take the small boys, chiefly, and I used not to have organised gymnastics but games for them.

4690. Can you give us any special reason for those boys being disinclined to come to you ? Is it their sense of relief from being at school ?—Yes.

4691. They want to feel that they are free from restraint for a period, is not that it ?—Yes.

4692. They want to have a sort of fling ?—Well, they won't stay long at anything.

4693. There is no religious association connected with this club ?—It is supposed to be under the church.

4694. But there is no service in connection with it ?—Well, they have got a new clergyman and he has been trying to get round the men to go.

4695. Do you think that that will have a good effect, the clergyman to induce them to go to the services ?—For the most part they do not like it; they are mostly rather irreligious, and they object to it. He has tried, I know, but it is very hard work. At least he could not get anything from them, and they laughed at every effort he made. I asked them to go to church, but I have not heard that they ever went.

4696. I was wondering whether, in your opinion, the mere fact of endeavouring to get them to church, or to put these views before them would not rather deter men from joining the club ?—I think it might.

4697. (*Colonel Fox.*) In connection with that remark you made as to the good effect upon the boys that these gymnastics have, does it give them a more manly spirit and habits of cleanliness; and if so, might not you look upon that as a step towards religion ?—Yes, I do; it improves their standards.

4698. In fact, it is the thin end of the wedge?—I am certain of it. I will say as far as the actual church work is concerned, that some of our older members who have grown up, and raised themselves, do belong to this church. The time I first get them is at their very lowest state.

4699. If you tried to rush them into what is commonly called religion, do you think it would have a very bad effect the change being too sudden for them ?—It would be too sudden for them certainly. *Mrs. Bagot.*

4700. As regards boxing, you were saying that instead of causing them to be quarrelsome, it rather makes them less pugnacious ?—Very much so.

4701. Because it inculcates a spirit of manliness and self-control—a manly spirit ?—Yes, the best boxer is the man who is most calm and collected under attack.

4702. As to those instructors, what are they. Are they military men or civilians ?—We had military men to start with, and now we have civilians who teach us gymnastics under the German gymnastic system. I believe it is more elastic than the army system, and they like it better. There is more variety in it, and we have to humour our men, and have constant change for them.

4703. Was he an old-fashioned drill sergeant, or a gymnastic instructor, the man you got from the army ?—One was a gymnastic instructor. I have always been in favour of gymnastic instructors.

4704. Because I must tell you that they vary very much, the modern gymnastic instructor would have given them very great variety; the older instructor would have been rather monotonous in his training ?—I tried to get a drill sergeant for the young ones, and that is what we saw; they found drilling irksome.

4705. The old-fashion sergeant with Peninsular ideas does not go down with the boys ?—No, he does not.

4706. We have heard from a witness that some of the older boys become, eventually, instructors themselves ?—Yes. I have many instances of this.

4707. Do not you think if we had some kind of central school in London, where these young men with a natural aptitude for training or athleticism could go and be properly trained at a very small fee that it would have a very good effect amongst the young men, not only in encouraging the promising ones to become instructors, but to get them at a very much lower charge ?—I do, indeed.

4708. You think that is badly wanted ?—Yes. It is an absurd price to have to pay 6s. a night for an instructor. You ought to get them for much less.

4709. Many of your young men properly trained could do the work at a very low charge. Many of them would be glad to take 1s. per night ?—Why, certainly. It would mean a lot to them in addition to their work.

4710. I forget what the average age is of your young men ?—From sixteen to twenty-two.

4711. You do not get the messenger boys or telegraph boys ?—A few telegraph boys.

4712. They are generally working-men. They are working-men who get short jobs. Do you think they come to your club to improve their physique, or simply for the sake of amusement ?—I think, on the whole, amusement is their idea. I have known some go absolutely to improve their physique. For instance, I had one man who had tried to get into the Police Force, and he was two inches too narrow in the chest, and he worked for a month until he got the right size. Whether he was accepted or not I have not heard, but he certainly broadened out tremendously.

4713. Have you thought that the habit of drink amongst those young men is caused by the natural habit of loafing, especially about the public houses ?—Yes, I think that is so.

4714. They are badly fed, and they have a craving for something ?—They want a stimulant.

4715. To buck them up as they call it ?—Yes.

4716. Then you and gymnastics help to put them into a more healthy condition ?—Of course.

4717. And they rather aid to diminish the wear and tear, and they get to know that drink is bad for them ?—Certainly, they find out what makes them strong. The thing is to make them stronger, and then they do not rely upon the stimulant for their weary bodies and nerves.

4718. They want food rather than drink ?—They do.

4719. (*Chairman.*) You know something of rural lads. Are you of opinion that the physique of lads of the rural districts of this age is very superior to that of the town lads ?—Yes.

Mrs. Bagot.

4720. In every respect?—Yes, some are short, but all are broader.

4721. In your part is the child of a big race to start with?—On the whole I think it is.

4722. With regard to the question of central associations, would you have any objections to being co-ordinated with some organisation?—Not in the least if they would let us carry out our own methods.

4723. You have no jealousy about them?—No, but we have never been sought out.

4724. If they took the matter in hand with the view to promoting local clubs and bringing them up to some standard of excellence, would you be in favour of them?—Yes, if they were not too rigid in their methods.

4725. And that would attract public sympathy to them and make it easier perhaps to get funds?—Yes.

4726. (*Mr. Struthers.*) I suppose the value of these clubs depends very largely upon the attendance being voluntary?—Entirely.

4727. It would not do; it would be no use, in fact, to try to compel attendance?—It would absolutely fail; that is the whole key to our success, that there is no compulsion.

Mr. Ralph F. Neville, K.C., called; and Examined.

Mr. Neville.

4728. (*Chairman.*) Can you tell us what aspect of physical degeneration first attracted your attention to the subject?—I practised what they call locally in Liverpool for eight years, and when I went down I saw a great contrast between the operatives from manufacturing districts and men and women coming from agricultural districts; it was very marked. I was startled by the appearance of the former, and it was some time before I came across the true Lancashire race. The agricultural parts of the county of Lancashire certainly produce as fine a lot of men as any county in England, and the contrast between them and the men of the manufacturing districts was most startling.

4729. From your observation would you say that the contrast is more startling than it was ten or twenty years ago?—I could not say that. I have seen less of it in the last ten or twenty years.

4730. What do you take then to be the principal causes of this great physical difference that you have observed?—I should think that the main cause was the difference in the life. In the one case the people spend the most of their time in the mills in a damp atmosphere and under conditions probably not very healthy, although they are quite as healthy as they possibly can be made, and they come to those mills from cottages which are situated in overcrowded districts where the streets are too close together. Another reason is the difficulty of the working classes, even those who are not poor people in the ordinary sense, getting milk for the children. It may not be true to-day, but at the time that I knew more about it the children got no milk at all.

4731. Fresh air and proper food are the desiderata, you think?—Yes.

4732. You know a gentleman of the name of Mr. Rees of Salford?—I have not met him.

4733. He was a witness here, and he laid great stress on the pollution of the atmosphere from noxious vapours, and he believed that had more to do in the way of stopping the development of the physique of the poorer classes than anything else. Have you heard that opinion currently stated at all?—No, I do not think so. The chief noxious vapours in that part of the world are the products of combustion, sulphur and carbon.

4734. He stated that the manufacturers of Manchester and Salford were entirely regardless of their obligations under the law not to emit noxious vapours from their factories, and that the local authorities winked at it: they now and again prosecuted, but the fine was paid and the offence was repeated, and so on, the fine being so very small; and he said that it was a habitual disregard of the provisions of the law which might not in themselves be insufficiently rigorous, but he regarded the poor condition of the urban classes in Lancashire as largely due to this cause. What would you say?—It may be so, of course, but I should say from ordinary observation that the smoke in Manchester is a good deal less than in London, and in the districts around Manchester less again, because to a certain extent they are spread about.

4735. Is not factory smoke much worse than household smoke?—I cannot say.

4736. There are a great many noxious ingredients in the factory smoke, are there not?—It is quite possible, but I do not know enough to give you an answer to be of any value.

4737. What, from the physical point of view, is the most desirable condition for the great bulk of the people?—The most desirable condition is what we cannot get for them, and that is open air to work in, but if we cannot do that we ought to try to get them open air when they are not at work as long as possible.

4738. How do you think that those adverse conditions can be best met?—The idea I am in favour of, to give an example, is this. I am associated with my coadjutors in seeing if it is not possible to organise what is undoubtedly progressing, and that is a decentralisation of manufactures. Several trades have shown a marked tendency to leave London in the last few years, notably the printing and the boot trades.

4739. You think that there are conditions favourable to the redistribution of the industrial toiler?—I think so. Of course, the position of manufacturers in great centres in London makes it difficult if they want to enlarge their works, and they would have to do so at very great cost. And the housing of their workpeople is a matter of constant difficulty, and it seems to me that the conditions which originally prevailed in great centres have been so modified that their true interests would be to get out of those centres.

4740. Are these manufacturers awake to their true interests: are they doing anything in that direction?—The printing trade has gone out to a very large extent. The boot trade has gone out to a very considerable extent, and there has been a distinct movement into the country from London during the last few years, to say nothing of large towns such as Birmingham and Liverpool, of which, notably, Mr. Cadbury and the Messrs. Lever are prominent examples.

4741. But that does not represent a general tendency?—No, there is no tendency outside our movement, as far as I know, to have an organised exodus. The instances I have referred to are of individual manufacturers who have put forth efforts of their own, and in their own interests have gone outside.

4742. Do you think that any amendment of the law of rating is necessary to encourage this movement. It has been suggested that if the sites instead of the buildings were rated that that would necessarily lead to the removing out of the great centres of population of industrial establishments from their midst?—I have not thought of that, but it is obvious that it would stimulate the movement to a very great extent, because one of the matters which really would induce manufacturers to go into the country is the low rates which would be paid. That is, of course, assuming the rating to be on the same principle as it is at present. You get lower rates because the expense of rural districts would be small, and they would not have to raise so much to meet their expenses.

4743. Will you tell us how you think a scheme of the sort you have in view should be organised?—I think you know, for the last year or two, I have been interested in the Garden City Association, and am now chairman of the first Garden City, Limited, which is a company promoted for the purpose of endeavouring to establish industrial settlements in the country. We have now obtained a site, and we hope to be able to get a population. We have had a good many applications at the present time, although we are not ready to part with our land at present, but we shall be able to get a considerable number when we do start.

4744. (*Chairman.*) Are you going to deal with the manufacturer directly, are you going to eliminate the middle-

man ?—We are going to act as a Land Development Company would do. Not to attempt to build, but leave that to private enterprise, and let the land directly to the manufacturer. It may be that the middleman may creep in, that we cannot help. As far as I can see, we cannot impose any condition of that sort, but any manufacturers that want to move we desire to attract.

4745. If the middleman came in he might reproduce some of the evils you are trying to avoid ?—No, I think not. The main thing is to put an agricultural belt round the town and to limit the town to a certain size. We get our site: a certain proportion, a due proportion to build upon, but beyond that there will be no buildings at all. If you want to expand you must go over the zone and start away from the town. We think by that means the vitiation of the air will be rendered impossible.

4746. How will you prevent more than a greater number being on that area ?—We must rely upon the general law for that. We shall let our land for cottages and stipulate how they are to be built, and we shall let land for factories on similar terms. So that as far as the buildings are concerned we can prevent an increase in the number of the buildings. But with regard to the overcrowding of those buildings we must look to the general law.

4747. Until you have organised a community of your own, you will not be able to apply those rules. You have taken a place near Hitchin, have you not ?—Yes, we are in that rural sanitary district.

4748. In the course of time it will become a municipality under your own superintendence and supervision, I suppose ?—Our point is that we shall be always the owners of the land, and, therefore, we can prevent building except in those parts which are set out for building, and we can prevent alteration of the buildings so as to increase the density of the population in that sense.

4749. You will not be able to make bye-laws?—But we can get covenants. We shall lease for 99 or 999 years, and the lease will be subject to restrictive covenants, and they will last as long as the leases will last.

4750. Will that be practicable?—It is done over and over again in the case of private development of estates for gain; of course, it is very important with a residential estate that you should have plenty of open space.

4751. But, in applying that to the poorer class, is it so very easy?—You do not take the covenants from the poor people, but from people who are in possession of land, and the remedy is by injunction. It is not a question of damages, but to prevent the land being applied inconsistently with the covenants..

4752. You think that can be done ?—I can speak of that as a lawyer, and I do not think there is any difficulty about that at all.

4753. You would leave to those living within the zone, land for tillage attached to every house if practicable ?—Yes, our notion is that. Of course, it is not absolutely fixed in the case of the cottages, but it is somewhere from six to eight cottages to the acre.

4754. Within the zone ?—Yes, so that each cottage has its ground. The only thing to consider there is, if we wanted to have a town of considerable population we must not struggle for too much or we lose the facilities of transit and that kind of thing. But either by way of allotments within immediate reach of the cottages or gardens, we mean them all to have a little bit of land sufficient to interest them.

4755. What is the area of this proposed scheme ?—3800 acres—a little over—according to our plan the buildings cover about 800 acres.

4756. Perhaps it would be useful to let us know what are the essential features of the scheme and the advantages you expect to flow from its adoption ?—The essential features are these (1) The acquirement of sites for industrial settlements at agricultural prices: (2) The scientific planning of the sites by experts: (3) The concerted migration of population: (4) The limitation of the area and population of the settlements.

4757. Can you tell me what the "concerted migration of population" means ?—Only this; that we do the concerting. We get applications and enquiries from manufacturers and we act as the organising company, and we provide sidings and lay out the land or part of the land for factory sites and offer them to any manufacturers. We think that we can attract them better than those who have nothing to offer except simply bare fields. We relieve the prospective buyers from a good many expenses. I have given you the fourth as to limitation of the area and population of the settlements. Now we come to No. 5, the maintenance of a belt of agricultural land around them and (6) application of the increments in the value of the land for the benefit of the population. *Mr. Neville.*

4758. Is that after you have taken the five per cent. ?—Yes, there is a limited dividend of five per cent. Then we come to some of the advantages which may be expected to accrue from industrial settlements so organised. 1. Conditions of life for the artisan and townsman, consistent with sound health for himself, his wife and his children. 2. Cheapness, efficiency and sightliness resulting from the scientific laying out of the town as a whole from the outset. In connection with this head may be grouped: (*a*) the supply of light, water, power and heat; (*b*) facility of transit and communication; (*c*) disposal of sewage. 3. The reduction of rates, by the application of the increment in the value of the lands, so far as it can be secured for the benefit of the inhabitants. 4. Bringing a market to the farmers of the agricultural land, and incidentally, (*a*) increasing the amount of labour employed upon the land by the extension of small culture. May I pause there to say that I attach an enormous deal of importance to that. It seems to me that this is the only scheme that I have come across, if it were carried out, which does offer a prospect of largely increasing the amount of labour employed upon the land. Of course, we all know the enormous amount of small produce imported into the country at the present time and that is largely in consequence of the railway rates, the cost of handling and the difficulty of getting the produce to the market. If you could distribute the population you would very largely increase small culture, and that means more hands on the land than there are at present. (*b*) Affording the agricultural labourer the advantages of town life.

4759. Have you already got in touch with any manufacturers who are likely to take up this land ?—We have got one or two who will certainly go.

4760. Will you be in a position to arrange for their removal ?—In a few months. We have got our plans out.

4761. For laying out this land ?—Yes the site, and we are now in negotiation with the railway to enable each manufacturer to get a siding to his own works.

4762. These three thousand acres are on the line of the Great Northern ?—The Great Northern runs right through them.

4763. So that you have a siding on either side ?—Yes.

4764. Are they disposed to assist you ?—Very much. They have taken it up wonderfully and have given us every possible assistance and support.

4765. Have you seen Lord Allerton ?—I have not seen him but they sent several of the directors and a manager to visit this place, and they have gone out of their way to encourage and assist us.

4766. Is it from London you invite the manufacturer ?—From anywhere. But London is the place where the tendency to emigrate is at work.

4767. What agency are you employing to get hold of them ?—Chiefly through personal canvassing. We are hardly in a position to advertise until we are in a position to close with the manufacturer. What we felt was that a single mistake at the outset, such as the letting a piece of land in the wrong place, might injure immensely our whole scheme, and we have determined to have the whole thing planned out in the first instance.

4768. Have you opened a bureau of information ?—We have not worked it out yet. Of course, we have got things in readiness and we shall have to advertise. The Press have been very good to us and have given us hundreds of pounds of advertisement free.

4769. Of course, you look to this garden city scheme to deal effectually with the problem of over-crowding ?—Yes, the important thing is to get on the right track, and if you do that to trust to time to reap the full advantage from it.

Mr. Neville.

4770. But, I think, if you do not mind going on, it would be as well to give us the heads of your memorandum because it is interesting and will be useful?—May I proceed with the problem of over-crowding?

4771. Yes.—(*a*) The provision of a minimum space, say one tenth an acre for each family; (*b*) covenants against over-crowding; (*c*) provision of an agricultural belt around the town; (*d*) Reasonable measures to prevent smoke—Mond gas to generate electricity, etc.; (*e*) in a town, surrounded by its own agricultural estate on which intensive culture would prevail, fresh fruit, vegetables and milk would be cheap and abundant.

4772. To whom do you propose to let this agricultural land in this zone. Would each manufacturer have a farm?—No. The farmers would stop, and I do not think they will go except by their being driven out by land being wanted for building. We have one farm falling in in September, and we propose to cut that up into small holdings, if possible. We have had several applications for it.

4773. What size of holdings would you have?—We have not worked it out yet.

4774. What character of land is it. Is it favourable to "petite culture"?—I am not much of an agriculturalist, but it is very good land. We had Rider Haggard down there the other day and he came down a great sceptic, but went away converted, and he said we had made an admirable bargain and it was excellent land. We saw that the conditions of working life would be improved because the factories or workshops would occupy much larger sites in proportion to the number of workers than is at all usual in or near our crowded cities. There seems no difference of opinion that where land is cheap it is in the interest of the manufacturer to have one storied buildings, and that the tall factory is almost always the result of the dearness of the land. Then each factory or workshop would be secured against interference with light and air by neighbouring factories, and, consequently, the operatives being housed near their work would save time and money now spent in going to and from work, and would not, during a considerable part of the day, breathe the vitiated air of a railway carriage, and they could spend the time otherwise spent in travel in their gardens or allotments, and thus add to their food supplies.

4775. You think that this scheme might be made the model for State enterprise?—That is our idea—you could not go on indefinitely with this matter by private enterprise, it would be impossible; first of all, because you would not get the sites at a reasonable price again. We have had enormous difficulty ourselves in this case—but, the thing started, the idea taking on, the price would be prohibitive—in other words, you want the Lands Clauses Consolidation Act to help you ultimately if this is to be as big a thing as we hope that it will be.

4776. Do you not think it would be a risk to embark upon it upon a large scale?—What I propose would not involve any risk on the part of the State, it would be simply the legalisation of the action of private companies.

4777. You would not go further than that?—That is all I propose. It will be worked in that way much as the liquor traffic is worked in Norway at the present time.

4778. You only want the State for benevolent assistance?—Yes, for benevolent assistance.

4779. (*Dr. Tatham.*) Does the project of the Garden City Association bear any likeness at all to Dr. Richardson's proposal for "The City of Health"?—Well, I do not know that it does, because in his case it was chiefly architectural. It was from the point of view of men going to build a town—our point of view is that of the people who are going to lay out a town. We shall not be masters of the building of the town to the extent that you should be in order to carry out Dr. Richardson's ideas—I should like to do it, but you would want many millions of capital, and it would be a very much bigger undertaking.

4780. You spoke just now of your wish to rely upon the general law to prevent the overcrowding of houses in the area and also of people in the houses. Do you think that the general law is at present sufficiently strong to prevent this, supposing it were properly carried out. I refer to the Public Health and Housing Acts?—As it is carried out, certainly not, but if it is not it ought to be. That is a matter which I think the general law ought to take in hand rather than the individual land owner. It seems to me to be very inconvenient for the land owner to attempt to regulate the number of inhabitants—that is a matter rather for the local authority.

4781. If the locality does not do it?—The necessary limitations are applicabe to the whole country. Beyond a certain point overcrowding ought not to be allowed.

4782. The law is strong enough if the authorities would put it in force, is it not?—Speaking generally one may say that it is not put in force, and that overcrowding undoubtedly under the eyes of the law, does take place, and in the country almost as much as in the towns.

4783. Do you think the immigration of aliens is damaging the population in our great towns?—I think it is terribly in the sense that it is reducing the wages in certain trades below the possibility of reasonable existence.

4784. Is that specially the case in Liverpool?—I do not think it is felt anywhere as it is in the east of London—that is my impression. I do not know that in Liverpool the slop trades are carried on to anything like the same extent as they are in London. I may be wrong, but my connection with Liverpool was some years ago and I am not in touch with the condition of the town, but I do not think that the alien element had much to do with it there. The Irish are there in large numbers, but you do not mean them?

4785. No. But in respect of the East End of London you have no doubt that it is having a very bad effect?—I have not the smallest doubt that it is a terrible thing.

4786. (*Mr. Lindsell.*) As I understand, you have 3,800 acres?—Yes.

4787. In the parishes of Ridgeworth, Baldock, Norton, and Rodwell?—I think so. I only mean that you have given the parishes, but whether you have given them all or not I do not know.

4788. A great deal of that soil, is, as perhaps you know, not of very high agricultural value?—I think that is very likely. I know that the return is small: that the rents are low.

4789. If it is not suitable for agriculture at all, it is not suitable for market gardening particularly?—Well, I am rather surprised to hear you say that because the reports are rather to the contrary.

4790. Do you know the district?—I do not know that part of the country nearer than Cambridge.

4791. The experience of the Bedfordshire agriculturists on this question of petty culture on growing for the market, is that it depends almost entirely upon the facilities offered by the soil itself, and they say that you can only do it on a light loamy soil which is further down the Great Northern line; and that this is almost impracticable land, and only suitable for corn growing, and that sort of thing. But your idea is that this land would be entirely for the needs of the local market?—I should not wish to influence it, but that would be the natural outcome, that the near market would afford a more profitable means of selling your produce than the more distant one. But our idea is not to restrict the ordinary way of farming, but let the farmer farm as he pleases, and so far as he can he will supply the local market.

4792. But your idea is to get small culture?—We are proposing to cut one farm up, not because we have this in view, but because the man wants to leave part of the farm, and we thought it a good plan to experiment with, stimulating small culture.

4793. You have 800 acres for building entirely?—That is about right.

4794. And the rest is the agricultural zone?—Yes.

4795. And that will have to be a sort of central position?—Yes, we have got a fair belt all round; we cannot get it as we like.

4796. On that part you propose to put the factories within this particular area—the outer part?—Yes, on one side, with the cottages and residential places on the other side.

4797. On these 800 acres ?—Yes.

4798. According to your plan that is about forty persons to the acre ?—Yes. I think that it is.

4799. It would be at least forty persons to the acre ?—Yes.

4800. But if the residential houses were built there under your scheme, you would have to give larger sites. You could not use the 800 acres in that way ?—No, a man wanted fifteen acres of land in connection with his house, we should not mind his going outside if he put up no more buildings.

4801. You would allow residential buildings to be put up all over the 3800 acres ?—Not if it was in small plots, not if it turned out that they wanted them for small cottages. In the case of the fifteen acres with the house we should not mind that because that would leave it substantially open.

4802. Are these market gardeners to live on the 800 acres ?—No. They are to live outside. We have had several applications I may say from people, and one man asked for ten acres and another for five acres for small culture.

4803. Are they local men ?—I think they are from Bedford. I am not quite sure. Of course, I ought to say the details of the thing I do not work myself. But I will give you the best information I can.

4804. How about the factories. How will you grapple with the question of smoke. Is the idea to use electrical power ?—Yes. Electrical power.

4805. Then you must generate that ?—Yes.

4806. You want large generating stations and you have water power there ?—We have no water power there.

4807. Have you got a good water supply ?—Yes Very good. We are advised by Mr. Straughan, the eminent water engineer, on the matter of water supply.

4808. Is it the idea that the company will get the administration of this into their own hands; there will be a District Council, I suppose ?—We are subject to the local authorities. We cannot help ourselves. The idea was, and is, that when the town is big enough, if it likes to take the property, it must be on the terms that it cannot be applied otherwise than in accordance with the original idea, a limited population and the agricultural belt. Those are the two vital points.

4809. And if this can be satisfactorily worked out you have taken a considerable step towards solving the problem of overcrowding in towns ?—That is what we feel.

4810. (*Chairman.*) Can you work on a scale sufficient to solve that problem ?—I think so. It cannot be done in a minute, but the advantages in such a town as ours if we are fairly successful in its management will be seen to be very great.

4811. It will prove a gigantic advertisement to the scheme you think ?— We feel that is all that we can do, but in that I think we shall succeed if we go on as we are doing.

4812. (*Mr. Lindsell.*) The ground difficulty is if the land is not suited to small holdings ?—Well, then, to that extent it will fail, you will not increase the amount of labour maintained by that agricultural land; but it will not prevent the industrial labourer getting conditions of life infinitely better than he can get in a big town.

4813. It would be better if the agricultural land were better suited to small culture ?—I would rather that both parts of the scheme succeeded, but, of course, I hope you have got a too unfavourable opinion of the character of the land.

4814. I know that part of the country very well. A large manufacturer, I suppose, would employ from about 200 hands very likely ?—Yes, I suppose so, but that means 1,000 people.

4815. So that there will have to be some limit not merely to the houses but the number of manufacturers allowed on the ground ?—Yes, but if the settlements extended in groups that difficulty would be superseded, because you could transfer labour without any difficulty.

4816. If this is a success the price of land will at once go up ?—That is a difficulty, but still there is a pretty considerable margin.

4817. But only the bad original land you will be able to get. The success seems more to be in getting pretty good land to supply yourself with all your wants within the ringed fence ?—It would be much better, but that does not affect to any vital extent the benefit to the artisan of living in the country and having the benefit of country air close to home. You see, take the man employed in an industry in London, he is at work for eight hours in the workshop and he has to get out from and back to his home. His time is taken up in work and getting to and from his work.

4818. The advantage of the better air in the suburbs is considerably discounted by the going to and fro, you think ?—Yes. In our garden city he gets from work to his allotment or garden to till it in a very few minutes daily. The extent to which a little land attracts is very wonderful. Where there are gardens and small allotments even the agricultural labourer who is at work during the day will work on a Sunday and in the evenings on his own allotment.

4819. Oh yes, where you could get the regular garden land you can get twenty applicants for every bit of ground you have ?—I suppose the success of petty culture in France depends very little upon the original character of the soil.

4820. But the French small cultivator lives in a very much more abstemious way than our labourer does ?—I mean intensive culture is round Paris, and they have three or four crops in the year, and there the soil is absolutely artificial, and they do not depend upon the natural soil at all.

4821. (*Mr. Legge.*) To follow up a remark of the Chairman and to try to get some idea of the size of this experiment, I suppose you have got some idea of the population that you will be ultimately able to house on this estate ?—25,000 to 30,000 people was the original idea, 6,000 acres and 32,000 inhabitants. We could not get the acres and we had to cut our cloth accordingly, and we shall reduce the number of population in consequence.

4822. Can you think, at this moment, of any manufacturing town of any importance with about that population. Do you know Luton at all ?—Only by passing it in the train.

4823. I passed through it and I thought perhaps that would be 25,000 or 30,000 ?—Of course, you know, abroad manufacture is enormously more widely distributed than it is with us, and there my impression is that you can find plenty of towns of 10,000, 20,000, and 30,000 inhabitants where they have manufactures.

4824. (*Chairman.*) But not under rigorous laws. Supposing the population of this place has increased up to your limit, and one of the manufacturers wants to increase his plant and extend his industrial establishment to an extent that would probably mean the employment of another 200 or 300, he runs his head against your ring fence, does he not ?—I do not think that he does. We only put him outside, he draws his labour from much greater distances at the present time.

4825. Your idea is that he would have to get the labour outside the belt ?—Yes.

4826. Would you facilitate his labour coming in by trams ?—If you have a complete scheme of those towns grouped in connection with one another, the main thing would be to facilitate the communication so as to turn them into one community for social and practical purposes.

4827. That is looking very far ahead ?—We must make a start.

4828. (*Mr. Legge.*) You think that all that is in favour of your scheme, that no man could build up on one spot a huge concern, he must place it outside ?—I rather thought the Chairman's remark was addressed to this, that, although he might have room to increase his factory, he would not have the accommodation for his workpeople, in case you were full up he would have to go outside.

4829. (*Chairman.*) I thought it might operate against any manufacturer who looks forward to increase his business coming to you, for the reason that he would have to go outside if he reached the limit of the hands permitted ?—I do not think we shall have to do that. It is conceivable

Mr. Neville.

when you get up to 25,000, to the last few thousands of population, that that might be so, but I do not think that it is a difficulty at present.

4830. (*Mr. Legge.*) It is, we see, a very considerable experiment, and different from those experiments that you spoke of, Cadbury and the Sunlight people ?—They are instances of a single manufacturer paying all the expenses himself.

4831. You will be anxious to bring your influence on the Government itself to encourage the movement in taking steps in laying out two new big towns which they are to construct, such as that place up on the Forth ?—Quite, we have been in communication on that subject, and are doing all that we can to induce those who are responsible to look ahead and consider what the place will be hereafter.

4832. I am not quite clear what is meant by the call for Government assistance on the lines of your memorandum. Do you mean when you have got a body of individuals associated under the Board of Trade they should get powers to obtain land compulsorily ?—That is what I mean. The idea in my head is the spirit trade in Norway. There you have bodies of individuals who associate themselves in a company, their dividend is limited, I think to the same rate 5 per cent. —I think it is 5 per cent.—thereupon they are granted the only license for the sale of spirits in the district which is allotted to them. I am not quite sure whether they are the natural divisions, each company is given its own area, and then they run the place in which the spirits are sold. My notion is the same, that companies like gas and water companies or any company dealing with a monopoly should have their proposals submitted to the Local Government Board or the Board of Trade or some authority, and if the point as to the dividend reserved and the scheme itself meets with approval then let them have the power to take land and carry it out. That was the idea, and that is what I mean.

4833. (*Colonel Onslow.*) I suppose that in this Garden City there will be a danger of monopoly. In the present case one of the causes of over-crowding and insanitary dwellings both in town and country is due in a great measure to one individual absorbing and getting hold of building after building, and then either he has not sufficient capital to repair, or the rack rental comes in and draws all the rent and puts nothing into buildings, is not that the case ?—Well, I should have thought that the small owner is, as a rule, a worse landlord than the large owner.

4834. Then you take provisions in your plan to prevent small holders because they might be leaseholders, of course ?—You see we all limiting the number of cottages to be built per acre. We are not very likely to attract the worst kind of cottage jerry builder, because he likes to get his fifty cottages to the acre, you know.

4835. Suppose a new railway line wanted to go through the property. Could not they go to Parliament and get compulsory powers to do so ?—No doubt they could if Parliament thought fit to give them. Supposing we were starting, we should have some consideration from a committee. Of course, we should not mind—another line would not do any harm unless it were so made as to be destructive to our idea.

4836. To go back to the garden city. The only danger is that the older order of things might be resorted to; although the cottages might be far apart, they might be allowed to go to rack and ruin. just as we see country cottages with no other cottages near them, which are in a shocking state entirely owing to the neglect of the owner of them, not necessarily the landlord ?—This is a matter that really must be left to the State.

4837. Exactly. Are the general laws sufficiently strong to deal with that ?—I do not know.

4838. And if strong, are they enforced ?—They are not put in force.

4839. (*Mr. Struthers.*) Do you propose that the company should get the land compulsorily ?—In the future.

4840. And what about the price that it pays for the land it acquires compulsorily. Would that be fixed by arbitration or by bargaining ?—The Act would incorporate the Lands Clauses Consolidation Act just as land would be acquired by a railway company. I do not propose any different conditions for the garden city. It is the value of the land plus 10 per cent.

4841. Who would value it ?—The value would be settled either by a jury or by arbitrators who would assess the damage and add 10 per cent. for compulsory purchases.

4842. But the arbitrators or jury have no terms put upon them as to how to value the land ?—No. You call in surveyors and valuers and they give evidence on one side and the other as to the value of the land, and the jury make up their mind on the evidence.

4843. But in your own particular case you propose to make this building of the garden city compulsory, and the question of the value of the land may depend upon what the arbitrators under the Lands Clauses Consolidation Act may think fit to take into account in fixing the amount, and in addition to the 10 per cent. they might take in the prospective value of its going to be used for this purpose ?—Oh no. Supposing that land was being valued in the ordinary course the evidence of value would be the prospective value of the land in the ordinary way, and not any increase of value by what the persons who were buying were going to do with it.

4844. But then, having bought the land at a certain price you propose to make suitable allotments which are to be leased ?—To be leased.

4845. Not sold ?—Not sold. We did at one time think of selling the freehold, but we are going to have building leases.

4846. Would there be feus ?—The Scotch term is not quite the same as ours, but it is a lease subject to certain covenants.

4847. (*Chairman.*) A Scotch feu is a perpetual lease with a comparatively small quit rent.

4848. (*Mr. Struthers.*) And the quit rent would be large or small ?—Yes.

4849. You naturally look for that on those buildings ?—Yes.

4850. And after paying 5 per cent. ?—There ought to be a considerable surplus if the scheme goes.

4851. What would be the destination of that surplus ?—We have taken wide powers in our articles—what would occur to me would be to spend it on recreation grounds and public halls and matters of that kind, which would be as much as possible for the benefit of all the population alike ; and, of course, the cheapening of gas and water and things of that kind.

4852. (*Chairman.*) You would not try the experiment elsewhere ?—I do not think that would be fair to the shareholders—we had to consider that.

4853. (*Mr. Struthers.*) You would follow the general analogy of Sweden and Norway where the profits of the sale are devoted to public baths beyond a fixed percentage? —Yes.

4854. When the agricultural belt is ultimately defined you would have it divided up into considerable holdings ? —We should not start with any fixed ideas. If we cannot use it for small holdings we must use it for large.

4855. But you must have some elementary notion as to the number, because you have a fixed number, and you want to limit the population ?—The limit of population is the limit rather of building. I mean to say, we do not mean to cover with bricks and mortar more than a certain portion of the holding. The rest is to be free from bricks and mortar.

4856. You mention 800 acres ?—I think I am right. We have got a plan mapped out, and I was told that they cover 800 acres, but I may not be perfectly accurate.

4857. Does that part which was reserved for building purposes, say 800 acres, come within the agricultural belt, supposing it got built upon ?—No, the homesteads are there.

4858. Supposing it was divided later on ?—Yes, that would be the idea : to keep a substantial belt of fairly good agricultural land.

4859. You expect your market gardeners to have their houses in the agricultural belt ?—That we should not do, if it amounted to the covering of any considerable area.

4860. They would have to take houses in the area ?—Yes, which they could well do.

4861. Or outside the belt altogether ?—Or else outside. One house in fifteen acres would not make much difference as far as the open air is concerned.

4862. As regards the suitability of the land for market gardening purposes, you have heard of the old dogma of the agricultural authorities, that given pure sand and proper manure you can raise anything ?—We have had that in our mind. I do not know much of agriculture myself, and my opinion is not of much value, but supposing our scheme were carried out, there is the town in the immediate neighbourhood and the manurial products of the town would have to be disposed of.

4863. (*Chairman.*) Do you know what the agricultural land is, is it good agricultural land or not ?—They are low rented. I cannot tell you.

4864. (*Mr. Struthers.*) The fundamental idea of the whole thing is to get the population to live under healthier conditions, I understand ?—That is it.

4865. Your reason for that is that you say the bad physique of the large towns is the result of the deprivation of fresh air ?—That is my opinion to a very great extent I say so for this reason. I know something of the children in the villages in the immediate proximity of London, and I know what rents their parents pay and how they spend their money, and I am quite sure that they are as badly fed as children in the east end of London, but there is an immense difference in their physique.

4866. You think that the distinguishing factor is the air ?—Yes ; I cannot trace it to anything else. It is suggested sometimes that it is the Board School curriculum or something of that kind, but the children in the country have the same Board School. The only difference is that when they turn out of their cottages they are turned out into the fresh air, and they spend a considerable part of their lives in certainly better air.

4867. There is a certain number of cubic feet and weight of air in the town as in the village streets ?—Yes, and the next best thing after the country is the gutter ; and one of my principal objections to the plans of improving the big towns is that they have big tenements, and children do not get into the gutter for the fresh air. They play on the staircases and under cover and they are worse off than the children in the tumble-down cottages in the country.

4868. That is your view—that there is this flow of fresh air, and you are speaking of the insufficiency of the air circulating through the lungs, so to speak ?—Has it not a double effect—they are less in the open air in the towns, and the London air is not so good as it is in the country, and the air in big towns is vitiated to a great extent, and the child does not get the same benefit from the air of the street as the child would do living in the open in the village road.

4869. But I thought that earlier on in your evidence you said that the smoke in the large towns did not make very much difference ?—I did not mean to say that. I think that smoke makes a very great deal of difference. But I do not think that the smoke in provincial towns, as far as I know it, is as bad as it is in London. It was a question of Manchester and Salford and comparison with London, and it was suggested, I fancy, that the air has something peculiar in it, and that it is more vitiated in Manchester than it is in London. I thought not.

4870. Supposing London had some means of entirely doing away with the smoke in the town, would it be as healthy to live in London as in the suburban village ?—It certainly would not. Wherever you have a great congestion in a small area you get a vitiated atmosphere. The atmosphere must be used to a certain extent by all those who breathe it, just as you might vitiate the air of a room by overcrowding it.

4871. You have vitiated the air of the room because that air is confined, but in the street the wind is blowing, as it always is more or less, and do you think that any amount of breathing would make that difference ?—That is a very difficult question to answer. You must remember that they are continually increasing the heights of the buildings, and that very much stops the movement of the air in big towns.

4872. (*Colonel Fox.*) Your object is to build healthier cities with healthier gutters, and in addition to that, to relieve the congestion which now exists in the over-crowded towns ?—Yes.

4873. Do you intend to put any restriction upon the people who come into your city ? Are you going to admit weakly populations from the slums of the towns ?—If a manufacturer comes, his work-people will follow him, and if they follow him from a particularly unhealthy district they will have the advantage of coming to a particularly healthy district.

4874. But those people who have been in the habit of suffering from an unhealthy neighbourhood of a densely-populated town, will they have a chance of coming into this healthy city the same as anybody else, then ?—Certainly, we should not restrict any trade that is not unhealthy on account of the poor physique of the work-people.

4875. (*Chairman.*) You would think it would be a useful experiment ?—Yes.

4876. (*Colonel Fox.*) Speaking of the alien population of the East End of London, in what way are they doing harm, except by cutting down the English people's wages, perhaps ?—To my mind, they are doing a great deal more harm than that, because they are reducing the wages in the whole trade which they attack. I take it that they are chiefly employed in the slop trades. I suppose it is common knowledge that the wages paid in the slop trade are a disgrace to humanity. It simply means misery and starvation. Those people can live, and are accustomed to live, on what will not support an English person in health. Supposing you have a trade that employs, say, 10,000 unorganised workpeople, and supposing that you add 1,000 labourers in that trade, it is not merely 1,000 who suffer, but all the 10,000, because you see, as soon as an employer finds a large surplus of labour in his trade, he thereupon says, "I will reduce your wages," or, "I will turn you away," and he can do it, because he has got 1,000 to come in on any terms that he likes. It must be so in the absence of trade organisation, and the over-supply of labour tends to, and has the effect of, reducing the wages of the whole trade. I am satisfied that one of the reasons why wages in the clothing trade are so pitiable is because of the influx of those people, who can live on what we consider to be almost nothing, and who, by the way, are very good workpeople, very industrious, and very enterprising, and they very readily get on. But, in the meantime, they are crushing our unhappy natives and bringing down wages to starvation point.

4877. The evil lies in this, does it not, that they can live on a less wage, and they are more thrifty and more abstemious ?—Yes.

4878. In your garden city are you going to have houses where they sell nothing but beer and spirits, as is done in ordinary towns, or are you going to start houses more on the lines of a restaurant ?—We have got three licences altogether, and we have got the liquor traffic in our own hands. We did not propose to make it a temperance place, because that would only drive the people over the border, and the evil would be worse then. We have not decided about it, but we thought of Lord Grey's scheme, something on that line, and we rather invited him to take over the licences, either on that or some scheme like it. All of us are not violent temperance people, you know, but we desire to offer counter attractions.

4879. On a liberal footing, but not to make the sale of beer too prominent ?—No, we want to give them a chance of getting recreation without the necessity of getting alcohol.

Miss M. K. Dowding, called ; and Examined.

Miss Dowding.

4880. (*Chairman.*) Would you kindly state what has been the nature of your experience, what, in fact, are your qualifications to give us evidence ?—I am a clergyman's daughter and I have seen a great deal of poor people. My father has had very poor parishes. He was at St. Thomas's Scarborough, a fisherman's parish, very poor, and a place in Lancashire during the cotton famine, and I have seen some very great poverty in agricultural places, too, and since then I have been in the Girls' Friendly Society for eighteen years, and worked also in Cumberland amongst the miners' boys and girls and amongst the factory girls.

4881. You wish to speak of your recent experience in Wiltshire ?—Yes.

4882. Near Chippenham ?—Yes, it is a great factory town.

4883. Not a great town ?—It is becoming so. There are about 11,000 people. There have been various factories built lately and there is a great deal of girl labour. They make the Milkmaid Brand, that is the tinned milk ; and then there is the wool—that is going down, and the silk throwing. There is a cocoa factory and a large foundry, and recently they have made all the Great Western Railway electrical work. That is at Chippenham. That has very largely increased in the last five or six years, but the girls work a very great deal. They do practically most of the cloth work and nearly all the tinned milk, the making of the tins.

4884. And you say from your experience of these years that there is more evidence of physical deterioration to be noticed amongst the classes that you have mentioned than there was before ?—Yes. I think that the children are very mean-looking and poor. I did not know what it was before coming thirteen years ago, but I can say that where the mother works the baby goes to pieces. The women work when they become widows, almost continuously, and the baby is left.

4885. You are speaking of Chippenham ?—Yes. The babies grow up anyhow. The boys and girls work at the factories up to the time that they are married, and after they are married, both men and women.

4886. You attribute a great deal of the deterioration to boy and girl marriages. You are aware that they are not married as young as they used to be?—Not quite so young, possibly, but still they are married very young. I was thinking of Cumberland and Yorkshire where they are engaged at thirteen and fourteen in the boy and girl class in the Sunday School. They are all engaged. They marry very young there, at sixteen or seventeen.

4887. But the general fact remains that early marriages do not take place so frequently as they used to do ?—I have no statistics on the point.

4888. There are the statistics of the Registrar-General ? —What do you call a boy and girl marriage. Not twenty, perhaps ?

4889. (*Dr. Tatham.*) The age of marriage is now higher than it was ten or fifteen years ago ?—You do not know what it is now.

4890. (*Chairman.*) In a district in Westmoreland it is from twenty to twenty-three ?—Oh !

4891. (*Dr. Tatham.*) It varies consid-rably ?—It seemed to me that they marry before they are fit to keep a home, either man or woman. Of course, when they are working they have no domestic learning and they pass straight off to the factory, even before leaving school.

4892. (*Chairman.*) Do not they have household management taught them at school ?—I do not think so.

4893. There is some effort made to make them familiar with it, I think ?—Well, they have book-work and paper-work, but I do not think that it is very practical.

4894. The homes in the places that you are describing, are they bad ?—They are very insanitary, and we have a most awful river, full of sewage.

4895. You are speaking of Chippenham ?—Yes.

4896. Does not the sanitary authority exercise its power? —Well, it is to be done. There is to be a sewage scheme, but we have been looking for it for two or three years and it is now supposed to be started this year.

4897. And you say that public opinion is not alive to the needs of the people ?—No. They think because it is country air it is perfectly healthy. They do not seem to think that the country air is vitiated with sewage.

4898. The new buildings that are built are under proper building regulations and conform to modern ideas of sanitation — do they not ?—No. Because the sewage scheme has not come off. There is no connection, you know. They are higher and cleaner; but, of course, they are closer together than they used to be. There are three or four cottages where there was one, and a garden, and I think that is worse. We are getting more cases of diphtheria and scarlet fever than we used to, and there is no proper sanitation. They cannot connect them, you know.

4899. Does not the local authority keep some hold over the building ?—It looks over the plans, but does not connect the houses with the system of drainage. Unless something is done to compel them, it will not be done.

4900. But as to the houses, what have you to say ?—They are very much overcrowded because of those industries growing so rapidly. We have recently had Saxby and Farmer from London, who have brought from 1,500 to 1,600 people.

4901. They have brought them from London ?—Yes.

4902. Where are they placed ?—In the cottages, which are always full. They are building for them, and in time they may have enough.

4903. But if a man brings down 1,500 people, he can hardly expect to have them housed ?—Yes; and he goes to his people and says, " You must take in a lodger ; I have so many men, and you must take one or two lodgers."

4904. And they are suffering from overcrowding ?—Yes, overcrowding.

4905. Is the municipality assenting to this ?—I suppose they are obliged to ; the men must have somewhere to sleep.

4906. Some of these men bring their families ?—I do not think they have arrived yet.

4907. Is the land available for building purposes ?—There is plenty of land to build upon.

4908. And not at exorbitant rates ?—It is expensive, but I do not think it is prohibitive.

4909. You have something to say about the condition of young mothers ?—Yes. I think the young mothers are fearfully ignorant, and will not come to mothers' meetings.

4910. They are unwilling to learn ?—Yes, they think that they know better.

4911. What are those horrible and ghastly tales that you refer to ?—Do you mean about the babies when they are born—about the mothers' carelessness ?

4912. You say in your memorandum you have had "horrible, and even ghastly" tales told you ?—That is about babies, and the carelessness with which they are attended to when the mothers are confined. Very often the baby really is very neglected, whether wilfully or not. I do not know, but when the mother dies the baby is nearly always buried with her.

4913. Do you mean buried alive or is it dead ?—No ; it is allowed to die, it is not particularly wanted probably—and they do not know what to do with it. The mothers want much more attention during the confinement.

4914. You are now speaking of the condition of things in Wiltshire ?—Yes, as a rule the poor do not go to the regular midwives.

4915-16. Do you think it would be a good thing to require that a doctor's certificate should be obtained for every death of a child below a certain age ?—I should like to do it for every confinement : either a doctor of their own or a parish doctor—someone should be at the expense.

4917. It would be a step towards seeing that no death as the result of a confinement could be registered except with a medical certificate ?—They generally do have one.

4918. It is not necessary ?—I do not think that would stop the deterioration.

4919. It might not—but it might bring home these culpable cases to those who are wilfully negligent ?—Quite true.

4920. Have you formed any opinion as to the different causes of infant mortality ?—I think that the diarrhœa, owing to the sewerage, is a main factor. The babies seem to feel it more, being more in the house.

4921. Is it not due to the food ?—It is partly due to the tinned food. It is not that the tinned food is bad; but they leave the tin open. Of course every tinned thing ought to be turned out.

4922. Do they not get any pure milk ?—Hardly any at all—it goes to the factory. I should like the borough people to order it.

4923. The municipal agencies do take it in hand in some places ?—They do order everything else, and they might order milk, I think. The people pay 4½d. a tin, and that lasts a week, but at the end of the week it is not drinkable.

4924. It is in a filthy state, I suppose ?—It is in a horrible state, impregnated with oxide of tin, which the tin throws off, as soon as it is laid open, to the action of the air.

4925. How are you to deal with children from infancy ?—I think that a crèche would be very useful; and a place to play in.

4926. Whether their mothers are at work or not ?—No, they are pretty well at home then. But they have norecreation ground at all: only one school has a playground; there is no space for them at all.

4927. I should have thought that in country districts there were plenty of places close at hand ?—In the roads.

4928. I do not think there is much traffic in the streets of Chippenham ?—There is a good deal of traffic in the main streets; but the best common land is now enclosed, and it is not allowed to be used at all; it is in the hands of the burgesses—a certain number of very good people who will not let the people play, and there is no other grass near.

Might I allude to the last witness in reference to the town and the country ? I think the main reason why they are so poor in London is that in the town there is a want of grass. The grass gives out oxygen and takes up the carbonic acid gas, and there is no grass in London except in the parks, whereas in the country there is always this oxygen being given out.

4929. Is there a striking absence of proper care of the sickly and debilitated in the country districts with which you are familiar ?—They look upon it as a sort of accident of Providence; they do not make any effort if it is a child ricketty or sickly.

4930. Have you not got a hospital ?—A cottage hospital, and there are free tickets to Bath, but they will not take the children. They can go to the Bath Hospital, but they will not.

4931. There is a prevailing indifference ?—Yes, if some one went round to the mothers it might be useful.

4932-6. Do not you think you could do something with them at school age ?—They are very young. In the Girls' Friendly Society we see them seventeen to eighteen, but even then they do not take in things. I think all that school work takes up a very long time, and is not of much use.

4937. Does the factory life unfit them for domestic life ?—Yes, they have no idea of domestic work; they pay their mothers just as they would pay any stranger. Everything is supposed to be found for them, their food and everything, and they are not supposed to do work at home. They have nothing to do with home, they say.

4938-9. Do you think that further provision should be made for the medical supervision of the children in school life ?—The school seems to spread infection of all sorts and it must come from carelessness. I do not think there is sufficient care taken. *Miss Dowding.*

4940. They are not allowed to go to school when they have contagious disease, are they ?—Last week there were six or eight cases of scarlet fever. In one case a child asked to come to class (G.F.S. Class). Her brother had been taken to the Isolation Hospital the week before, and I refused to admit her. She answered, "But we are all going to school, just the same." I do not think there is enough care with regard to people in contact with diphtheritic cases. I do not think they examine them properly, but let them wait until they develop malignant diphtheria.

4941. Is diphtheria very prevalent ?—It is constant. They have an epidemic of either diphtheria or scarlet fever alternately.

4942. And you think it is traceable to the want of proper sewerage ?—I think that is the main thing, but it is gross carelessness not to separate them and isolate them.

4943. (*Dr. Tatham.*) With regard to this question of school children, and the way in which infectious diseases spread amongst them, are you aware that under the general law of the country it is incumbent upon medical men to notify the existence of infectious disease amongst their patients ?—Yes.

4944. Is that neglected in the case of Wiltshire ?—I think in the case of sore throats they take no notice; and if it is diphtheritic throat it is the same thing. I think many of the so-called sore throats are diphtheritic throats.

4945. There is no provision for the examination of the scholars there ?—I do not think there is. They go occasionally to the school when there is an outbreak.

4946. But speaking generally, what would you say ?—I do not think there is any examination. I am manager of one of the schools, the British School, and they never examine them unless there is an outbreak.

4947. So that that would tend to increase the number of cases if they only examine when there is a genuine outbreak of diphtheria ?—Yes.

4948. And then the school has to be closed ?—Sometimes they do close it and sometimes they do not. Sometimes they send one class down; but I do not think that that is of much use, because the children meet in the playground and the class room.

4949. Is there a County Council in Wiltshire ?—Yes.

4950. Do they supervise in any way ?—They have made attempts to do so, but it is not very successful. The Local Government Board is moving in this sewerage business—they threatened. I do not know what you call it, to prosecute the town unless the sewerage scheme was started this year.

4951. Is that a recent threat ?—That is why it was started. It had to be started in January in consequence of the threat.

4952. You speak of the milk supply being very defective in Wiltshire ?—I think that it is all sent to the great milk factory—they can make better terms if they send it regularly.

4953. It pays them better ?—Yes, much better.

4954. And the consequence is that the children of the working classes get practically no milk at all ?—Very little.

4955. What substitute do they give ?—This tinned milk; and the tins are constructed in a bad way: they are very thick on the top and you have to strike them with a heavy tin-opener, making a jagged edge, so that you cannot close them again—you cannot push the top down tight and any amount of polluted air gets all round it.

4956. Do you think that they get improper food ?—They give them many bad things, herrings and that sort of thing, and especially bread. They ought not to give them anything fermented until they are two years old.

4957. Is infant mortality very high in Wiltshire ?—It is high: whether it is higher than in other counties I do

Miss Dowding.

not know. I think that Dr. Thomas, who came three or four years ago, mentioned that it must be looked to.

4958. What part of Wiltshire are you particularly acquainted with?—Chippenham. I have lived there. It is half way between Bath and Swindon. They tell me that it is worse in the rural districts.

4959. In Chippenham the mortality amongst infants is very high you think?—Yes, and that was mentioned by Dr. Thomas. I think it is partly due to infants not getting attended to by the doctor but by the young assistant mostly, and by the dispenser, even. It is not that the doctor will not go; but these people go up to the doctor at ten o'clock say, and he is busy and the mother either stays for an hour or an hour and a half—then she gets tired and the dispenser examines the child. I do not think that the doctor refuses to see them. I do not suppose that he would or could, but practically they do not see the doctor.

4960. But you think that there is general neglect of young children?—Yes, very small children, it is only amongst the children.

4961. It is, you say, owing to the ignorance of the young mothers who are unfit to bring up children?—Yes—they do not seem to know the importance of the first two or three years of the child's life and they give it brandy (I mention in my memorandum the way they take it themselves), but they give brandy and gin to the children. It lessens the size just as you might do to a terrier or small spaniel—it lessens their size by taking drops of it constantly.

4962. Have you ever compared the general appearance of infants in your immediate neighbourhood with that of children in other parts of the country?—In Cumberland and Yorkshire they are much larger, but that is partly because they come of a better stock; the people themselves are healthier.

4963. You do not think that the children are better looked after?—They have more milk for them. I do not think that you have this want of provision of milk except where these great factories are. I think that it is local, the want of milk. A child ought to be fed on milk entirely; they give them as I mentioned tinned milk, and the 4½d. for the week would only be part of the food; they make it up by giving them bread and sop, and one thing and another.

Mr. B. Seebohm Rowntree, called; and Examined.

Mr. Rowntree.

4964. (*Chairman.*) You are the author of the book upon the conditions of life and labour in York?—Yes.

4965. Therefore, you have made some considerable study of the conditions of the problem which we are asked to investigate?—Yes, a very fair amount.

4966. Are you in a position to say anything on the general question as to whether the conditions that make for deteriorated physique are increasing in intensity, or otherwise?—I do not think I have any scientific information on the point. I have a general opinion that the conditions are such that it must be so. There is a greater proportion of people living in towns.

4967. You must set against that the improved sanitation in the towns?—Yes.

4968. I suppose you will admit that where local authorities make full use of the powers that the various Acts of Parliament place in their hands, there is no reason why anyone should live under actually unhealthy conditions?—I think it is very difficult for them under existing conditions to avoid doing so in towns.

4969. For what reason?—On account of the high rents.

4970. On account of the obstacles which are placed in the way of the discharge of their duty by the local authority?—On account of the difficulty of getting good accommodation at the rent which people are able to pay, and the impossibility of a very large proportion of the population securing sufficient food for the maintenance of physical efficiency, no matter how economically they spend their incomes.

4971. I thought it rather appeared from your book that a very large proportion of the poverty you describe is due to causes which are within the control of the classes that suffer from it?—I divided the poverty into two classes. I say that 10 per cent. of the population of York are living in "primary" poverty, over which they have no control, and 18 per cent. in "secondary" poverty, over which they have control. But you have the 10 per cent. who are in "primary" poverty.

4972. That is a small section of the population, but it is regrettable that it should be so, of course?—It is four millions of the population if the proportion is the same in other places.

4973. It does not do to assume that; you would not judge of the whole of England from the conditions of York? That would be, surely, unscientific?—I only said if they are so. There is just as much reason to suppose that they are as that they are not.

4974. On the contrary, I always understood York was one of the places which is, and has always been, bad, partly from the fact that it is one of the oldest cities in England?—Only one portion of it is very old.

4975. Historic York is an old city?—Yes, but the proportion which that bears to the present city is very small.

4976. I know York very well myself, and from its features one is impressed with the fact that it has probably had more difficulty to adopt itself to modern conditions than many other places?—I have exchanged opinions with a great number of people who have made a considerable study of the conditions in other towns, and I myself am of opinion that the conditions in York are no worse than in other places. I should be surprised myself to find the condition throughout England better than the condition in York.

4977. There is a very considerable Irish element in York, is there not?—A decreasing proportion.

4978. But it has been considerable in the past?—Yes, it has been considerable.

4979. That always tends to depress the standard of life in a town, does it not?—Possibly; I do not know.

4980. It is generally assumed to do so. Then with regard to the consideration of the principal causes of physical debility, which would you put first?—I have put them merely in an arbitrary form in my *précis*. But, I think, first of all, there is the question of the feeding of infants, with regard to which there is a very great amount of ignorance. For one reason or another, of course, a very large number of children are not nursed by their mothers.

4981. That, we may take it, is the first regrettable circumstance?—Certainly. Then there is undoubtedly, very great ignorance as to the proper way in which to feed them, if they are brought up by hand.

4982. With regard to the failure of mothers to nurse their own children, according to your own observation, is that due to necessity, or indifference, or what?—We made some little investigations with regard to that, and it seems to be very largely the physical inability of the mothers to feed their children.

4983. They are too weak?—Whether it is that they are too weak, or whether it is due to the nervous stress of town life, or what it is, I do not know.

4984. Do you think that early marriages are on the increase?—I should think they were not.

4985. The Registrar-General's Return shows they are not: so that it is not due to women becoming mothers

earlier than they used to that this weakness arises ?—No. The conditions of town life, the later hours, and the greater excitement of town life, the absence of quiet and so forth, all tend to increase the number of mothers who cannot feed their children.

4986. I suppose the conditions of their lives when they first marry, are not so acutely uncomfortable as later, when their families have become larger ?—No.

4987. Do you believe it to be the case that mothers are just as reluctant or just as incapable of nursing their first children as their later ones ?—I should think so, but I would not be quite certain of that.

4988. Do you think maternal improvidence, maternal carelessness, and maternal ignorance, grow with the growth of the family ?—No, I should not think so.

4989. You do not think they are over-weighed by the pressure of circumstances so as to make them more careless ?—I think the class of mother that would be careless at all, is careless with all her children probably; if you have a decent mother, she is not careless with any.

4990. Do you not think that as maternal responsibilities grow upon her, possibly her sense of duty becomes less, and she becomes more careless out of sheer despair ?—That might be so where there are a very large number of children.

4991. You attribute a great deal to the want of proper education on the subject ?—There is a very large amount of real ignorance on the question of infant feeding. One comes across it constantly. My secretary, who has done a very great deal of visiting amongst the poor, has constantly come across most gross ignorance with regard to infant feeding. The constituents of the food given to the children are entirely wrong. There is an inadequate supply of bone-making material, and you get ricketty children, and the child starts very badly.

4992. That is from want of milk ?—Yes. Milk is expensive. I think wherever the mother can nurse her child she prefers to do so, because it is cheaper, and less trouble, at night particularly. Of course, it is very troublesome for a mother to have to get up and warm food for the child.

4993. How would you suggest that this lack of education on the subject is to be supplied. Do you think the schools should do it, or that it should be done later ?—It is a little too early in the school.

4994. You suggest that the local sanitary authority should supply information on the subject ?—I would suggest two things. The first one is that the local authority should supply leaflets.

4995. Would they be read ?—If they only dealt with one thing at a time I think they would, if printed in big type with not too much on them. I think the mistake which has often been made with regard to leaflets is to try and make them too comprehensive. If you can get one fact on a leaflet and distribute that, and then get another fact on another leaflet a little later and distribute that, say one with regard to the food of the children and another with regard to the general management of children, fresh air and so forth, I think they would be read.

4996. Do you think that evening continuation schools for girls are a good institution ?—I do not think they would attend them. I think it would be an ideal way if you had compulsory evening schools like Germany. That is just the time you want to take them. Then in addition to leaflets and lectures which, I think, people would attend if they are good, we should have more infant milk depôts established, such as exist in Battersea, St. Helens and other towns.

4997. By means of municipal effort ?—I do not think so. I do not think that is the best way.

4998. That is the case in Battersea and St. Helens ?—Yes.

4999. And in Liverpool and various other towns, I believe ?—Yes. I think if you could get them by private effort there are certain advantages; because the personal element is very important, I think. The advantage of these milk depôts is that you get thoroughly good food supplied to the children to give them a start, and then it is extremely important to associate with these depôts the visiting of every parent.

Mr. Rowntree.

5000. By ladies, do you mean ?—Yes.

5001. Like the Manchester Health Society ?—I do not think they have quite the kind of lady I have in my mind in Manchester. We have started a milk depôt in York recently.

5002. Is that by private agency ?—Yes, the York Health and Housing Reform Association have done it. We visit every working class house where a child is born, or try to do so; we have not quite got our organisation complete yet.

5003. They have that in Manchester I understand ?—They have just begun, I think, last week.

5004. The Manchester organisation is of considerable antiquity I believe ?—They have voluntary ladies and uneducated women.

5005. They have the agents of the municipality below them ?—They have women to whom they pay 16s. a week, I think.

5006. Yes, but they act under the direction of the ladies of the city ?—My idea is that to get the best results you should have ladies visiting who have real knowledge with regard to infant feeding. If they have some experience as hospital nurses, or something of that kind, so much the better. But it requires people of very considerable tact and real sympathy. Everything depends upon your lady—if you get the right person people will take advice, I have seen that constantly in regard to the visits at York. We have most remarkable results where the whole treatment of the child has been entirely altered.

5007. Has it had the effect of reducing infant mortality ?—There is no doubt about that. I have seen several cases since August where a child's life has been distinctly saved by it. I was in the depôt the other day, and a man told me that his child would have been dead now if it had not been for the depôt. I feel that these depôts fail to do the utmost good unless the lady visitors are associated with them. That I believe, is the best piece of educational work that could be done. Our experience of York is that if you have one visitor who is prepared to work hard and systematically, she can deal with a town of 70,000 or 80,000 people, supposing there was not more than an average of 70 per cent. of the working classes. I do not quite know yet—I could not get the figures before I came here—what proportion of the children are hand-fed, but there is not nearly the same need to give time where the mother is nursing her child. You want, however, even in these cases, to give a certain amount of information with regard to the general treatment of the child and so forth, of which there is supreme ignorance amongst a very large section of the working classes, and above the working classes for the matter of that. Our medical officer of health tells me that it is by no means confined to the poorer classes. Of course, the wealthy classes have nurses for their children.

5008. These depôts are not intended to be eleemosynary, are they ?—I think it would be very difficult to make them pay, but I think it could be done.

5009. We are told that the Battersea depôt, which is municipal, is paying ?—I think the one in York will pay in time.

5010. At the outset you must expect a loss ?—I have a statement here, which I prepared for another purpose, of the York depôt with the accounts. (*Document handed to Chairman*). We have gone rather carefully into the matter in York. We visited all the English depôts before we began ours; at the present time we show a loss of about £2 a week.

5011. What number of people are customers of it ?—At the present time we only have about sixty-five. We have only just begun. We lost £81 in the first half year, and that included the cost of starting and so forth. The cost of initiating such a depôt to deal with something like 150 babies would be from £250 to £300. The whole thing is not serious.

Mr. Rowntree.

5012. Do you mean the loss is not serious?—The capital is not serious. I may mention the way in which we are going to try to meet this loss in York. We are beginning to supply sterilised milk in bottles, not only for infants, but for anyone who likes to buy it. We started that a week or two ago, and there is a good profit in that. We are also trying to get a sale of modified milk for wealthy customers sent to their houses direct at 5s. a week, which yields a good profit. If we can do that and get a sale for sterilised milk, and also get a larger sale for the modified milk, which we shall, I think, as soon as the thing becomes better known, we shall make both ends meet.

5013. How many children are born in York of the class that you have named, weekly or monthly?—About forty a week. The visitor is paying forty visits a week, and then there are other visits which are required afterwards as well. A certain number need not be visited for six months again, if it is found that the mother is nursing her child.

5014. Can you tell us what proportion of mothers out of that forty a week would be likely to nurse their children?—No, I cannot; the figures are not ready.

5015. You are making some inquiry?—I asked the Secretary of our Association to get the figures, but she had not them ready.

5016. What security have you that the milk you get is pure to start with?—We make very stringent conditions with regard to the supply.

5017. From whom do you get the milk, from outside I suppose?—Yes, we get it from outside, but we make extremely stringent conditions with regard to the supply. I have the conditions here. We have a veterinary inspector who is in our service who goes round periodically to examine the cows and cowsheds.

5018. I suppose the dairies from which you get the supply are outside the administration of the York sanitary authority?—Yes.

5019. So that you have to depend upon the discharge of their duty by rural sanitary authorities?—We undertake the duties ourselves; we have our own inspector.

5020. But you cannot insist upon sending an inspector into cowsheds which are not under your own authority?—Yes, it is a condition of our contract. These are the conditions. (*Copy handed to Chairman*).

5021. You make it a condition of your contract?—Yes, we pay rather more for our milk on that account.

5022. I suppose, generally speaking, the security that the law does provide for, is not made use of in rural districts with regard to milk supply?—I imagine not.

5023. You know there are stringent conditions by which the milk may be made the subject of very careful inspection if the local authority choose to enforce them?—Yes, There is no difficulty at all in any depôt making its own contract and its own conditions.

5024. If you get the milk supply within a reasonable distance so that you can see that these conditions are being observed, that would be so?—Yes.

5025. And that is so in your case?—Yes. The dairy from which we get our supply of milk cannot supply cream and we get the cream from the Pure Milk Dairy. I imagine that is the purest milk in England; it is spoken of by Messrs. Newman and Wittenbach as representing the high water mark of dairy farming in this country.

5026. Does your milk depôt issue instructions to parents on the subject; you say it performs the double duty of supplying food and educating parents?—Yes, we distribute leaflets on the feeding of children with different colours representing different ages.

5027. (*Mr. Struthers.*) May I ask the price?—It varies between 1s. 6d. and 2s. a week according to the age.

5028. That is the supply to the children, but I mean the cost of really pure milk?—9d. a gallon in summer and 10d. a gallon in winter.

5029. (*Chairman.*) With regard to the dietetic value of different food stuffs, is not that difficult to ascertain, because there is a good deal of difference of opinion on that. Here, in this room, we have had very different opinions expressed?—Scientifically there may be differences of opinion with regard to exact dietetic values, but roughly speaking, I should have thought there was general agreement with regard to it.

5030. There is the chemical presumption in certain cases and also the factor of assimilability which is quite apart from that?—It is generally accepted that a pound of peas is more nutritious than a pound of cabbage.

5031. Chemically, but a very competent witness said that the whole theoretical value of peas as diet was vitiated by the fact that they were extremely unassimilable. I am glad you mentioned that, because it was specially stated. We are at once plunged into a morass of doubt, and there is a great deal of difference of opinion on matters of that kind?—I know that there is a very great deal of difference of opinion upon the exact dietetic value of different food stuffs, for instance as to whether white or brown bread is the more nutritious. Chemically, brown bread is more nutritious, but alimentary research shows that white bread made of seconds flour is more nutritious, because it is more assimilable. There you are dealing with differences which are not of great moment. I believe the difference between the chemical dietetic value of white and brown bread is not very great. With regard to details there is certainly not agreement. With regard to important differences there is, I think, general agreement.

5032. I am only putting in a *caveat* as to the real value of it?—There is very great ignorance amongst the working classes, for instance, as to the dietetic value of cheese.

5033. That value is very great, I believe?—Yes, it is very great. In York we distributed about 9,000 or 10,000 copies of a handbill of the kind I have in my hand, indicating in popular form the dietetic value of different foods.

5034. (*Mr. Struthers.*) Cheese, again, is an extremely indigestible food, is it not?—That depends how it is taken.

5035. That is the most important thing to mention, as a warning?—Yes, we have done so. It states on the handbill, "If you find cheese indigestible, try eating it more slowly, or grating it on your potatoes or vegetables, or else make cheese puddings or macaroni cheese." People usually bolt it after a heavy meal.

5036. (*Chairman.*) Take it in large lumps?—Yes.

5037. (*Mr. Struthers.*) I know many people who suffer from indigestion traceable to cheese—at least that is what they are told by medical people—notwithstanding the different forms in which they choose to prepare it?—Is that proportion greater than those who suffer from indigestion due to meat, do you think?

5038. I do not know?—There is no doubt the scientific men would agree roughly with regard to the different dietetic value of different foods, and that is all that is required for the purpose.

5039. (*Chairman.*) Will you go on to say what you conceive to be the second great cause of physical deterioration?—Apropos of what we have been saying, of course we must remember, in connection with the question of the low standard of physique owing to mal-nutrition, that a very large proportion of the population—whatever it be, it must be reckoned in millions, whether four millions, two millions, or one million—have not enough money to get food, let them spend their money as well as they possibly can. They cannot do it, and that, of course, is a very important factor.

5040. With regard to the young, would you advocate some system, at any rate during school age, for supplementing parental resources, where necessary, by giving children who have to undergo a certain amount of brain work sufficient food?—Yes, if it is done judiciously. There is a very great danger of pauperising them.

5041. With every intention to maintain responsibility?—I should like something to be paid for the food given in schools, even if it were supplied at very low cost. I think a point which has not always been realised is the fact that the time of special stress in the life of the poor is the time that the mother is bearing children. What the effect of that is upon the offspring is not fully recognised; it is not really known, I think. But one can hardly help thinking that it must be prejudicial.

5042. Do you think, if the parents who were poor, knew what food was the most valuable in proportion to the outlay upon it that a great deal might be done to reduce the difficulty that is caused by poverty alone?—Yes, but not to remove it.

5043. If they knew, and could be induced to act upon their knowledge, the outlay upon food which, from the point of view of nutrition, was most productive?—Yes, but the things which are the cheapest often take the most cooking.

5044. And they recoil from the trouble?—Yes. A thing like porridge takes a great deal of cooking in the morning, and the work which a working woman has to do in the morning is considerable if she has a family of children to wash and dress and send to school, and so on.

5045. Do you confirm what we have heard as to the extreme laziness of a great many of the mothers?—I think it is very greatly exaggerated. Of course, there are a number of lazy mothers amongst the poor, as amongst all classes of the population.

5046. It does not affect the children in certain classes, but amongst the poor it is of immediate importance. You do not think that is a charge which can be generally brought against them?—No, not generally, by any means. It is undoubtedly so in the minds of a number, but I think it is exaggerated amongst those who do not know the poor well.

5047. You put the intemperance of the parents as one of the points you wish to bring forward?—Yes.

5048. Do you think that drunkenness among women is increasing?—I cannot say. There is more alcohol consumed per head of the population now, of course, than there was forty or fifty years ago.

5049. We have had it stated here that the average mother, if she is at all hipped or out of sorts, always has the black bottle ready to take a nip, and that the child is often asked to share the nip. Do you think that is a general failing?—I should not think it was a general failing. I should imagine there are more teetotallers among the working classes now than there were.

5050. You think there are?—Undoubtedly.

5051. You think that legislation to reduce intemperance is needed?—I think that is of the very first importance.

5052. Will you kindly indicate to us how you think it could be best done?—I should suggest a scheme similar to that which was outlined in the Temperance Manifesto recently published, with which I daresay you are familiar.

5053. Which was that?—I have it here. (*The document was handed to the Chairman.*) The very definite recommendations of the signatories include: "(1) A large speedy and definite reduction in the number of licensed premises; (2) wide powers of local self-government (with provision for their immediate operation), including permissive powers of (*a*) veto, and (*b*) public control under which, subject to the regulations of statutory law, the whole of the retail traffic in a locality could be conducted without the stimulus of private profit, and without direct and appreciable pecuniary gain to the locality itself; (3) a scheme of constructive reforms which should include the provision and maintenance of adequate counter-attractions to the public-house." Such a scheme as is set forth in the Manifesto would permit of the drink trade being taken out of private hands and the monopoly profits, amounting to not less than £20,000,000 per annum, which now go to strengthen a dangerous and baneful monopoly, could be utilised for national purposes, great care being exercised that they were not so expended as to give any locality an inducement to drink.

5054. That must be a very slow process, must it not?—No, I feel that the country is ripe for such a measure. I think that any Government that came in that was in favour of radical temperance reform could pass a measure of this kind. It has the support of an enormous number of people. Of course, the signatures to that Manifesto are very striking.

5055. Removing the whole trade in drink from the hands of the present holders?—The process would be that you would give a time notice to the trade that at the end of a certain period all licences lapse. Then the locality would have the option; they could either apply local veto if they can, which would probably very seldom be done in the case of towns, or, in the alternative hand the licences of the locality over to a company approved by the Licensing Authority. The company would then manage those licences in the interests of the community; they would submit all their accounts and management to Government control; they would not take more than four per cent. interest upon their capital, and everything above that would go to the National Exchequer. The first charge upon the profits would be the provision of adequate counter-attractions, which is a matter of first importance, and whatever was over would be used for National purposes.

Mr. Rowntree

5056. Do you think that the nation would make so much out of that scheme as they do at present out of the excise?—They would make the excise and the profit as well.

5057. The consumption of liquor, presumably, will be enormously diminished?—Yes, one hopes so.

5058. That, of course, is the basis of the matter?—Yes.

5059. (*Colonel Fox.*) But they would make a profit on other things—people would eat more if they drank less?—Yes.

5060. The profit would be made on other things than beer?—Yes.

5061. People would eat more, would they not?—What they do in Norway and Sweden is this: as the sales decrease they put up the price and weaken the spirits, so that they get their profit in that way. Their profits do not decrease with their sales. They have steadily been increasing their prices and steadily decreasing their strengths.

5062. You allude in your *précis* to a sort of restaurant instead of merely a beer-house. You are speaking now of beer-houses where they sell beer, or beer and spirits: and to take the place of that you suggest a place that is attractive, where they can obtain beer, tea, coffee and eatables, or anything that they like?—I would not make them attractive, no.

5063. You would make the restaurant attractive, would you not?—No, I would not make the restaurant where intoxicants were sold in any way attractive.

5064. I thought you were saying just now you recommended that these houses, which took the place of the beer-houses, should be attractive?—I would make attractive places where no beer was sold at all.

5065. Do you not think it is going too far to suppress beer entirely?—I should sell beer. You will have your public houses, but I should have those rather severe, and I would have the attractive places where no beer is sold at all.

5066. I thought you were going to abolish the beer-houses: would it not be better to make them restaurants where the working men could go and have their eatables and drinkables, tea, coffee, cocoa or beer?—No: the places I should try to attract him to would be temperance restaurants.

5067. Do you not think that one of the great faults has been the fact that people go in for the absolute extreme, that is, teetotalism: do you not think that that has done more harm to the temperance cause than anything?—I do.

5068. Therefore, why not introduce beer in the excellent restaurants which they are having now—I keep harping upon the old question of Lord Grey's Public House Trust, which is on lines which seem calculated to keep people away from drink: there they can have beer if they want it, but it is not pushed prominently forward?—You have to make them attractive now because they are in competition with other public houses, but when the whole of the licences are handed over to this company they have no need then to make them attractive. If a man wants beer he can go and get it.

5069. Have you ever thought of what we have all over London now—the cabmen's shelters? In the old days half of the cabmen were drunk, because the only place they had to go to was the public house, where they had beer. Now they have shelters and a cabman is very rarely seen drunk, because in those shelters they can have their chop or whatever they want. I have been in several of them lately, and was told by them that they can get a chop cooked there and eatables of various kinds, and beer if they like it, or tea, cocoa or

Mr Rowntree.

coffee, any mortal thing they like. The result is that they do not want to go into these low public houses, and they remain sober. If you can do that for the cabmen in a small way you can do it for the working men in a larger way, by having shelters in the nature of restaurants where they can get anything they like. You can have your restaurant where a man can get a meal, and something to drink as well?—I would have those, but the ordinary man does not want anything to eat when he goes in for drinking; he wants the drink. I would give him his drink.

5070. But you would not bar a certain class of men who are accustomed like honest men to have a glass of beer—you would not bar them from going into your restaurant by making it a teetotal restaurant, would you?—I would have restaurants with licences in the same way that you have at the present time for *bona fide* eating and drinking.

5071. (*Chairman.*) Is it not the case in Germany that the working classes take their families to have meals at popular restaurants?—Yes.

5072. (*Colonel Fox.*) They have a very good mild beer which does no harm—something like the watered spirits you spoke of?—Yes.

5073. (*Chairman.*) Would you be prepared to say that the mild beer, such as Colonel Fox has described, is more unwholesome than tea?—It depends on how strong the tea is, and how mild the beer.

5074. I mean in the normal conditions in which tea is drunk. Personally, I should say tea was the worse of the two?—I am not prepared to say. If you get your beer mild enough it might be less harmful than strong tea.

5075. It might be much more wholesome than any tea?—Yes.

5076. We had a lady here not long ago who said, with regard to the feeding of children, that she would much prefer to see them fed on beer than on tea?—I would not go so far as that, because you have no guarantee that they will stop at this mild beer.

5077. (*Colonel Fox.*) If there is no other beer there but the mild beer, they are bound to drink it?—Yes, but if you feed the infants on beer, when they get older they would put away childish things and take something stronger than beer.

5078. When a working man's day's work is over or week's work is over, he wants to go to some place where he can meet his chums and have a chat. There is no place he can go to except the public-house. Why not have these restaurants, with beer and other drinkables and eatables, such as cocoa, tea, &c.? Why not encourage them to go to these places, and then they will not drink half so much?—With regard to this profit of £20,000,000, a first charge on that would be the provision of counter attractions on a most liberal scale—beautiful rooms fitted up, people's palaces with all kinds of attractions, concerts, music, lectures, etc. I would have a splendid gymnasium and swimming baths, but I would not have beer sold in those places.

5079. What a pity! If you had mild beer there you would draw all classes, the very men you want to get?—I would not close every place.

5080. (*Colonel Onslow.*) All the bad characters would go to the dull places and the men already reclaimed would go to the others?—I do not think that is the experience in Norway and Sweden.

5081-2. (*Colonel Fox.*) You must accept the fact that in Sweden drink is one of the greatest curses. I have been there many times, and the great curse is punch-drinking?—I forget the figures for the whole of the country, but certainly in Gothenburg the sale of spirits has decreased 50 per cent. in thirty years, and in Bergen more than 50 per cent. in twenty-five years under this company system.

5083. (*Chairman.*) On the question of housing, of course you attach a great value to improvement in that particular?—Yes.

5084. There, of course, you come into contact with difficulties of another kind. The great difficulty in regard to the housing problem is the indifference of the people themselves to the conditions under which they live?—Yes.

5085. And their reluctance to move?—Yes.

5086. And in the case of the poorer classes, their incapacity for moving?—Yes, I think it is just the indifference that comes from anyone who is used to a low condition; he does not want to be improved.

5087. He does not want to be disturbed. Is not the local authority embarrassed with the further difficulty of providing for the displaced people if they apply the laws against overcrowding to the extent which they might do?—What I myself would like to see would be the town making a wide use of Part III. of the 1890 Housing Act—some improvement would have to be made in that before it would be thoroughly satisfactory—and buy a ring of land round the town, and then develop it municipally as building estates, on the lines of Bourneville. I do not mean in long rows of miserable streets.

5088. Creating a Garden City, in fact—a suburban city outside?—Yes, and connecting that to the centre of the town by trams—the trams being municipally owned, which is the *sine qua non* of success.

5089. Can they do that under the existing law?—They can do it under Part 3; but there you have to form a scheme, and you do not always want to form a scheme straight away. You want to buy the land so as to get the increment of value as it comes and form your scheme slowly as it goes along, and the law does not permit that at present. I believe it can be wriggled out of by saying that you are going to form your scheme "shortly" if you only say it often enough.

5090. Should you say that local authorities are culpably neglectful of the powers under the existing laws, as a rule?—I do not think public opinion would support them in taking any extreme measures at the present time. I think the public want to be educated.

5091. Do you think there is a growing feeling on the part of the public in favour of utilising their powers more than they did?—I think there is.

5092. The public are becoming more alive to the dangers of ill-health, to national prosperity?—Yes. I think that schemes such as Bourneville and Port Sunlight, and Garden City, are good, and indicate what can be done.

5093. You would not suggest an interference by a Government authority, such as the Local Government Board, which is the office charged with the duty. You would not suggest any drastic intervention on their part to compel the local authorities to discharge their duties more thoroughly. You think it had better be left to the slow advance of public opinion?—I would remove all the difficulties which there are at present in the way of putting such a scheme as I indicated in force. There are difficulties in detail at the present time. I would remove those and make it exceedingly easy. I would make it difficult to continue building miserable cottages in the way that is done at the present time. There might be considerable pressure put on by the Central Executive in the way that there is in Germany, where they do not actually order the towns to undertake a building scheme, and so forth, but recommend them to do so, and encourage them.

5094. Germany is very different from this country, because the great industrial development in Germany succeeded instead of preceding as it did in this country any comprehensive knowledge based upon scientific hygiene?—Yes.

5095. And therefore Germany was fully alive to the sanitary conditions of the problem before it had to face the great increase of the urban population?—Yes.

5096. Whereas the great increase in this country in industrial development preceded, not only any healthy public sentiment on the subject, but any scientific knowledge?—Yes.

5097. That I understand to be the case?—Yes; but we have those things now, and therefore there is nothing to prevent the Central Executive encouraging such schemes, probably sending communications down to the local bodies encouraging them to undertake such a scheme as I have indicated. I think one often hears that the poor will not move out, if houses are provided.

5098. That is what Mr. Booth says among other things ?—I think his expression is that we must always remember that a town population moves outward in rings, and it seems to me there is a profound truth in that statement. You will always find a very large number of people who are glad to move out and then, of course, they make room nearer the outside for the slum dweller. The slum dweller will not leave the slum. The mistake has been in people attempting to get the slum dweller to move out.

5099. Mr. Booth testifies to the value of gardens as an attraction ?—Yes, I am associated with a little scheme in York conducted by private enterprise where we are trying to get people to move out. We are building cottages about a mile from the boundary of the city, each cottage having a garden, and we find that we can build an artistic cottage thoroughly well built of the best materials with a large living room and scullery, bath, three good bedrooms, and a garden, to let at 4s. 6d. a week, the tenant paying rates, to show 4 per cent. on capital.

5100. Is that being done at York ?—Yes ; it is a scheme of my father's. We are doing it now. We got the figures out only last week.

5101. In talking about the efforts made to raise the lowest levels of human life, Mr. Booth says, "Success can only be very gradual and never perhaps complete ; the principle of action is unchangingly the same, to interfere by administrative action and penalties at each point at which life falls below the minimum accepted standard while offering every opportunity for improvement." I pressed him to explain what he meant by that, but he rather hesitated to do so. If you had to interpret that somewhat cryptic dictum in practice how would you do it ?—I do not know. I do not quite see what he means. With regard to the scheme I mentioned, the value of gardens must be borne in mind when we are thinking of rural rents.

5102. The value of the asset of the garden ?—Yes.

5103. Do you think that the class we are discussing will make full use of a garden ?—I think the higher section of the working classes undoubtedly would make good use of a garden. I do not say that every man would, but a very large proportion would. In the few houses we have already built it has been quite striking to see the improvement in the health of the people who have gone out there.

5104. Because of the additional open space ?—Yes.

5105. And the value of the garden in raising produce would add to their dietary and so on ?—There is no doubt of that.

5106. They can make a good deal, but are they willing to do so ?—I have taken out a number of figures myself. George Cadbury could tell you the figures of Bourneville—1s. 11½d. a week for one-eighth of an acre.

5107. That is what they can make ?—Yes.

5108. Do they ?—Half a dozen of them actually did make it.

5109. They did it under his immediate eye and encouragement ?—Yes. I have some figures here which I only got this morning referring to allotments in York. I have taken twenty-five gardens, and these are the figures for 1902—I have not the figures for 1903 out yet. It averages about 8½d. a week for one-fourteenth of an acre.

5110. Clear gain ?—Yes, after paying a rent at the rate of £7 an acre, and the cost of the manure, seeds and all expenses, it came out to 8½d. per allotment per week.

5111. (*Colonel Fox.*) Taking everything into consideration except labour ?—Yes. I only had the figures this morning, and have not had time to carefully analyse them, but I notice that the profits vary from 4s. 10d. to £4 18s. 11½d. for the same sized allotment.

5112. That is due to the individual factor, I suppose ?—Yes, it shows what can be done. One man actually got £4 18s. 11½d. from the one-fourteenth of an acre. These figures are extremely carefully got out.

5113. Can you let us have these figures, or a copy of them later ?—Yes. I am getting last year's figures out, and will publish them together.

5114. (*Mr. Lindsell.*) How do you calculate the profit ?—I take out of pocket expenses. I do not count anything for the labour.

5115. (*Mr. Struthers.*) You suppose that all the produce is sold, but do you know that it is ?—Very little of it is sold.

5116. How do you value it ?—I have got about half a dozen families, who have no allotments, to keep budgets for me for the whole year, showing what they have actually paid for their vegetables, taking full advantage of all the cheap times, buying at half-past nine on Saturday nights, and all that kind of thing ; and I have also got one or two fruiterers to keep statistics for me the whole year round of what they are actually selling at. Then I have taken those figures, and have taken the average price every week for every kind of vegetable. I have taken rather low prices, and I have calculated the value of the allotment produce all at those prices, different for every week.

5117. (*Chairman.*) That is the basis of this calculation ?—Yes, I think this is rather a severer thing than George Cadbury's was. He let them value their own vegetables. Of course, a man likes things to appear at their best. I valued these myself, and I valued them low ; I valued them at just the price they would actually have had to pay. On the allotments a great many would grow flowers, which I valued at nothing.

5118. Turning to the effects of the different conditions of employment, you have something to say on that subject, I think ?—One feels, of course, that the rural population were working for the most part in the open air, and then when they come into towns they work in factories, and shops, and so forth.

5119. You attach great value to the hygienic effects of open air ?—Yes, an enormous value.

5120. The atmosphere of York does not suffer much from smoke pollution ?—Not nearly so much as many towns. What I feel, is that the hygienic conditions of many factories are exceedingly bad.

5121. Is not the law strong enough on that point : Is not the last Factory Act a very considerable improvement, particularly on the point of ventilation. It is with regard to factories, but I am not sure about work-rooms ?—In a modern factory with which I am familiar, the directors asked their chemist to analyse the air in all the rooms. It was only built ten or twelve years ago, and is a model factory, regard having been had to the health of the workers, and no unhealthy trade is being carried on there ; a good deal of attention is given to ventilation, and the cubic air space per worker is very considerably in excess of the statutory requirements.

5122. Was that before the Act of 1901 ?—It was last year, yet although in most of the rooms the air was pure, in a few rooms the parts of carbonic acid gas per 10,000 parts of air were as high as 20. You will remember the Departmental Committee which was appointed to go into the question of the air in factories recommended that twelve parts per 10,000 should be the maximum allowed. In this factory the directors had a system of moving air introduced mechanical ventilation, and gave 2,000 cubic feet of air space for each worker. The over-lookers report better health in the rooms where fresh ventilating appliances have been installed. They are positive in regard to the improvement of their own health. In one case of a room containing sixty-five to seventy girls engaged in light employment, the percentage of time lost through sickness during a six months' period dropped from 5·9 to 3·1, after a supply of 2,000 cubic feet per girl per hour had been secured. If, in a modern factory of that kind, built really with a view to the health of the workers, you get those conditions, one can imagine what it is like in some of the old factories. Yet an inspector walking through would not have said a word about it ; it was not nearly bad enough for that. What I feel is that in many solicitor's offices you get little lads there developing consumption, and also in all kinds of offices and shops. One cannot help feeling that a great deal of the impaired physique is due to the conditions of work.

5123. I suppose the conditions of workshops are more liable to evil influences than in factories ?—I should think very much so.

5124. And particularly the smaller workshops which are not so liable to inspection ?—Yes.

5125. Is there much employment in workshops in York ?

Mr. Rowntree.

—No. I feel certain that the question of the air in factories and workrooms is a very important point, quite apart from what are known as dangerous trades.

5126. Would your experience suggest any amendment of the law ?—I would tighten up the law very much.

5127. Are you familiar with the provisions of the last Act ?—Not in detail.

5128. That was a very considerable advance ?—It was an advance, but still it permits such conditions as I have described.

5129. I should hardly have thought it would, because it was particularly strong on ventilation. You have formed some opinion as to the need of recreation, as a counteracting influence to tendencies towards physical deterioration ?—Yes, one feels that in the country districts there is no need for the children to have organised recreation. But when they go into the towns it is a matter of supreme importance that they should have this. One feels that except in a few towns the urgency of that need has not been really fully recognised.

5130. There again improvement is noticeable ? —Yes, but very slow.

5131. You do not think it is gathering momentum. Surely a great deal of attention is being paid to the value of physical education now ?—Yes. I was speaking just now of the recreation.

5132. But that is a branch of it. York has no difficulty in getting open spaces, has it ?—They are miserable little places when one compares them with the conditions in America.

5133. Outside York you can get to a big open space in a very short time ?—But you are not going to get three, four or five-year old children walking one and a half or two miles to the playground ; they would not be allowed to.

5134. But immediately below the bridge which connects the station with the town, there is open space enough there ?—Yes, but I think one important thing to remember is what the Americans have emphasised so much, that a mere open space is not enough, that to make really full use of an open space you want to have someone in charge of it who will organise play for the children. They have come to the conclusion there that an open space is of very small value, unless there is someone in charge.

5135. Are you talking now of children at school age ?—Yes, children's playgrounds.

5136. Do not the schools have playgrounds in York ?—Yes, but they only play in them in recess time, not after school hours ; just in the short recess they crowd in them and run about.

5137. Would you suggest municipal action to provide this ?—Yes.

5138. And they should keep caretakers and instructors in the open spaces ?—In America, for instance in Boston, there is no single open space which has not one or two janitors as they call them, men or women who have had experience of kindergarten methods, and who organise the play for the children. That is growing enormously in American cities ; they are spending considerable sums. They see the need for really organising play just as a master in a better class school here does. He knows it is no good letting the children stand about, and shiver in the playground with their hands in their pockets ; it is necessary to have someone to take charge of and organise the games.

5139. Under the Swimming Baths Act you have baths, I suppose ?—Yes.

5140. Are they used ?—Yes, and they bathe in the river also.

5141. On the whole, from your experience, which is of a very considerable kind, may I take it that you think ameliorative tendencies are generally getting the upper hand in the struggle for national prosperity, or the reverse ?—I think the grave point is the constantly increasing number of people who are subjected to town life. We are now beginning to realise that we cannot much longer recruit the towns from the country. I speak without statistical information, but I should have imagined that the increase in the town population was really overtaking the ameliorative agencies.

5142. For every one person who lived in the towns in 1851 there are three now. The number in the rural population has slightly diminished. That is in what are called urban districts, but there are vast numbers of urban districts which are just as healthy as the country: they are not densely populated ?—67 per cent. of the population are living in towns of over 10,000.

5143. But there are zones in all those towns—suburban zones which are perfectly healthy ?—Yes, there are zones which are healthy in all towns, but there are some of the worst slums in some of the smallest towns. Taking a town like Hitchin, you cannot find any slums in London worse than those.

5144. (*Mr. Struthers.*) Garden City is close by Hitchin ? —Yes. The slums are terrible in Hitchin.

5145. (*Chairman.*) That does not effect any very large proportion of the population ?—I am not sure that it does not.

5146. It is a small place ?—I am speaking of the proportion to the population of Hitchin, and if you take it that in other towns the proportion is the same it would.

5147. But I must submit it does not at all follow that because there is a small section of the population in Hitchin which live in these conditions that you would find the same proportion in other towns, which rather seems to be your idea ?—No, except that I have taken an opportunity when I have been knocking about lately to see for myself. Whenever I have had a few hours in a town I get somebody to take me round, and I have never found any town without those conditions. The best town I have been through is Leicester.

5148. Infantile mortality is higher there than any other town in England ?—I have travelled about and been lecturing a great deal lately, and I have had people take me round. If I go into one town after another and find the same conditions everywhere, I am more or less justified in saying that those conditions prevail.

5149. Of course if you generalise from a large number of instances that is quite different.

5150. (*Dr. Tatham.*) Do I understand from what you have said, and from the cursory reading which has been possible to me, of your interesting book, that your observation has been mainly concerned with the city of York ?—My general observations.

5151. I think your book is largely based upon that ?—The book was based on York entirely.

5152. Generally speaking, your observations have been more concerned with the city of York than any other part ? —Yes, but always bearing in mind such knowledge as I have of other towns, which I have tried to get as I travelled about.

5153. Is it your opinion after careful consideration which I am sure you must have given to the point, that alien immigration is at the bottom of a good deal of the poverty which you speak of in our great towns ?—I do not know. It certainly is not so in some towns in the north. It does not affect us at all in a town such as York.

5154. You are aware of what is stated to be the effect of alien immigration on labour generally ?—Yes, to lower the standard of life.

5155. To lower the wages to vanishing point almost, so that English people cannot live on them ?—Yes.

5156. Do you think that is to any large extent the effect of alien immigration in any great towns which you know of ?—It certainly has a bad effect in towns where alien immigration is an important factor.

5157. Upon that point you have no information ?—I have no definite information. I know in Leeds it has a bad effect upon wages.

5158. We have had evidence here that it has a bad effect in many cases. You spoke just now of a health society they have in York ?—Yes.

5159. That is one of recent establishment, I think ?—Yes.

5160. Could you detail to me in a few words the kind of work they are doing ?—They organise lectures. They have as secretary a lady who used to be a sister in one of the London hospitals, and who also held some post under the County Council—I think a health lecturer or something

like that—and she visits very largely amongst the poor. She does a good deal of this visiting in connection with the infants milk depôt which was opened by this health society. We seek to influence the Council generally to form public opinion on health and housing matters.

5161. Are there not several ladies engaged in that work in York ?—Only the one paid by the Society. My secretary does a great deal. She was a sanitary inspector.

5162. Are you aware of the work which has been done for a considerable number of years now in Manchester by the Ladies' Health Society ?—Yes.

5163. From what you have said in answer to the Chairman, I think you were scarcely aware of the very extended work which the ladies of that Society are doing. I might probably shortly explain to you that that Society consists of something between twelve and twenty ladies who are engaged in domiciliary visits amongst the poor, personal visits, and that under them they have acting a very large number of ordinary women of the working class, who, under the direction of the ladies, undertake work of great importance amongst the poor. Were you quite aware of that ?—Yes. I know just how it is worked.

5164. And for a great many years now they have been doing that work ?—Yes. All I was saying in answer to the Chairman was that I rather doubted whether these working women whom they employ would be quite suitable to take up the very delicate work of advising the mothers how to feed their children. A working woman might take it from a person whom she considered a lady, and not from another working woman.

5165. I think I ought to tell you that each paid district visitor works under the direction of a lady who is really responsible to the Society for the work in her district ?—I am aware of that.

5166. I am glad to be able to tell you that is so from personal experience ?—I was staying with one of those ladies a short time ago. I think a good deal of their work consists in disinfecting houses, and in general teaching with regard to cleanliness, and so forth.

5167. That is part of their work, but they are also engaged in instructing the poor how to keep house, for instance, and how to cook food for the family, and how to look after the children, and how to feed them ?—I think the work is entirely admirable.

5168. All this work is being done under the direct personal supervision of the Medical Officer of Health for the city ?—Yes.

5169. You are speaking now of infant mortality in York, and you are showing—as you have done in your book—the enormous difference between the mortality in different parts even of that town ?—Yes.

5170. Differing from 94 in 1,000 to something like 247 ? —Yes.

5171. Do you think the higher rate is due mainly to poverty of the mothers who are unable to give proper nutriment to their children ?—Poverty and all that poverty means—bad housing, bad clothing, bad feeding, and neglect and ignorance.

5172. And it is amongst the slum dwellers mainly that this terrible mortality exists, does it not ?—No, there is a very high mortality in districts which are not the worst slums.

5173. But the poorest districts ?—Yes, but not necessarily slums. I distinguish between a dirty neglected house which one associates with a slum and one where there is honest poverty.

5174. Do you find that consumption is very destructive in York amongst the younger part of the population ?—I am afraid I forget the figures. There is undoubtedly a great amount.

5175. You think there is an excessive amount compared to other towns ?—I do not know about compared with other towns.

5176. Speaking generally, there is a great deal ?—Yes. There is a very large amount of consumption in York.

5177. And that amongst the children ?—Young people —not quite children I think.

5178. (*Mr. Lindsell.*) I think you expressed the opinion that the increased evils in towns are outpacing the palliatives ?—Yes, that is an opinion, it is not based on statistical information.

5179. You seem inclined to hold that opinion ?—One fears that.

5180. You fear that the rapid increase of urban life is outpacing the palliatives which modern science and modern philanthropy are introducing ?—I am afraid so. I would not like to stake my reputation on the statement.

5181. Given what remedies there may be, town life must be in itself worse than country life ?—I think a great deal can be done by having the town worker to dwell outside.

5182. Decentralisation ?—Yes.

5183. That is your cure ?—Yes. You can have your workers living outside in the scheme I briefly outlined while they are working inside.

5184. That necessitates a good deal of travelling by trams and railways ?—Yes.

5185. Distance from work is not altogether a good thing? —It is a choice of evils.

5186. Do you not think that the work and the workmen can go together—decentralise the centres of work as well as the centres of population ? I think you can to a certain extent ?—There are very great conveniences in having factories and offices close together.

5187. You know there are various attempts being made in that direction ?—Yes.

5188. Do you feel sanguine about their success ? In regard to the economical condition of labour, generally speaking, the tendency has always been to draw together in large aggregate groups ?—One cannot help feeling that the movement is somewhat artificial. It is opposed to economic tendencies. If you can educate people up to it, well and good, but the amount of labour and labour of a very high order, which is being put into this Garden City movement at the present moment is enormous. One almost feels it will always be so. I do not think you will always find people who are prepared to put that into these things.

5189. It is a sort of hothouse growth, rather than a natural one ?—I think the Garden City will be immensely educative, but I should be very much surprised—and very much delighted—if one saw a large growth of Garden Cities on anything like natural lines. There are undoubtedly for any business immense conveniences in being near together to be able to just run across to your printers or tin-maker, or solicitor.

5190. (*Chairman.*) Has not the telephone rather annihilated distance ?—Yes, but the telephone, of course, would not bring back the proofs from your printer or bring you the tins, or boxes that you want, and that kind of thing. Then there is another thing, namely, the constant variations in the number of people you require. Another advantage is this, in our town for instance, the railway employs the fathers and we employ the children very largely. If there were no railway near at hand, we should be very awkwardly situated.

5191. (*Mr. Lindsell.*) The employé in a factory must necessarily be less healthy than an employé in the open air, however well ventilated the factory may be ?—Yes. Immense improvements might be made. We have large rooms in our factory where about 500 girls are employed, and the air is changed completely every seven minutes. It is passed through water screens—iced water in summer—so that the air will be very pure. One feels that in the coming century there will be a lifting up of the ideals with regard to ventilation in the same way as we have had in the past century with regard to drainage.

5192-3. You are also inclined to think that these bad influences are not confined to the slum population, but town life injuriously affects the class higher than the class that is living on the verge of absolute poverty ? —I think there is no doubt about it.

5194. Then you are almost inclined to believe in progressive physical deterioration as things are at present ?—No, I do not think so, because I think you have seen

Mr. Rowntree.

almost your worst now. You have practically nothing more to draw from the country now.

5195. But you can go on increasing the towns and increasing the town population ?—Yes ; but the palliatives will begin to tell. You have the bulk of your people in the towns already, and you are only beginning your palliatives. As you increase the palliatives you will improve the physique in your towns.

5196. Among the palliatives you would put in a very high position, not merely the improved conditions of life, but improved attention to the very, very young ?—I would give improved attention to the very, very young, and to food, and I would put temperance very high, and, of course, housing.

5197. I suppose intemperance does not tell upon the constitution till a man has reached a certain age ?—But the children are neglected. I am not dealing with the physiological effects of alcohol—they take a long time to work ; but I am talking of money going in drink which ought to go in support of the children. One-sixth of the income of the working classes at present goes for drink.

5198. You think the Norwegian and Swedish system of placing all the drink traffic in the hands of monopolies, under certain restrictions, is the best solution of the difficulty ?—A somewhat modified system. I have the outlines of it all here.

5199. Would you entirely confiscate all existing interests ?—The interests of the public houses. I would leave the brewing in private hands.

5200. But how would you deal with the business in which several people depend for their livelihood upon the property itself ; would you abolish all tied houses ? Suppose a brewery had 100 houses—a very large freehold—scattered over large areas, and these houses are deprived of their licences, they would become practically valueless ? —I would give them a time notice ; I would not give them any national compensation.

5201. That is the publican ; he can seek another livelihood ; but there are certain people who have sunk a large capital in a brewery and the property thereto annexed ; if you adopt this system without some consideration for them you entirely destroy that property ?—It is the risk of an abnormally profitable trade.

5202. Supposing it is paying 6 or 7 per cent., if you did away with these houses it would pay nothing ?—They have taken their risk.

5203. A few large brewery trusts would then get the whole supply of the country : would you not ruin thousands of perfectly innocent people ? Would it not be hard to destroy all the small brewers in the country ?—I do not think that you would necessarily destroy them. A certain amount of drink would be required—a less amount, of course.

5204. The licences would all be taken away, and another place would be set up, and the Public House Trust Houses, as we will call them, would probably go to one or two large breweries in the town, which would amalgamate and form a gigantic trust which would get the business and ruin all the country business ?—I do not see that it follows. People would go where they could get the best beer.

5205. Do you think that business deprived of freehold properties could compete with the large ones ; would not all the country brewers follow the fate of the country bankers ?—They might amalgamate themselves, possibly.

5206. You think it could be done without any great injustice ? I am not talking of the publican but of the owner of brewery property. It seems a very large problem ? —I should be perfectly prepared to give a time notice ; I should not go further than that.

5207. What is your opinion of the rival harm done by the gigantic gin palace and the small country public house. Do you not think that one tendency of the extinction of a large number of licences would be the vast growth of certain large establishments which would lead to a great deal more harmful drinking than the small country public house where just a few neighbours gather together every night ?—I think some reduction of the number of licensed houses in England while the trade is still in private hands will never make any great change in the drinking habits of the people. I think the only solution of the question is to take the trade out of private hands.

5208. And to put it into companies with a monopoly ? —Yes. The interests of the nation are to reduce the consumption of alcohol ; the interests of the trade are to increase it. Every glass of drink that they sell means an added profit to them. The interests of the trade and the interests of the nation are diametrically opposed, and it seems to me that under no system of legislative jugglery can you possibly bring them together.

5209. Do you not think these companies might not only take the houses but the brewing also ?—Yes, if they like, I have no objection.

5210. If they had 5 per cent. they would be really glad to have it ?—I have no objection if they like.

5211. You were saying that the houses which you mentioned have a rent of about 4s. 6d. a week or something like that ?—Yes.

5212. (*Mr. Struthers.*) With taxes added ?—Yes.

5213. (*Mr. Lindsell.*) It is rather high for a country cottage, is it not ? The agricultural labourer does not pay that ?—No, but he does not pay any adequate return on his house at all. His wage is based on the fact that he will get a cheap cottage.

5214. It does not often happen that the house belongs to his employer ?—You will never find a builder putting up cottages in the country as a speculation or as a return upon capital. That is why you have your rural housing problem.

5215. (*Mr. Struthers.*) What are your rates ?—9d. or 10d.

5216. Does that include poor rate and school rate ?—Yes.

5217. (*Colonel Onslow.*) I should like to follow a point of Mr. Lindsell's : you say you will give a time notice to these small brewers ?—To all licence holders.

5218. You are, I think, a great manufacturer of chocolate ?—Yes.

5219. Supposing that the medical profession showed that it was very harmful : would you think it was fair that you should be given notice that the State were going to interfere with you, and without giving you any compensation for all the money you had spent in plant, and so on ?—We are simply discussing whether the trade have any legal right to their licences. They have never paid for them.

5220. (*Mr. Lindsell.*) I was talking of the manufacturer not the retailer ?—He has only paid for the freehold of his house.

5221. (*Colonel Onslow.*) Whether it is beer or whether it is cocoa, or anything else, it is a business, and if a man is suddenly to be stopped in that business, surely he ought to have compensation if he is going to be stopped by the State ?—But, surely, if the State has given licences for a year, they are absolutely at liberty to take them away at the end of the year.

5222. But the State have not got the licences at present ?—I mean the magistrates have given licences for a year, and there is no reason if the public say that there are too many licences or that they want them removed, why they should not be all removed. The brewers have taken all risks.

5223. In the excellent information which you have given us in regard to Class A and B of the standard of life, you give a great many examples of houses and full particulars about them, and there is one point I wish to ask you : who are the owners of those houses ? I do not mean the names, but what are they ?—Very often working people who own two or three.

5224. With no capital ?—Very little capital.

5225. Are any of them owned by men in a higher grade ? —Yes, a fair number.

5226. With capital ?—With capital.

5227. There are sanitary laws and sanitary inspectors and all that sort of thing who appear to be fully competent to deal with these matters : how is it the laws are not enforced ?—The lack of public opinion.

5228. But there must be sanitary inspectors ?—Yes, but there is no public opinion to see they do their duty.

5229. How is it possible under the sanitary laws that

there should be such a state of things as is pointed out here, of one water tap to twenty-four houses, one closet to something like on an average, seven or eight houses, and ashpits not cleared out: whose business is it to see to all that?—The municipality.

5230. Do not they do it?—No.

5231. Is there no means of forcing them to do it?—They have been forced to do it now.

5232. Why have not they been forced to do it before?—So long as public opinion did not absolutely force them to put the laws in order, they did not do it.

5233. What sort of persons were they who formed the Corporation that they had no higher sense of consideration for the people?—Many of them own property themselves.

5234. It is necessary to have somebody to force them?—I wrote to the Local Government Board with regard to the water taps

5235. (*Mr. Struthers.*) Then it was the Local Government Board who forced the municipalities to carry out the law?—Yes. What is required is a strong public opinion. It seems to me that the public should be enlightened regarding what the laws are, and what their powers are.

5236. It is not only in a town like York, where very likely the upper classes never see these things, but in the country where you constantly pass insanitary dwellings, and you can see by the outside, and the smell as you pass them, that they are insanitary?—Yes.

5237. If we are told, as most people seem to think, that the law is strong enough, how is it possible that those things can go on?—Because you have a council with very low ideals. Their medical officer of health reports that certain houses are insanitary; the council inspects them and says: "We are not going to take action in this case; it is all right." They do not know. Then there is nothing for it. The medical officer of health dare not write to the Local Government Board, because he would be dismissed, and therefore it requires somebody independently to take the odium upon himself, which is very considerable sometimes.

5238. Can a medical officer be dismissed by a county authority without the consent of the Local Government Board?—They certainly can in the towns.

5239. (*Chairman.*) Everywhere except London. You would advocate something being done to improve their security of tenure?—Yes, I think it should be done, because it is very difficult for a progressive medical officer as things are now.

5240. (*Colonel Onslow.*) It is practically impossible for a man to carry out his duty?—Yes, he cannot do it.

5241. Without losing his own livelihood?—That is so.

5242. Therefore, although the law is strong enough, the means of carrying out the law are not sufficient?—No.

5243. Of course you made some of these investigations yourself: it was not entirely done by your agents?—Some was done by myself, and I checked the others.

5244. You have personal knowledge of a great deal of what is vouched for in your book?—Yes. I do not say personal knowledge of it all, but I have satisfied myself as to its accuracy. I have not put anything there which I do not believe to be absolutely accurate. I have taken the very greatest pains to prove the accuracy of the information.

5245. (*Mr. Struthers.*) You rather infer the deterioration of the physique of the people from the increasing numbers in towns?—Yes.

5246. And from the proportion of people in primary poverty in York you infer about four millions right through the country?—I would not say that; I would not care to tie myself down to that. I say it is obvious they must be measured in millions.

5247. But, of course, the country districts on the basis of your reasoning must be better than York?—More healthy, yes. I do not know that there is less poverty, but I do not think it has such bad effects.

5248. You must allow something for the remaining population of the country districts; they are not all yet transferred to the towns?—No, but those which are left are largely young children and old people. If you look at the census figures you will find that the ages of people in the country are very different from those in towns.

5249. You spoke of the ignorance of the mothers about the care of their children; do you think that the mothers of the present day are worse in that respect than they were a generation ago?—I have no means of knowing.

5250. What do you think is the probability: do you not think there is some increase of knowledge even in the lower classes of recent years?—I think very likely that is so, but I should imagine a smaller number of mothers are nursing their children, and so, though the knowledge may be a little more, the physical deterioration due to ignorance may be greater.

5251. That may be due to physical weakness?—Yes,

5252. With regard to the visiting ladies you speak of, who work in connection with the depôt for distributing milk, I do not quite gather whether you mean that they should be amateurs or professionals, so to speak?—They should be professionals. They must be very carefully selected, they must have real knowledge, and they must be people of experience, and of great tact and sympathy.

5253. They must have special training?—Yes. For instance, one is coming to me to-day to help my secretary, and she would train her herself. She would start by taking her round with her, and in a few months' time she would be able to go by herself.

5254. Let us consider what the training means. I understand you lay considerable stress upon a knowledge of the constituents of food and a good range of physiological knowledge?—Yes, not more than an educated person can get up in a few months.

5255. Do you think that a person should be chartered to go round and advise people in this authoritative way who has not gone very thoroughly through a course of instruction on these subjects?—The problem is very much the same in every house.

5256. If you are going to select one, two or three individuals who are going to be placed in the special position of what will be acquired authority, they ought to be able to speak, not as to whether I, or you, or any ordinary intelligent person can speak about these matters, but with full knowledge?—If you only had one visitor I should not think of having her a person at all approaching an amateur, if you have one visitor she must be a person of real knowledge, but she could have working under her two or three whom she trains herself, and who would always come to her in all cases of difficulty.

5257. But this special person would be a professional?—Yes.

5258. And would be paid, I presume?—Yes.

5259. And indeed would be a person with practically a medical training?—The training of a nurse.

5260. Not more than that?—The training of a nurse with a certain amount of knowledge of hygiene, and so forth. I do not think medical training is necessary.

5261. Do you not think it would be a very useful occupation and profitable both to the persons and the town if certain medical ladies were appointed to these posts. I mean there are a considerable number of ladies who are now qualified to practice?—It would be a very excellent thing if you could get them, but the question is, if it is not impracticable except in certain cases.

5262. I should think you would get them at very reasonable rates—ladies of that description?—The ladies in my mind would have a salary of about £150 a year.

5263. I am sure you would get the ladies I speak of at a lower rate, because the corresponding man, the young practitioner, or the medical man beginning his professional life takes a situation on board ship, and so on, at £60 and £70, and sums like that, and female labour of whatever class is generally cheaper?—Yes.

5264. You speak of primary poverty; will you say what you mean by that?—Primary poverty is the poverty of families whose total earnings are insufficient for the maintenance of physical efficiency, no matter how carefully spent.

5265. What would that sum be: I suppose it would vary in different conditions?—It would vary in different towns according to rent and so forth. The figure I made

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out in York for a family of man, wife and three children, paying 4s. rent, was 21s. 8d.

5266. Paying 4s. for rent is primary poverty?—No, he would be in that class if the income fell below 21s. 8d. That is the amount which I say is necessary for physical efficiency.

5267. A person with that family with 18s. in York would certainly be in primary poverty?—Yes.

5268. That is to say he would not be able to get sufficient food to maintain himself and his family in a state of efficiency?—Yes. I am fully aware that those are only average figures. If you take half a dozen men they will probably all require different amounts of food to maintain them, but when you deal with thousands you must take an average figure. That average is based upon the best information available at the present time, the information of Dr. Atwater, of America, which I submitted for criticism to two or three British experts. I was speaking to him on the subject and he said he did not think that that figure was too high as an average.

5269. Besides the 4s. rent what other expenses are included?—Sixpence a week for clothing for parents and 5d. for children; 1s. 10d. for coal; and 2d. a week per head for all else.

5270. How much for food?—3s. for adults a week and 2s. 3d. on the average for children.

5271. On inquiry you find that that sum, no matter how invested, would not produce sufficient for proper nourishment?—Less than that would not for people engaged in moderate labour. If engaged in sedentary labour they would require less.

5272. For tailoring they would require less?—Yes. A navvy would require more.

5273. If in the open air they would require more?—If they were doing hard work in the open air they would require more.

5274. But even mild work in the open air?—I do not think so.

5275. Now about this plan with regard to buying up all the public houses and so on. I am not going into the question of compensation, but there is another point I wish to put to you: your plan resembles that of the Gothenburg?—Yes.

5276. But the essential difference between the two, as I take it, is this that whereas in Gothenburg and in the corresponding scheme in this country the profit in the public houses in any locality would be spent in that locality, you propose to put all the profit from all the localities into the national exchequer?—Yes, I think that is extremely important.

5277. When it goes from the national exchequer what are you going to do with it?—I would earmark a certain amount equal to £1 for every ten of the population to be spent in the provision of adequate counter attractions.

5278. In the different localities?—In the different localities. That would take four millions.

5279. So that you collect the profit from the different localities by excise officers, that is to say, officers of the Central Government, and then do some calculations by clerks in an office, and hand it back to them again?—Yes, in proportion to the population, and not in proportion to the amount they sent up. That is a *sine qua non*.

5280. Why do you lay such stress upon this, because it would be more expensive?—So that there should be no inducement to the locality at all to drink. If the locality like to pass the local veto, and close public houses, it would get just as much as the locality which drinks heavily.

5281. The mere question of profits to the locality from public houses managed by them would certainly make an ordinary locality indisposed to veto drink absolutely; but putting the local veto aside, do you think an ordinary locality, even if it got profits from public houses in its district would be at all disposed to positively encourage drinking?—Yes, I think so. I think if the local hospitals or local recreative agencies benefited directly in proportion to the amount consumed in the district, public opinion in that district would be in favour of drinking, and not in favour of suppressing drink.

5282. In that case the consumption of spirits in Gothenburg and Bergen ought to have gone up?—No. The Company system works so powerfully that in spite of defects the results are far better than under private lisence.

5283. It ought to be going up since the time the system was started?—No, I said it would go down if my scheme were introduced into Gothenburg.

5284. Take the people of Bergen; they certainly drink less spirits than they did under the old system when there was no monopoly?—Yes.

5285. When this scheme at Bergen was in working order for two or three years, did the people begin to realise that there was a very considerable profit?—Yes.

5286-7. On your theory, that ought to have led these people to encourage drink, and therefore the consumption of spirits in the later years of the monopoly ought to have been greater than it was in the beginning; is not that a good argument?—The Temperance and Reformers Legislators of Norway realized the danger of the system adopted in Sweden, under which the profits of the trade went directly to local objects, and in 1894 a law was passed whereby 65 per cent. of the profits goes to the State. I do not see why t should take a few years for localities to find out that they are making a considerable profit. I do not see why they could not recognise that from the first day. It would not take them long to realise that if all the profits of the district are going to be spent in the district it is to the advantage of the district that the profits should be as large as possible.

5288. Does it not exactly follow from that, that once you have introduced this system, the consumption of liquor would go on increasing, because the popular opinion is in favour of the consumption of liquor?—No, I don't think so at all.

5289. If it does not encourage the consumption of liquor what is the good of taking away the profits from the locality and putting them into the national exchequer?—I thought you were referring to my proposal with regard to the consumption of liquor?

5290. No, I am speaking of the monopoly system generally?—I thought you were referring to my proposal. So long as there is a knowledge that the rates are lowered by the amount that is drunk in that locality, there will always be a tendency on the part of the locality to oppose any action which would materially reduce the consumption of alcohol.

5291. Putting it the other way, I understood you rather to say, that in addition to that there would be a positive desire on the part of the community to increase the consumption of liquor in order to get further profits of this kind?—I think that if increased consumption meant diminished rates the danger referred to would be continually felt.

5292. I think that it certainly would be an obstacle in the way of imposing a veto, but I do not think that the mere fact of profits accruing to the public houses would make the people in the locality encourage drinking in order to make larger profits?—What I feel is that it would discourage any progressive temperance sentiment in the district.

5293. It would discourage any movement in favour of an absolute veto?—Or even materially reducing the consumption of alcohol apart from absolute veto.

5294. What sort of steps do you propose to take for reducing the consumption?—You might say that we start with one house per 1,000 of the population. There might be a temperance propaganda going on in the district—not teetotal, but temperance propaganda. So long as there was no influence working against it, it might bring the locality to such a point that the next time they came to vote they would be in favour of one in 2,000 of the population instead of one in 1,000. But if there were against them the knowledge that if the consumption were reduced the rates would go up, that would be constantly put in opposition to progressive temperance sentiments.

5295. That assumes rather that some reduction of the number of public houses would certainly reduce the consumption of drink?—If you do it to a large extent, it would.

5296. If you do it to such an extent that you are approaching the veto, I am with you at once; it is cer-

tainly an obstacle in the way of people vetoing it, or even approaching the veto, but I do not think that that would ever lead people to encourage drinking for the sake of increasing local profits or diminishing local rates. If that view is right, then I do not see the gain in transferring the money to the National Exchequer, and distributing out to them again. That is a more costly system, is it not?—What would you do supposing there were country districts which had adopted the veto? Would they get nothing?

5297–8. They would get nothing?—They would be penalised.

5299. It would depend on the size of the district to a certain extent. You said that in Boston the Corporation have appointed officials to take charge of games in the public parks?—Yes.

5300. You do not know whether it is the municipal authority or private enterprise?—It is a public authority.

5301. Is that a recent thing?—Yes, comparatively.

5302. Where would one get information about that?—The whole thing is in this book. (*Book handed to Mr. Struthers.*)

5303. You spoke of slums in Hitchin?—Yes.

5304. That is quite a small town, is it not?—Yes, I should guess it to be about 3,000 or 4,000.

5305. Slums in a town of that kind cannot be so very bad, because there is no difficulty in getting to the open country as there is in York?—The overcrowding in some of those houses is terrible, and the conditions at night also, when all the windows are closed, as they religiously are in slums.

5306. With regard to the overcrowding, that is another case of the law not being carried out?—Yes, I think there are conditions there which are really illegal.

5307. You said that in York, while the parents are employed in the railway, the children are employed in work such as yours?—Yes.

5308. At what age do you take children?—Fourteen, fifteen, and sixteen.

5309. Not earlier than fourteen?—Very exceptionally, when a child has passed its labour examination.

5310. With regard to the comparative healthiness of open air employment, it seems to be assumed that open air is necessarily healthier: is it your opinion that work in the open air is necessarily healthier than it is in a well-ventilated factory?—If you have a really well-ventilated factory, I do not know that the open air would be materially healthier.

5311. Take a moderately ventilated factory—I am going to put against the case of the operative in the moderately ventilated factory the case of an agricultural labourer, who is working in the fields in all sorts of weather?—I would not say that the conditions of the agricultural labourer are better.

5312. He is subject to wet and exposure, almost invariably ending in rheumatism by the time he is forty?—Yes.

5313. It has been so often said that open air employment is necessarily healthier than work in towns generally. Is it your opinion that that is quite established?—Not if you have a reasonable ventilation in your workrooms, and if you are not living in overcrowded conditions.

5314. And also that for any kind of employment that can be carried on in the open air to economic profit there are counterbalancing disadvantages?—Certainly.

5315. (*Colonel Fox.*) You were saying just now that a great number of children who were born into the world are affected because the mothers do not understand the choice of food for them, or how to cook it—it is ignorance?—It is not quite a question of cooking with the young children.

5316. It is a question of cooking when they get over the milk stage?—Yes.

5317. Will you tell me why you do not approve of girls receiving instruction at schools when the impressions are so strong and so lasting; why do you not approve of girls being trained to cook?—I do approve of it so far as it goes, but I think they forget a great deal between the time of their learning and the time they have to practise it.

Mr. Rowntree.

5318. I mean girls between thirteen and fourteen?—Most of them would not practice it till they are twenty.

5319. It is the most receptive time of their lives?—Yes. The amount they learn at school is very small.

5320. But simple cookery?—I think as far as it goes it is good. I would not for a moment be in favour of reducing the amount of knowledge of that kind.

5321. I am not speaking of fancy cooking and going in for competitions?—I am in favour of increasing the knowledge of simple cookery rather than the reverse.

5322. First of all, they would assist their mothers immediately after going from school?—They go into factories; very few of the girls we are considering will go and help their mothers. They will either go into domestic service or else into factories. They do not stay at home.

5323. At all events, in four years' time they will probably become mothers themselves, and they will remember the things which they learnt at school which they liked, just as we remember our nursery rhymes and fairy tales?—Yes.

5324. It would be a very good means of getting this fashion into the homes of the poor working classes, would it not?—I think as far as it goes it is admirable.

5325. In addition to what you are stating about lady workers?—Yes.

5326. You suggested wiping out the brewers, I think?—Not wiping them out.

5327. In what way do you suppose the breweries will be carried on?—They will supply these companies.

5328. And be satisfied with a profit of 5 per cent.?—The brewers will simply supply the drink for these companies at such profits as they are able to obtain.

5329. It will not affect the brewers in any way?—It will, undoubtedly.

5330. Why?—Because they would not have any tied houses.

5331. You would do away with tied houses?—Yes.

5332. You do not suggest putting the brewing into the hands of the municipal authorities, or anything of that kind?—No, I do not think there is any need to do that.

5333. Simply do away with tied houses?—Yes, and put the whole retail trade under company control.

5334. Why not introduce in place of the tied houses what I have already suggested to you, these forms of restaurants instead of purely beer-houses. When I say restaurant, I mean a place where they can have eatables as well as drinkables?—I should not object to see restaurants where drink is simply taken along with food, where a man wants to go and get food and he gets a glass of beer along with it.

5335. Then you speak of what you call slum dwellers. Are those people who do not work at all? How do you define a slum dweller?—What I mean by a slum dweller is a happy-go-lucky person who spends his income as soon as he gets it, who cares nothing for his home, who neglects his home; who may make very good wages, but who drinks them and eats them. Probably if he gets his wages on Friday, on Monday he is pawning his clothes. I distinguish him from the man who is genuinely poor and is trying to do work. He may be drinking and gambling to some extent, but he is genuinely poor and does not get a good wage, but leads a steady life.

5336. It is not simply a slum dweller but a loafer?—Very often; not always—he may be a hard worker.

5337. A slum dweller does not mean simply a man who is an unemployed loafer?—No.

5338. You were saying just now that you attributed the poverty amongst the working classes to alcoholic drink?—The secondary poverty.

Mr. Rowntree.

5339. I was surprised to hear you say that only about a sixth of the earnings was spent in drink; I thought the proportion was much more?—6s. per week is a figure which is practically established now as the result of very exhaustive inquiries.

5340. Out of a 36s. wage?—35s. is looked upon as the average family income, and 6s. out of that goes for drink. It is not my own figure; I am merely quoting a fact.

5341. In what you call Class D, skilled workers at 30s. and over, and unskilled workers, they are those whose families can help them in making things better?—It is possible that in Class D there is a greater proportion than that, but I take the working classes as a whole. Of course the working class includes a great number of people who only earn 15s., 16s., or 17s. These, no doubt, spend less than 6s., and therefore the better paid section of the working classes must spend more than that sum.

5342. We know of men in the docks earning from 30s. a week, and at the end of the week they drink pretty well half their pay?—I think that is quite likely. The figures have never been taken out, but amongst those who receive 35s. a week, or high wages, the amount will very likely be more than 6s. Six shillings is the average figure of the working classes and includes those who have not got it to spend.

5343. Amongst those who get more you think the drinking is higher?—Yes.

5344. Do you not think that the reason of that is that they have no other place to go to but their dirty home and therefore they go to a public house?—Very largely so.

5345. And it is those beer-houses which you want to see abolished and to give them something better to go to, to prevent them spending their money purely on drink?—I would make the really attractive thing the place where there is no drink at all. There we are at issue.

5346. (*Chairman.*) There is one thing I want to ask you. You were talking about the ventilation of factories, and you appeared to think that there was still a great deal of room for improvement. Are you acquainted with Section 7 (1) of the Act of 1901: "In every room in any factory or workshop sufficient means of ventilation shall be provided and sufficient ventilation shall be maintained"?—The word "sufficient" has not been clearly defined.

5347. It goes on: "The Secretary of State may by special order prescribe a standard of sufficient ventilation for any class of factories or workshops of that class, and an order made under this power may supersede any provision of this Act or Order of the Secretary of State with reference to ventilation in cotton cloth factories."?—The word "sufficient" has not been defined. The Commission appointed in 1901 made a definite recommendation as to the amount of CO_2 per 10,000 parts of air that should be allowed as a maximum. They would furnish the factory inspectors with simple instructions for testing the amount of impurity in the air, and if an inspector found more than twelve parts he could say: "Now I condemn this room and you must forthwith introduce ventilation; I shall be here again in a month, and you must rectify it before that time.".

5348. Do I understand you to say that the Secretary of State has not made a special order under that Section?—It was our own factory that I was speaking about. I imagine it is much better than the average, because it is a modern factory, and there was some moving ventilation there.

5349. (*Mr. Struthers.*) You are aware that the returns made by the Board of Agriculture show that the wages of agricultural labourers in various parts of England range from 12s. to a maximum of 16s. and 17s.?—Yes.

5350. Would it be your opinion that all those agricultural labourers live in a condition of primary poverty?—It depends on the size of their family and the rents they pay. I do not wish to speak about the country because I do not know what subsidiary means of income there are. One knows they can get fuel, they can get fruit and vegetables, and they have allotments; they can also get rabbits and milk and all that kind of thing.

5351. In brief, you think there are many circumstances which explain why an agricultural labourer on 14s. may be in a condition of greater efficiency than a town man with 21s.?—Than a town man with considerably more than 14s., at any rate.

5352. (*Chairman.*) Would you say that a larger proportion of people are living in a condition of primary poverty now as compared with forty years ago?—Certainly not—not so large a proportion.

5353. Should you think absolutely a greater number?—I have no knowledge of my own, but from what one has read of those who have studied the subject the opinion appears to be that the number is very possibly as great as it has ever been, but the proportion will be considerably less.

5354. Are you aware that, so far as the general rate of real wages can be represented by figures, in the years 1860 to 1864 it was represented by the figures 70, and in the years 1901 to 1902 by the figures 136; that is an enormous improvement?—Yes.

5355. Nearly double?—Yes.

5356. It is nearly 100 per cent. in forty years?—I am not aware of those figures.

5357. These are the figures given in the "Westminster Gazette"?—There were figures in the Fiscal Blue-book to the effect that they rose from 1865 to 1900 by 44 per cent., general wages; agricultural wages considerably more.

ELEVENTH DAY.

Wednesday, 17th February, 1904.

PRESENT.

Mr. ALMERIC W. FITZ ROY (*in the Chair*).

Colonel G. M. FOX.
Mr. J. G. LEGGE.
Mr. H. M. LINDSELL.
Colonel GEORGE T. ONSLOW.
Mr. JOHN STRUTHERS.
Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary*).

The Hon. Mrs. ARTHUR LYTTELTON, called; and Examined.

Mrs. Lyttelton.

5358. (*Chairman.*) We have before us a *précis* of the points upon which you are prepared to speak. Will you state what your experience has been upon the subject of our inquiry?—I have not had any direct experience in schools, that is to say I have never been a school manager, but I have had considerable experience amongst the poor in Cambridge, in a suburb of Manchester, where I was for three years Poor Law guardian, and in Hampshire, Herefordshire.

5359. Have you been able to form any general opinion upon the question of physical deterioration; should you say, looking back for ten or twenty years, or as many years as you are able to look back, that the conditions have become aggravated of late?—I think that they have. As far as I can tell, the girls are more weakly and less able to work, and certainly the teeth are worse; but that is a difficult question.

5360. It is not a very certain index of physical deterioration, as a rule?—I should say certainly, from what one hears of the conditions years ago, that there is less power amongst those growing up—less force, they have less strength altogether.

5361. You could not go so far as to say whether it is general or applies only to certain parts of the country where the conditions are most unfavourable? We have had a great deal of evidence from Manchester and its neighbourhood where it is stated things are very bad indeed?—I know something about Herefordshire. I should say that the girls who came for instance into my mother's service are less strong than in my girlhood thirty years ago.

5362. Has that been due to any extent to the migration of the better class in Herefordshire from the rural districts into the towns leaving the worst to remain?—I should not have said so from my own experience. They have migrated to some extent. No, I should say not—I should say that these girls thirty years ago would have been more capable and stronger than they are now.

5363. They are the pick of the rural population of Herefordshire at the present moment?—I suppose they are the pick. Herefordshire is very sparsely populated of course, as a whole.

5364. Why should Herefordshire be in this position? I suppose the cottages are better and the water supply is better than formerly?—They get no milk. I do not know whether it was so thirty years ago. Certainly before that they used to get more milk. My own impression also is that very often they are in school rather too young.

5365. The rural schools are fairly well ventilated, are they not?—Yes, but they walk great distances, and they go very young, because the mothers like to get rid of them; then they are often kept in classes sitting up and quiet, which is said to be good for discipline, and is, in a sense, but we should not like our own children to be treated in that way.

5366. They are made to sit quiet without sufficient intervals of exercise you think?—Well, as to exercise, they get a certain amount of play, but the playgrounds are often poor, and they are kept in classes where they sit up and are kept quiet, whereas our own children would be playing about and lying down occasionally.

5367. And then you have something to say about children between three and five years of age?—Yes, They send them to school early because they like to get rid of them. If you ask them if they would not like to have them at home they would say they would not, and one of their reasons is because they wear out so many boots running about in the fields. We have all through England I think, by the School Legislation, kept the children in worse air than they would have been thirty or forty years ago, when they were not obliged to be in school and could run about.

5368. We are aware of the importance of fresh air, but I should have thought that in the rural districts the feeding was not worse than it was a few years ago—one would have thought it might be better because the wages are higher?—I think that this enormous increase of tinned meats has contributed to this deterioration. They buy so much tinned food. I cannot speak from my own experience of it, but I know from friends who have told me that they have many tinned things, and they feed the children upon these a great deal. Then as to bread. I know in Hampshire some years ago they used to have cottage baking and the flour was very much better. The bread they eat now is often poor stuff. The baker goes round and supplies them with bread, it is of course much easier to take the bread from the baker, so that they have given up the old ovens. I do not know whether it obtained in Hereford, but certainly in Hampshire it did. They used also to brew in Hampshire a rather light beer, but that is entirely gone. I think that they have got to depend upon the foods which are brought to them in tins, and they are not so nutritious as the old foods.

5369. But in the case of very young children the suitable diet is milk. Do the mothers suckle their children?—They usually do that.

5370. That solves the problem for the first year or so?—Yes.

5371. We have heard that very few of them get milk?—I think that they do not get it and they do not care to buy it. They think that it is too expensive and they cannot see that it is the proper thing. They do not get the milk at all. It pays the farmer better to send it to big centres of population or the neighbouring towns and the children do not get it at all. They would take it if they got it given to them.

5372. Do you think that the British rustic will ever acquire a taste for goat's milk?—I do not know.

5373. The goat is very hardy, and in parts of England where there are waste lands where they can feed them it would be a good thing and certainly the French peasants appreciate the advantage of goat's milk?—Yes. I was talking once to a woman in Normandy when I was waiting at a railway station and she began to speak about children. She was surprised and shocked to hear that the poor children did not get milk in this country. She

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said that in France they got either goat's or cow's milk. Mostly goat's I suppose, but she evidently thought that to bring up children without milk was simply horrible.

5374. You think that there is less milk used in the rural districts than there was thirty or forty years ago?—Yes, because the transport has become much easier and more organised, and where it used to pay the farmer to sell the milk to the people in his neighbourhood he now sends it away. Unless you get some organised method of getting milk, and can induce people to believe that milk is essential, I do not see how it is to be altered.

5375. Do you think much could be done in schools in rural districts to instil sound notions of household management into girls?—Yes. It could be done in school hours—simple cookery lessons and some kind of health lessons given to the girls in school hours.

5376. But is it not within the power of the managers to do it under the Code, although it seems difficult?—It is not often done, is it?

5377. I do not know what the case is in the rural districts but it is so in the towns. The county council is the education authority now?—And in school hours?

5378. Yes. Of course the difficulty is the early age at which girls leave school—by the time that they become mother themselves do you not think they have forgotten what they have learnt in school by that time? I want to know whether by keeping the girls longer in school, and making them take those subjects compulsorily, you could do anything?—Yes, if it is compulsory. The eager girls will learn anyhow, but the girls who are not keen do not go to the continuation classes. Of course some of them go to service and there they would learn a certain amount.

5379. (*Mr. Lindsell.*) Girls' wages are useful to the family you know?—Yes, certainly.

5380. (*Chairman.*) I suppose domestic service is to a certain extent a training for household management?—Yes, I think it is.

5381. They must pick up something where there are children in the household?—But they go back to their own cottages, where everything is different. That is what made me say that I should like to see the cookery teaching done in the people's own houses, because they see excellent utensils and fine things at school, and when they go back to their own homes the whole thing is different.

5382. You want a simpler method and ruder apparatus?—A simpler method and ruder apparatus—much more like what they have in New York. They have tenement classes in New York which are very successful. First they did not take to it, but afterwards they found that they would learn something, and they could be taught to use up vegetables and cottage garden stuff.

5383. We had a lady here the other day who told us that she was staying at a small farm house where they had a cottage garden full of fruit and vegetables, but the people lived on tinned fruits and tinned vegetables?—Yes, I daresay. If they would learn anything about the making up of vegetables in the way the French people do with their stews it would be much better. If you could get tenement or cottage lectures where they could show them how to use up their things with their own home utensils it would be useful to them, for this they do not do in the elaborate classes. I do not fancy that it is done in England. I have not heard of it. In a few cases it may be done, but not at all widely. You would have to pay for it, and it would have to be done by the authority.

5384. I suppose the cottagers are better than they were; much greater attention is given to sanitation?—In many cases I think that they are better than they were, but still a great many of them are very bad and they are overcrowded.

5385. Even in the rural districts?—Some of them are very bad still. Of course, they are improving very much, but some of them are very bad.

5386. Even with the decrease of the rural population the cottagers are over-crowded do you think?—The people cannot get cottages; they leave the country because they cannot get cottages. If a young couple want to get married they are often obliged to leave to get a house. It does not pay people to build the cottages; and then directly they get into the hands of the smaller owners, which sometimes happens, they are often very bad.

5387. Are the mothers merely ignorant or is it a reckless indifference?—I think that they are ignorant. You know what they say—that what is good for themselves must be good for the children.

5388. They think that it is a kindness to give the children what they get themselves?—Yes, I heard yesterday from a friend who was last year looking after some country holiday children, and provided them with excellent food, meat dinners, and tea and jam and cake, and when they went to bed a glass of milk and some bread: and one little thing of nine years of age said—"I do miss my tasty supper," and she was asked what the tasty supper was, and she said—"sometimes a bloater and sometimes a halfpenny saucer of pickles," and that was from a child of nine years of age.

5389. They want something with a bite in it?—Yes. My friend found that this halfpenny saucer of pickles was what was liked, and that they got all those tasty things at home, and it is bad, of course, for their physical development.

5390. In the rural districts is infant mortality greater than it was?—I do not know that: I do not think it is so in the districts with which I am acquainted. I do not know about others.

5391. You refer to health visitors in your memorandum. When you lived in Manchester was that system of lady health visitors in existence?—It was: it was not in our own suburb of Eccles—but it did a great deal of good in Manchester. They got the entrance into the houses and got to know the people, and the people began to trust them.

5392. And the assistants are paid by the municipality?—I think so.

5393. And they work under the direction of a committee?—Yes. I saw that the Battersea Borough Council proposes to have a lady health inspector. I do not know whether it has yet been sanctioned, it seemed to be a useful thing.

5394. It does not require a very large number of ladies to cover a considerable area, we understand?—I should not think it would.

5395. Mr. Rowntree, whose name is known in reference to York, I think said that one lady would deal with a population of 70,000.

5396. (*Dr. Tatham.*) He is wrong there.

5397. (*Chairman.*) He said that was with a special view of going to the houses of mothers when children were born: he said there were some forty births in York weekly, and perhaps one-fourth or one-fifth of those would be fit subjects for the advice and assistance of the lady visitors to mothers and their infant nutrition, and from that he argued that one lady could cover the whole ground, with assistants.

5398. Do you think there would be any difficulty in finding not only ladies with sympathy, but with knowledge?—It would be easier to get the knowledge than the sympathy. Of course you want a lot of tact.

5399. But a great many people have this sympathetic faculty in dealing with the poor?—You can easily get that knowledge, but you would have to be careful not to put the mothers' backs up.

5400. Many of the mothers of the upper classes have not very good ideas of the management of their children, have they?—That is true. If Health Inspectors were paid and it was a regularly understood profession, I have no doubt the people could be got who could take such a position.

5401. It is claimed that the system in Manchester has reduced the rate of infant mortality?—That may be so. I have no doubt that the results in Manchester have been wholly satisfactory.

5402. As you suggest here in your memorandum, do you think that parents might be given some notion as to what is required in the way of ventilation?—Often in

Manchester, if you found some one with a cold, they would say, "Oh, unfortunately the window was open a little, all night." It may be because they are accustomed to bad air in Manchester, and the atmosphere is often certainly very bad, but they do not mend it by shutting the window.

5403. We had a gentleman, Mr. Rees, from St. Thomas's in Pendleton, here the other day. Do you know him?—Yes, I know him a little.

5404. But he brought a very serious accusation against the local authorities in Manchester, for the way in which they winked at the pollution of the atmosphere; would you say that that is true?—It is perfectly true.

5405. And he described the Manchester atmosphere as very bad?—It is very bad, and when we lived there the one thing we were told was not to open the windows, but I do not think it is quite so bad as that. There is no reason why it should be so bad, and it might be immensely altered for the better.

5406. Mr. Rees said that there were very few prosecutions, and that, if they were prosecuted, the manufacturers paid from 5s. to £5 fine, and that it was much cheaper for the manufacturers to pay the fine once or twice a year rather than to go to any expense to remedy the evil?—They used to tell us that the remedy was to fine the stoker.

5407. But the manufacturers ought to be made responsible, ought not he?—But he does not care unless you send him to prison without a fine. If you fined the stokers they said it would be useful.

5408. Are the furnaces properly built?—They told us that if the stoker was more careful there would not be nearly the same amount of smoke. But they let the fires die down and then put a lot of coal on and black smoke issues, and the atmosphere—well London is nothing to it. The whole population must be affected by such an atmosphere. People care very little. I have sometimes talked to friends of mine who live there, and they do not seem to think that it mattered very much; they said the people were all very well, and what did it signify.

5409-10. *Are* they well? We have been told that the physique of the people of Manchester is extremely debilitated?—Yes, people say that they were kept going by the influx of people from the Dales to Manchester The police are a fine lot of fellows, and they mostly come from the Dales. People say that the atmosphere is not positively deleterious to health.

5411. We have had some suggestions for dealing with very young children by having an attendant in the school; do you think that would be pacticable?—I should like to see the young children in school put into a *crèche*, but that would involve more attendants to look after them.

5412. But not an attendant with a very superior training?—No. Do they teach them there? I did not know in these baby rooms that they taught them anything.

5413. (*Mr. Lindsell.*) Only to make things?—How long are they there?

5414. I should think up to about five years of age. They are inundated with these children under five years of age. The parent is not bound to send them until they are five years of age?—He can if he likes, and he constantly does.

5415. There is a feeling in some quarters that it is very much better not to send the children to school before they are five years of age?—Yes. It seems to me that it cannot be right to treat young children in that way. It must be bad for them in all ways. I should like the *crèche* system more fully developed and the children kept in it till a little later on.

5416. (*Chairman.*) There are hardly enough children in the average villages to make it pay?—I do not think it is so bad in villages.

5417. In villages they can be dealt with at home, you think?—It is more in the towns that it would be useful because it would not be so necessary in a village. I think even at five, perhaps, they might be better at home. I speak without much experience, but I think that, even if the *crèche* lasted a year or two longer than it does it would be better. In the case of our own children if they are taught later than five it is all right—they build up their physique in the meantime.

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5418. (*Mr. Struthers.*) They do not treat them in that way very long when they are young?—But only half an hour is too long at a time.

5419. But it does not come to more than that, but a great deal less.—Are not they sitting up in class?

5420. I think that the teaching of very young children consists mostly of games, and they are not more than a quarter of an hour at work, for instance?—Do they lie down at all?

5421. I understand that in these baby rooms they have cots for the very small children?—That is not after five years of age.

5422. It is what the child is fit for, and it is not a question of age. If the child were likely to be hurt by sitting up its position would be altered?—Do not you think that all young children are the better for lying down—it rests their backs.

5423. I am afraid I am not an authority upon that subject.

5424. (*Mr. Lindsell.*) They do sit at galleries and not at desks?—I think if they could be treated up to the age of seven with more room to play in and to lie down and lounge, it would be better for them.

5425. Would you abolish compulsory attendance?—No, but I should like to see them taught much more laxly up to seven, and to treat them as infants.

5426. (*Mr. Struthers.*) I think that it is the intention to treat them so?—I hope it is.

5427. Would you not be inclined to distinguish between the compulsory attendance in urban and rural districts? It might be quite reasonable at five in the towns and six in the country?—Yes, I think that is very likely to be true.

5428. As a matter of fact although nominally in Scotland there is compulsion at five years of age, in very few rural districts is it enforced. We cannot get the Board to enforce it and we do not try it?—I see.

5429. (*Dr. Tatham.*) I think I gathered from what you said this morning that you really think yourself, that there is progressive deterioration amongst the members of the poorer classes?—Yes. I should say that I do think so.

5430. Is it progressive?—Yes.

5431. And you would be of opinion that the way to counteract that would be by beginning in the school with the young children?—Yes.

5432. According to your own experience do you think that the children are sent to school frequently very imperfectly fed, and, therefore, unable to acquire such information as is offered to them?—I believe that to be so, but I do not know it from my personal experience. From what I know of very small children it is very likely to be so, because if you give them things they do not like they simply throw them away and do not eat them; and they are compelled by the present Code to go to school and often do so without sufficient food.

5433. And you would disapprove of that?—Very much so.

5434. Do you think there is anything like over pressure in the case of young children in the schools?—I do not know, but my impression is that it may be so, because every teacher is very anxious to make her own classes do well, and naturally enough therefore, there would be a tendency to press them.

5435. We have had a great deal of evidence to the effect that, in the opinion of witnesses, in the place of what is called book learning there should be given practical instruction to young children; would you concur in that?—Yes.

5436. And as they approach womanhood the girls should be taught to manage the house and to cook food and that kind of thing; is that in accordance with your views?—Quite so. I should like that teaching to be in school hours, not voluntary.

5437. And that kind of teaching should take the place of so-called book work?—Yes.

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5438. I think I gather from you that you know the neighbourhood of Eccles very well?—I lived there for five years.

5439. Do you think that comparing the children in the neighbourhood of Eccles with the children of, say, those in Herefordshire and other counties that you spoke of, the children in Eccles are physically inferior to the children of the country?—No; I should not have said they were, but Eccles is not Manchester, of course.

5440. I know the place quite well?—I was thinking of what the Chairman said about Manchester. No. I think that the children of Eccles compare very favourably. I think they are better fed in the north, and, so far as I know, they do not take so much of the tinned food and the pickles I spoke of as the children of London do. I think the poorer classes there eat very well, and I was always struck with it.

5441. But near to Eccles there are a great many much poorer people?—Yes, much poorer.

5442. Do you think that the poor people there take as much care of their children as they do in the country?—I should not think that there is much difference?—Of course, in the case of a person who drinks and has a moral lowness of tone, it is different, but taking one person with another, I should say it is about the same. I believe that nothing has done so much among the superior working women as the Women's Co-operative Guild, which has had a great educational effect upon them. It does not seem to get on so well in the south of England. I had a great deal to do with the Women's Co-operative Guild in Eccles. I was one of the people who started it there, and I was struck with the educative force it had, partly because it was managed by the women themselves. Women of the artisan class often gave the lectures; this is more effective than when lectures are given by the richer classes, with some exceptions, of course. This Co-operative Guild had an excellent effect. The members would discuss questions of health and management of children also, and I think that was very useful. That was the people teaching themselves. The women's branch of the Guild is almost solely educative.

5443. Working something like the Ladies' Health Society of Manchester?—Well, the Ladies' Health Society gets visitors and sends them round to teach people. The women who belong to the Co-operative Guild will listen to a lecture from one of their number, and discuss the subject afterwards. It is a voluntary thing entirely, and it is not done *de haut en bas* and they like it very much better. They are a very fine set of working women.

5444. (*Chairman.*) Do you get a large proportion of them?—Yes.

5445. (*Mr. Struthers.*) What sort of a place is Eccles; is it a village or a manufacturing town?—It is what is called a village, but it has 20,000 people in it. It was formerly a great residential suburb of Manchester; now the rich people are going away, and the middle class and the poor are increasing.

5446. What distance is it from Manchester?—Four miles, but there are houses all the way, and you go by tram.

5447. (*Colonel Onslow.*) Practically it is part of Manchester?—Yes. But beyond it there is a very large district called Patricroft, which is much poorer. We were always told that the people were not typical Lancashire people, because Manchester is very cosmopolitan. But they are a splendid lot of people. An audience of Manchester working women respond to a speaker quite as much as an audience of the richer class in the South, if not more. The Co-operative Guild is a very excellent thing, for, besides other subjects, it teaches the members how to manage their homes.

5448. (*Dr. Tatham.*) This guild is under the ægis of the ladies in that neighbourhood?—No, it is the women's branch of the great Co-operative Society and it is presided over by Miss Llewelyn Davies. But the point of it is that it is not started by ladies for the poor, but by the artisans for themselves.

5449. Do you not think that there would be a distinct advantage in connecting the guild with some advisory agency of this kind?—Possibly so.

5450. That is the reason why the Manchester Ladies' Health Society succeeds so. We have heard a good deal about the health visitors—they are really sanitary inspectors, but the reason why the whole thing succeeds is that operations are directed exclusively by ladies who go into the poorer districts and supervise the operation of the female health visitors from personal knowledge of them?—I fully believe that. I do not mean that is a reason against the health visitors, but simply that for women this Co-operative Guild is a great educative force.

5451. You spoke just now of the dearth of milk in the neighbourhood; is it worse in Eccles than in Herefordshire?—I do not think they have any milk anywhere.

5452. You trace the difficulty of obtaining milk to the fact that the farmers find it more profitable to send it to the big towns?—Yes, and constantly when they do make an effort the poor do not care to buy, because they are not properly aware of the advantage of milk; and this might be got over by teaching them its advantages.

5453. That seems to be the general opinion?—I think so.

5454. (*Mr. Lindsell.*) You would not say that the advantage of fresh air is less among the cottage population than it used to be?—I think I should, partly because the windows shut much better than they used to do and the draughts are kept out.

5455. One has known of windows that were not made to open in former times. I know one country—not England—where not a single farmer's or other person's house was constructed to open; they were hermetically sealed?—Well they do not open them much now. I am rather a fanatic on this subject and I often notice carefully as I am passing cottages and houses, and I find constantly that every window is shut except on a very fine day in summer. The houses are so much less draughty than they used to be and the people get much less fresh air; then children are kept in schools much longer and they do not run about so much out of doors. Although the schools are very well ventilated, if you go into the room you find that the air is not really fresh air.

5456. Is not it very much the fault of the teachers and not the fault of the building?—I quite believe that, but I do not think the teachers care enough about fresh air. They are often afraid of it; and the consequence is the children are brought up in a bad atmosphere.

5457. And modern improvements, both in the way of sanitary arrangements and cheap food, are not altogether an unmixed blessing if they have produced some of these evils?—I think they have.

5458. The extraordinary facility of getting all kinds of food without much trouble in cooking has produced a habit of laziness in girls you think?—Yes, but I do not think there is any reason why these household things should not be taught the children.

5459. The remedy is almost an educative one and not legislative at all?—I do not want to see a system of free food for children, and I think we ought to try everything we can before coming to that. I cannot but think that with proper education and care the thing might be done.

5460. You spoke of the tenement classes of New York. Are they classes held in people's own houses?—Yes, they are. They are classes held in the people's own homes; five or six women of the poorer class go to these lectures with their own cooking utensils and they have the advantage of seeing their own things used.

5461. There is a very large portion of the population in whose homes that could not possibly be done would you not say?—That is so.

5462. And the class one particularly wants to get at too?—Yes, you mean the people who are in London living in one room?

5463. In one room and a large family too. Could they be instructed elsewhere?—But you could have a room in a tenement house. The whole point is that it should be done with the things which they are accustomed to.

5464. The great difficulty would be, would it not, that the interference on the part of the health visitors and teachers would be resented in the homes very much at first? You would have a greater prejudice?—Well, you might, but I think that it would go after a bit. They would see the advantages of it. It would have to be very carefully organised, of course.

5465. With regard to very young children would you prefer that they should not go to school at all in the earlier years? Should the sending of children to school be discouraged or encouraged?—Where they have homes such as they have in the country where they can remain quiet without danger and comfortably and in fresh air I should send them later. In towns, where they have only a single room then perhaps it would be better to send them to a school and to get arrangements more on the *crèche* system up to rather a later age. It would depend rather upon the condition of the children.

5466. You think in our school system that they are over crammed?—Yes.

5467. That was much worse under the system of payment by results?—I daresay this new Education Bill in that way may possibly have a beneficial effect.

5468. The payment by results has been abandoned gradually now or rather is confined to a very few special subjects?—That I suppose is so.

5469. The advantage of the alteration would probably be that the county authorities being now large important educational bodies would take up the question in a more general spirit instead of leaving it to the haphazard decisions of school managers, and therefore wait a little time?—Yes the whole thing would be more studied; I have no doubt about that.

5470. (*Colonel Onslow.*) We have had evidence before us here by ladies who have seen a great deal of this sort of thing, that girls both in the town and country are less fitted for housewifery duties than their grandmothers were, and they attribute that mainly to the fact of their disinclination for home life. What do you say about that?—You mean where they go to factories?

5471. No; I mean more in the country. The young wife.—That the young wife is disinclined to house duties?

5472. Well, she is said to be lazy and does not get up in the mornings?—Well, some time ago, a friend told me that the woman lies in bed and the man gets up and makes her a cup of tea, but it is a thing I can hardly credit.

5473. You have not experienced that?—No; I should not have said that that was my experience, but I think that these people are very ignorant.

5474. It is not their own fault, but it is the want of the opportunity?—Well, in some cases they are delicate, and if you are not very strong, and you have to walk a quarter of a mile for water that is very tiring you know.

5475. We were told that one of the things that led to this state of things was that they were fond of amusement, or, to use a common expression, they were too fond of gadding about?—That would not occur in the country—there is often no place to go to, if you are speaking of the rural districts.

5476. I think we were told that that was the case in the country. You know Hampshire—what part of Hampshire?—Petersfield, on the borders of Sussex.

5477. You were speaking of cooking, and said that no bread is baked at home now—is not that a great deal owing to the fact that there is practically no gleaning now?—No doubt they used to glean.

5478. Before machinery was use it was very much in vogue in farming life; there was very much more corn of a kind, and the stubble was hard, and the people used to get enough corn in gleaning to last them throughout the year?—I daresay that is so; whatever may be the reason it is very lamentable that it should be so, because they could get good bread then.

5479. And if they did not get that they got the tail wheat. The less acreage of corn now would have that effect to a very considerable degree would it not?—That is very possible.

5480. Regarding the question of air, do not you think that very much in higher classes, certainly with the lower middle classes, and even in the upper classes, there is an ignorance of the necessity for air noticeable?—I do not think that one person in a thousand of any class understands the advantages of fresh air.

5481. It is not confined to the very poor?—Oh, no; not in the least.

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5482. And the teachers have a well-built school, and they block up every hole, and that you would say is owing to their ignorance of the benefits of ventilation?—Yes.

5483. It emphasises the great necessity for their being instructed does it not?—I wish that some man of science would invent a paper which was sensitive to the pollution of air. I am sure that in churches and theatres and public buildings if you had a paper which began by being white, and gradually grew black as the air got polluted, people would see that and take note of it. I want an instrument to show impure air, and I wish somebody would invent one. People do not know that the air is so bad.

5484–5. (*Chairman.*) There is a very simple apparatus which shows a certain amount of carbonic acid?—Yes; but I want the man in the street, or the man in the concert hall, to know that the air is impure, and they would begin to learn something of value. Churches are often the worst offenders.

5486. (*Colonel Onslow.*) With regard to the lady health visitors, do you know that in a very large number of parishes they have parish nurses?—That is an excellent thing; that is increasing very largely.

5487. And the extension of that would be very good you think?—Yes; they are first-rate teachers.

5488. They are far better than well-meaning, but ill-advised, lady district visitors?—I think they would be. Our own village nurse, in Herefordshire, says that the difficulty with the air is tremendous. She goes into a room very often which she can hardly remain in.

5489. They generally find that they can deal with the poor people well without trouble?—Yes.

5490. And especially if they have a uniform on?—I think that the poor will receive them—they must have tact you know.

5491. (*Mr. Struthers.*) Would you have all classes of persons on your committee?—It is an excellent plan to put all classes on the committee, because then people feel that they have a voice in the management and can make any criticisms which may occur to them.

5492. Is the dislike of fresh air in this country worse than it is with our neighbours on the Continent?—I do not think we are so bad as they are.

5493. Do not you think that we are a good deal better?—Certainly. Our fires are much better than their stoves.

5494. We know in travelling on the Continent what difficulty there is in getting the railway carriage window open, and there is no corresponding difficulty in England?—That is so.

5495. So that however bad we are we are not behind the mass of humanity?—I should not wish to say that we are.

5496. But still you think there is a great deal of room for improvement?—Yes.

5497. You say, I understand, that the bad housekeeping is not due to indifference or want of interest on the part of the parents, but it is due to ignorance chiefly?—I should say so; I think that it is ignorance; many women, certainly a great number of women, have comfortable homes.

5498. Do you think those women in Herefordshire are more ignorant than their grandmothers were?—Well, I think so. I knew an excellent old woman, who lived to a great age and was the wife of a small farmer. She told me stories of the old days, and it struck me that things were better then in many ways than they are now. I do not want to go back to the time when everybody made their own medicine, their own jams and so on; but I think that many modern tendencies need counteracting.

5499. Do you wish to go back to the home baking of bread?—That would be a great advantage. I know houses where it is done.

5500. In what way would it be a great advantage?—It is better bread than you get from the baker. I do not know whether you could not get better bread from the baker, but the present bread is made of the very white flour.

5501. Was it better because it was made of better material, or was it better baked?—I thought it was made of better material.

Mrs. Lyttelton.

5502. Of course, the corn from which the bread is made is grown in Manitoba and Hungary, which is acknowledged to be much better than the best wheat here?—I did not know that.

5503. There have been a great many investigations, which throw some doubt about this brown bread and dark bread being necessarily better than white bread?—I did not know that. I thought that the bakers' bread was inferior to the home-grown seconds. I may be wrong, of course, I know nothing technically of the matter.

5504. I have no opinion myself, and I am only putting the other possible view. You would not have them make their own jam, and so on?—I always have made my own jam, but I do not know whether they could do that sort of thing.

5505. The question is whether you could get equally good stuff by the new method, and save labour?—No doubt you could get good stuff. I do not want to add to the labour of the housewife. They have plenty to do if they would do it thoroughly, only they need good food. The jam they get very often is very bad.

5506. On this question of tinned meat, must it necessarily be worse than the meat they get from the butchers. You know very often the tinned meat is brought from a district where it is very cheap, and it does not pay them to make use of anything but the very best, and it is probably better than the inferior stuff that these people buy from the butchers?—But they might not get the best kind, and also they run to the highly-flavoured, seasoned things.

5507. My point is that because it is tinned food it is not necessarily bad, but it may be very nutritious?—Yes.

5508. And it might be better than the meat of a corresponding price which they get at the butchers?—I should have thought that it would be better to get bacon, for instance, at home. And again, they often give their children jam, which is quite good feeding, but they give it instead of butter or margarine, and I believe margarine is very wholesome. In the Patricroft Workhouse we used to get margarine, and it seemed very good and nutritious, and very wholesome. There is a certain amount of prejudice against it, but it seemed to me to be very good.

5509. The old fashion in the country districts used to be that they had a distinct rule not to give both butter and jam?—Yes. I think that the children of the poorer class often get very little fat of any sort, either butter or margarine, and they get jam instead.

5510. (*Chairman.*) They get bacon, do not they?—A certain amount of bacon, but not the other fat. The jam of course is good for them. If you take children for a school treat they do not care about jam, because they get it at home.

5511. (*Mr. Struthers.*) Now as to this very interesting question of milk. The amount of milk used in the whole country is very much greater than it used to be. There is a great deal more pasture land in cultivation, and the wheat crop has been going down?—I suppose so.

5512. The means of transport are very much greater now than formerly; is not that so?—Yes.

5513. So that thirty years ago the inhabitants of the towns, at all events, must have had far less milk per head than they have nowadays?—I suppose they must. But do you suppose the poor class gets much of that that comes into the towns?

5514. If it is not consumed in the country districts, or practically not at all, and the amount is increased in the whole country, it must be consumed to a greater extent by all classes of the population?—The population has increased so much, too.

5515. No doubt?—The question is has it increased in the same ratio as the milk?

5516. Do you not think it possible that while the country people have suffered in physique from not getting their proper supply of milk, it has to that extent redressed the balance between town and country, and that it has improved, on the whole, the amount of milk that the townspeople get?—Do the poor get much milk in the towns?

5517. More than ever?—But there were not so many big towns at the time the agricultural depression began, and the towns have increased since.

5518. But that is since 1872, and there were large towns then?—Yes, but they have increased since.

5519. You rather felt satisfied with the way women in the neighbourhood of Eccles managed their houses and domestic affairs generally, and the way in which they looked after their children?—I think that it was intelligently done, more so than in a great many places. I did not mean that there was not a great deal of room for improvement. There was; but they were intelligent, and fed them well as a rule.

5520. But the chief reason why they compare favourably with the labourers is because they are more intelligent. Is that not so?—Very possibly.

5521. And that rather points to what you advocate, that the real remedy is an increase of intelligence throughout the country?—Certainly.

5522. But, of course, that is not achieved merely by school work?—No.

5523. Take the question of cookery and taking care of their houses in school. It is, no doubt, very useful to have instruction between twelve and thirteen upon the e subjects; but you can see that it must be given under somewhat artificial conditions?—Yes.

5524. It would be difficult to reproduce the cottage conditions, would it not?—You could in cookery, but not in the case of housework.

5525. And even in cookery it might be somewhat difficult. The meal must be artificially arranged?—To a certain extent.

5526. To enable them to show how to cook this thing and that thing; you could not cook a cottage dinner, for instance?—But you could teach them a good deal in that way.

5527. If those girls had instruction between twelve and thirteen, and then left school to go to shops and various occupations, and did not assist in the house for many years, until the time that they were married, the chances are that these instructions would have evaporated?—Yes.

5528. And with so much development of our parish nurses and the instruction of adults actually engaged in the management of houses, would you, on the chance of 30 per cent. eventually becoming the heads of houses teach them to take charge of houses?—That would be very desirable, and by health inspectors.

5529. Yes; who would also organise suitable instruction?—Yes, but for that reason I would not in the least diminish the teaching to the girls whilst they are at school, because if you have taught them up to fourteen or sixteen they may forget it in a way, but it comes back extremely easily later on.

5530. But these girls leave school at fourteen at the latest, and very many of them at thirteen?—But if they are taught at school they would learn it easier afterwards, and they would also know the advantage of it. They rather look down upon it in a way now, and they will not learn.

5531. (*Chairman.*) Is there a great abuse of tea-drinking? Has that had a bad effect?—I think it has.

5532. It is given to young children, we understand?—It is given to young children very largely indeed.

5533. And from your knowledge of these classes do you think that they get much cheese, which is an extremely valuable article of diet?—Yes, it is.

5534. That is a feature of the French peasantry, that the wife makes her own cheese, not from the milk of a cow, but from that of a goat, and they have plots of land on which they can feed their goats?—That is quite true; I do not know about cheese. Of course it would be a good thing if they did eat cheese.

5535. There are fatty ingredients in cheese, are there not?—Yes. I hope I made it clear that what I want is teaching and better expert management of the household. I do not in the least wish to say that the poor, or any other women, should be solely devoted to their household work. I think that there is a certain amount of gadding about; but still I think that they ought to take greater interest in outside things, and have more instruction. This is excellent for the poorer class, because it makes them

happier with their husbands, especially in Manchester, where you get clever artisans. It seems to me that by proper teaching, with both school and health visitors, you might teach girls to manage households, and make them better members of the community altogether. I do not want to see them confined solely to domestic work. But I have no doubt that they often use their leisure badly and they might do better.

5536. They do not seem to use it at all ?—That may be so.

5537. (*Mr. Legge.*) Have you ever heard of a suggestion that girls with good homes might at the age of twelve be excused from more than half-time attendance at school, and spend the rest of the day helping their mothers ?—Yes; I have heard of that suggestion.

5538. What do you think of it ?—I do not think I wish it, because, in the first place, it is very difficult to say what are good homes; and, in the second place, the more you can teach the girl or boy the better it will be for them later on.

5539. And because of the difficulty of deciding what is a good home are you prepared to say that all are bad ?—Not in the least.

5540. And it is well to keep them from home ?—No; I should like to see the mothers realise their responsibility more than they do.

5541. Would not this be more of an incentive to the mother to have a decent home ?—She would often only send her out to a place if she were sent home.

5542. But her license would be at once revoked ?—You would compel her ?

5543. The license would compel the child to be at school half the day and to go home for the other half, to attend in the household work ?—And would you insist upon her not taking any place during the other half of the day, or helping anybody during the other half of the day ?

5544. I should like the local authority to make its own bye-laws in that regard ?—Because the result would very likely be that the girl would be at school in the morning, and would be sent to a place where she would be fairly hard worked in the afternoon; that would be the natural result in many cases. The mother often does not want the girl at home in the afternoon.

5545. Supposing she wants the girl in the morning and the girl went to school in the afternoon—the girl ought to be at home at the time that she is most likely to be useful, you know ?—Well, I do not know that I like the idea myself, because I think that the tendency is towards making use of children amongst the poor. I think they are very bad at it.

5546. But supposing it was laid down strictly that this was not to be done ?—You mean that the mother would be teaching them domestic work at home ?

5547. Yes; precisely such a home where they get this cottage cookery, which you are anxious to see being taught; but that is practically impossible to reproduce in the school ?—But it would be perfectly easy to teach the girls in cottages.

5548. But in an artificial cottage ?—Yes.

5549. But the tendency is to provide the fittings, not as in a little family, but as you would see it in a flat ?—Quite so, and it is useless. I do not believe in the letting out of girls to be half-timers more than is done now. Your proposal is that it should be done more ?

5550. That it should be encouraged. At present it cannot be said to be encouraged—it is all the other way, to keep the elementary school children in full attendance up to a later age—that is the tendency at present ?—Yes.

5551. And it is to provide some check to that tendency in the case of girls, where domestic employment concerns are of more moment than in the case of boys, that this has been suggested ?—Of course you already get them on Saturday very largely, the whole of Saturdays in which the mothers could teach them and get their help in cleaning the cottage. I do not know whether it is universal, but certainly in the North there is no school on Saturday.

5552. (*Mr. Struthers.*) It is practically universal ?—Yes. And so you get them in that way. Any scheme of that sort would rather tend to a girl being overworked or loafing about.

5553. (*Mr. Legge.*) My suggestion is that the girls should be under licence and the terms of that licence should be observed ?—That she should not have to go into any other house or to work for money in any way ?

5554. If that was one of the conditions, it would be the duty of the local authority to see that condition observed ?—Well, they would have their work cut out for them.

5555. Is it more alarming than the present obligations where they have to see that every child attends school ?—It would add another and very difficult charge to that which they have already got. I know the way the parents do consider that their children are the means of earning wages.

5556. That is admitted. That is one of the things that is not at all admirable amongst the poor ?—All the difficulty arises from their not having had a high standard on the subject and I think you would find that this might add to that evil and that these girls would be going out to help the neighbours in order to get 6d. or 1s., and that they would be wasting their time in many cases, or being overworked. I cannot say that I wish to bring back the children to help their parents.

5557. (*Chairman.*) Your idea would be to turn the children out better fitted for their domestic life ?—I would rather have the younger children kept later at school so as to turn them out well fitted for domestic life.

5558. (*Mr. Lindsell.*) The clever girl gets through the standard qualification, and it is only the backward who does not ?—I know.

5559. And the clever girl is not met with the difficulty; for she not only can help her mother but can go as she likes ?—She can earn money as a half timer.

5560. (*Mr. Legge.*) She may be clever in a particular sense, but clever in the sense which unsuits her, or does not particularly suit her for domestic work ?—According to that the girl can go and earn money at domestic work.

5561. She cannot go to learn domestic work ?—She can if she likes.

5562. But there is no obligation to do so, but in the other case there would be an obligation ?—That may be so.

5563. I do not want to crab my own country, but do not you think on the whole that in France and Belgium, and certainly in the north of Germany (and notably in Italy where the climatic conditions are different), and in the north of Europe where the climatic conditions are similar to our own, the poorer class have a very much greater appreciation of the value of fresh air in their homes, particularly in their bedrooms, than our own poorer class ?—I have not much experience of that.

5564. In France and Belgium especially every morning their bedding and mattresses are thrown out on the bar ?—Yes, they do that.

5565. The very existence of the bar is for that special purpose, and it seems to make a vast difference ?—It is not perhaps so rainy there. If you could be sure of getting a fine day and sun that would be all right. There is no doubt that as far as the railway carriages are concerned we have the advantage.

5566. I think that must be conceded ?—Yes, and there are the double windows and stoves. From my experience of foreign travel I should not have said that the foreigners liked fresh air as much as the English people do, but I do not know about the poor and could not say.

Mr. T. C. Horsfall, called; and Examined.

Mr. Horsfall.

5567. (*Chairman.*) I should like to ask one preliminary question, and that is, whether your experience as a whole tends to make you think that the conditions unfavourable to the physique of the population are increasing in intensity?—I do not think that they are increasing in intensity. The area over which they apply has increased; it is a cause of great alarm to all of us who are taking any interest in the health of the people that the suburbs of the large towns receive so little attention.

5568. Are not the houses built under building regulations which were absent when the more central parts of the town were built?—Yes, but the building regulations do not provide all the conditions necessary for health. For instance, I do not know whether Dr. Tatham knows of the buildings going on in North Manchester which used to be a district of open country. There has been an enormous increase of building there and all the streets are narrow.

5569. Are the houses high?—No, but all the houses are what are called one family houses. Such houses cover a very large area, and even 100 houses cut off the inhabitants of any one of the houses to a very serious extent from open country. That great band, the newly covered land, offers an increasingly great obstacle to the very small proportion of the people in the central parts of the town who wish to get into the country. That is a drawback to small houses, each one for a family, in English towns, the importance of which has been overlooked. Because the houses are so low they necessarily cover a very large area and they cut off the inhabitants of the central districts to an increasing extent every year from the open country.

5570. They do not intercept the inrush of pure air into the central districts?—They keep it above the height of the roofs. No effort is being made in our English towns, at any rate not in Manchester and Salford, to keep wide airways towards the centre of the town. That is one of the things to which I want specially to call the attention of the Committee. In the German towns an effort is being made to keep wide channels of open building through which fresh air may pass to the rather congested parts of the towns.

5571. Converging on all those parts of the towns?—Yes, I am offering to give evidence over a most appallingly large area, partly for this reason: Three years ago a Committee, of which I am the Chairman, resolved to make an inquiry into the housing conditions existing in typical parts of Manchester and Salford. We have just finished that inquiry, and I have the information collected in proof. At the same time I myself undertook to collect German evidence as to how the authorities in the principal German towns have dealt with just the same problems that are baffling us in our large English towns. All that information I have now in proof form. I tried to indicate the connection of the different parts of the subjects as to which I want to speak in the *precis* of evidence that I sent.

5572. Will you give me a description of what you conceive to be the adverse conditions of Manchester and Salford at the present moment?—I must, first of all, refer to the invaluable life table prepared by Dr. Tatham. That is a good authority as to the results of the general conditions existing in Manchester, conditions which have not changed since Dr. Tatham left Manchester, and the equal of it does not exist in any other form. Dr. Tatham published it in 1893. Dr. Tatham's life tables give the expectation of life in different parts of England, or rather of England as a whole, and in Manchester. The expectation of life in England and Wales—according to data, collected from 1871 to 1880 and in Manchester from 1881 to 1890—was for the Manchester township including the central part of Manchester 28·78 years; for England and Wales 41·35 years; and for the outlying townships of Manchester where semi-urban conditions existed 38·11. That is for males. I have the corresponding figures for females, but I do not think I need give them.

5573. That is quite sufficient?—Now for people who had reached the age from fifteen to twenty-five the difference is much less marked in those years of greater strength. In the Manchester township it is 5·55, for the outlying townships 6·50, and for England and Wales it was 6·79; but in the years of maturity the difference becomes much more marked. For people from twenty-five to forty-five in Manchester 8·79, in the outlying townships 11·45, and for England and Wales 11·91. For people from forty-five to sixty-five I do not think I need give the figures. Those figures show clearly that quite close to Manchester where there is space enough amongst the buildings, and where there is still some vegetation and where people are not of the poorest class, it is possible to have conditions that give an expectation of life not very much inferior to that of the whole of England and Wales. Am I right in that?

5574. (*Dr. Tatham.*) Yes?—Dr. Tatham showed by comparing the figures for 1881–90 of his own Manchester Life-table, and those for 1838–44 of a Manchester Life-table prepared by the late Dr. Farr, that, while in Manchester a reduction had been effected, in the time between the two sets of years, in the number of deaths of young children, a considerable increase had taken place in the number of deaths of persons of over ten years of age; and that, although the total mean lifetime had increased to the extent of about four-and-a-half years, the mean future lifetime of those who survive the dangers of early childhood had actually decreased by fully three years. Speaking of the old township of Manchester, Dr. Tatham said, and his words apply to the district to-day as fully as they did in 1893. "Here is a population of nearly 150,000 persons paying a tax which must be reckoned, not in pounds, shillings, and pence, but in years, months, and days—a tax amounting on the average to fully 30 per cent. of the lifetime of every member of the community. Here are men and women entering the period of decline at an age when they ought scarcely to have passed the prime of life. And what is particularly distressing in this regard is the thought, that although in some respects the local conditions of life have improved within the last half century, in other respects bad has become even worse. . . . . The task which lies before us and our successors is nothing less than that of restoring to every infant in the Manchester township the twelve years of life-expectation of which it has been defrauded by the evil surroundings of its birth." The extreme seriousness of the danger caused to the Empire by the unhealthy condition of Manchester and our other large towns cannot be realised, unless we remember that the difference between their death rates and the death rates of the rural districts, by which we chiefly judge of the unhealthiness of the towns, is made much less than it would otherwise be, by the constant movement into the unwholesome towns, and from the wholesome country, of vast numbers of men and women of the ages at which deaths are least numerous, whose removal, therefore, leaves the country with a much larger proportion than towns contain, of persons, very young and old, of the ages at which deaths are most numerous, and gives the towns a much larger proportion, than the country contains, of persons of the ages at which deaths are least numerous. Moreover, each of these young vigorous immigrants into the towns for a time raises the average strength and health of the mass of the urban population, and for the moment increases its power to resist the causes of disease. Now that our urban population forms more than 77% and our rural population less than 23% of the whole population, the country can no longer invigorate the town so largely as it has done hitherto, and, unless towns are made much more wholesome, they must have a much more marked effect in causing physical degeneration in the near future even than they have had in the near past. In spite of the invigoration and "juvenation" of the urban population at the cost of the rural population, the death rate in 1901 for England and Wales, excluding the 76 largest towns, was only 15·03 per thousand, while that of the 76 towns, including large areas of low mortality, was 17·7, that of Manchester, in 1902, was 20, and that of Ancoats 25·28. Those are the only figures on that point. The death rate for Manchester in 1902 was twenty per thousand. That was lower than in any previous year of which we have a record except 1894. In England and Wales, excluding seventy-six great towns, it was only 15·31 in 1901. But we must remember that this twenty per thousand is most misleading; the terribly high death

rates of many small districts are swamped by the rate of the large district, which includes areas with comparatively low death rates. Whilst the death rate in Manchester was twenty per thousand, in Ancoats it was 25·26 for the central part of the town.

5575. (*Chairman.*) Is Ancoats purely an industrial district?—Yes. It is a district from which every one flies except our University settlement. From the University settlement we have got simply invaluable information as to the conditions of life. The central district had a death rate of 26·74; St. George's 24·24; in Cheetham the death rate in the northern district is 12·74 for the same year. The Jewish death rate is notable. With a population of 16,517 in Manchester the rate was only 16·99; and many of these Jews live in the very poorest houses.

5576. Are they very much overcrowded?—Some are very much overcrowded, but their houses are cleaner than English houses, and they are more particular about fresh air.

5577. And what do you say about the food?—The food is also better and they are much more attentive to their children. The difference between 16·99 and such death rates as 26·24 for the central district of Manchester is testimony to the great value of a little increase of care of children and for the general conditions of life in a house. One cannot speak very highly of the habits of the Jews. Many of them are bad, compared with our standard, but though they are dirty, they are cleaner than our English poor. Now I think that one of the things to be realised is that the conditions which I have to speak about affect such a very large proportion—such an appreciable portion of the total population of the country. We had in Salford and Manchester 764,925 people in 1900. Shall I go on seriatim through my memorandum?

5578. If you please; you can give some of the special things affecting the poor which lead to deterioration?—May I just speak of the general physical condition of the people.

5579. Perhaps this can go on the notes as it is?—I want to give a little additional matter in relation to parts of it.

5580. I think it would be the most convenient course if we put your memorandum on the notes just as it is. Then we could ask you some questions upon it.

Précis of Evidence of Mr. Horsfall, on behalf of the Manchester and Salford Sanitary Association.

Mr. Horsfall.

When referring to evils which are producing physical deterioration in Manchester, if measures, which elsewhere have removed or diminished similar evils, have not been adopted in Manchester, for the sake of brevity I have spoken of the non-adoption of the measures as one of the "causes" of the evils.

Those parts of Manchester and Salford which half a century ago were the most unwholesome have been much improved, and there are probably to-day no parts of either town in which the death-rate is so high and disease is so common as they were in the worst districts of both towns forty or fifty years ago. But the towns are very much larger than they were then, and neither in the districts which have been recently created nor in those which are now being built are nearly all the conditions existent which are necessary for the attainment of health and physical strength.

In those districts of the towns which are chiefly inhabited by working people, the average stature of the inhabitants is very low—a man of 5 feet 10 inches in height looks over the heads of a crowd in such districts—and physique is very poor. Bad teeth are remarkably common. The children in schools are much below the English average in height and weight. The members of the University Settlement in Ancoats, who meet many of the most intelligent workmen of that part of Manchester, notice that they walk badly and that very few breathe rightly. Cripples are very common. The settlement is in touch with 180, all of whom live within a mile of the settlement.

As the stature and general physique of the well-to-do classes in Manchester are below the general average of England, it is obvious that some of the causes of poor physique are to be found in conditions affecting all classes. But the high death rates of the poorer districts show that there are some very bad conditions which influence only or chiefly the poorer classes. There are small districts or plots which have death rates of over fifty per thousand. The results of a careful examination made during the last two years by the Manchester and Salford Association for the improvement of the dwellings and surroundings of the people, of the Committee of which I am Chairman, show that bad conditions in respect of water supply, of closets, of lack of light and air, of damp, of overcrowding, still affect a considerable proportion of the population, and make health and strength almost impossible for it. Conditions having much in common with those just mentioned are being created in many parts of the outer districts of the towns and in the suburbs. So long as dwellings may be placed so close together, a high level of health and strength must be impossible in a town. But the existence of so high a death rate as thirty-five per thousand in the Jersey Street dwellings, which are carefully superintended and are supplied with many conditions which are exceptionally favourable to health, suffices to prove that overcrowding and other defects in dwellings are not the only causes of disease. The residents in the settlement and the Clergy who live in the crowded parts of Manchester find that they need to get country air and change of scene frequently, if only for a few hours at a time, if they are to retain health and vigour. The condition of the air, by its direct effects on lungs and skin, is probably the cause of much disease and physical deterioration. By cutting off much of the scant supply of sunlight which is all that Manchester at best would be allowed by its gloomy climate to receive, it injures health. The residents in the Ancoats Settlement, who have servants to attend to their rooms and clothing, find that they have to accept a lower standard of cleanliness than they were previously accustomed to. This indicates what must be the effect of smoke and soot in producing indifference to filthiness of person, clothing and dwelling in most of those who do not keep servants. The filthiness of the air makes those inhabitants of all parts of Manchester who value cleanliness most unwilling to ventilate their dwellings as fully as they would probably otherwise do. By killing nearly all vegetation, and by its other effects, the foulness of the air contributes much to that general gloominess of the town which led Mr. Justice Day to say, in explanation of the commonness of drunkenness in the town, that to get drunk "is the shortest way out of Manchester." The foulness of the air probably does more than any other single cause to prevent well-to-do persons from living in, or quite near to, the town, and thus to maintain the separation of classes which is a most fruitful cause of the ignorance and bad habits of the poor, and of the neglect by the authorities of the districts in which they live.

Much disease is caused in Manchester by drunkenness, which seems to be much more injurious to the physical health of persons who live in foul air and do not take strong exercise, than to workers in the country. Last year 8,577 persons were arrested in the streets of Manchester for being drunk: the number of arrests for the same cause in the previous year was 7,714.

Other causes of bad health and physical weakness are: Badly chosen food, taken by many persons because their appetite is depraved by hot work-rooms, foul air, lack of exercise, drunkenness and other bad habits; taken by many others from ignorance on their own part or that of others; taken by many others owing to poverty.

Poverty, due to being out of work or to inability to earn good wages, misfortunes which are due often to bad health, often to bad habits.

The influence of unwholesome dwellings and environment, of foul air, of bad habits, insufficient wages, etc., so interact that each is in some measure cause, and in some measure effect.

Insufficient exercise is a fruitful cause of evil. Many children do not know how to play health-promoting games; many lack the moral qualities which are needed in social games; many have no place in which they can play. Town children get far too little sleep. Late hours, cigarette-smoking, the use of stewed tea, and other unwholesome kinds of food, do much harm. There is a great lack of parental control in towns.

The causes of the existence of the wrong conditions which I have mentioned are, in part, these:

Of the overcrowding of areas with dwellings, of the non-existence of wide streets, and tree-planted streets, of the insufficient supply of open spaces—the chief cause is that English Town Councils do not prepare, and have not

Mr. Horsfall.

power to prepare, the building plans and thebu ilding regulations which are in use in almost all large German towns, and which ensure that there shall be an adequate supply of wide and of tree-planted streets and open spaces, and that all new houses shall have wholesome environment.

Of the foulness of the air—the chief cause is that the law for the prevention of smoke from factories, etc., is not fully enforced, that the penalties which can be imposed are insufficient, and that the occupants of dwellings, which, even in Manchester, produce half of the whole amount of smoke, are not compelled by law to produce the least possible quantity of smoke. In some German towns the amount of smoke has been reduced by two-thirds in the last ten years. Another cause is that we do not confine the "works" which produce noxious vapours to special districts where they can be closely supervised, and where they can do the least possible amount of harm. This is done in many German towns.

One chief cause of the existence of many conditions which lower health in a large proportion of dwellings, and in many of the places where Manchester people work, is the non-existence of the system of constant inspection of all small dwellings and of the rooms occupied by servants and apprentices in larger houses, which has been adopted in some German towns and is being adopted by most, and of a system of inspection of many kinds of work-places.

One of the causes of the poverty which, directly and indirectly, is the cause, or one of many co-operating causes, of physical deterioration, is the absence of such a system as the Elberfeld system of dealing with poverty. This system seeks to remove the conditions which are likely to cause workpeople to need relief.

One of the causes of insufficiency of exercise in fresh air is that not only are playgrounds not numerous enough, but they are not supplied with suitable apparatus, and with attendants trained to know how to make them as widely useful as possible. Nor are they open on Sunday afternoons.

Of drunkenness, some of the nearer causes are the ubiquity of drinking places and the paucity of places of wholesome recreation, and the habit of closing all places of recreation except drinking places on Sunday afternoons.

Of the ignorance, the bad habits, the vitiated tastes, the lack of good habits and wholesome tastes, which co-operate with the influence of unwholesome dwellings and unwholesome environment to lower the health and strength of a large proportion of the inhabitants of Manchester, one of the principal, if more remote, causes has been, and is, the unwholesomeness of schools, due to lack of knowledge of the conditions needed for health on the part of many teachers, managers, and inspectors, and the failure of our school system, partly due to failure to consult educational experts, partly to the employment of ignorant children (monitors and pupil-teachers) to give children the knowledge and the physical and mental habits which cause human beings to desire, and to be able to live, healthy lives, and their failure to develop the unquestionably good physical and mental powers possessed by most English children. There is a remarkable contrast between the results attained by schools in Germany, where in the large towns the school buildings are regularly examined by large staffs of medical men, who also examine the children, where the new schools are all supplied with ranges of shower-baths, where only adult well-trained teachers are employed, and those which we obtain. We are to-day compelling children to go to some schools, the foulness of the air in which, and their coldness in winter, must have very bad effects on the health and strength of the scholars. The results attained in the Practising School in Manchester, where only trained teachers are employed, and where the arrangements are supervised by the Mistress of Method of the Owen's College Day Training College and by Professor Sadler, prove that results equal to the best German results can be obtained with ordinary Manchester children.

The effect on the health of sickly Manchester children of three weeks holidays in the country shows that a great improvement in the health and strength of the population would probably follow the better ventilation of schools, dwellings, and work places.

The patriotic Association formed in Macclesfield has found that both boys and girls in elementary schools are eager to receive physical training, and that a considerable proportion of the boys in the town are willing to serve in a cadet corps, which gives them both military drill and gymnastic exercise.

(*Signed*) T. C. HORSFALL.

5581. We had some evidence the other day about the pollution of the atmosphere, which I see you refer to in your memorandum. You say the condition of the air, by its direct effects on lungs and skin, is probably the cause of much disease and physical deterioration. By cutting off much of the scant supply of sunlight, which is all that Manchester at best would be allowed by its gloomy climate to receive, it injures the health and so on. We had a gentleman here two or three days ago, Mr. Rees, of Salford. Do you know him?—Yes.

5582. He brought very strong charges against the local authority of Manchester upon this particular point. I have his evidence here in which he discussed the worst causes of physical deterioration in Manchester, and in reference to this particular subject he says:—"The pollution of the air for instance is worse than ever. You have stopped, not all, but some of the most flagrant abuses, but the amount of abuse is greater than ever it was; but if I might explain a little more in detail, I may say that there are people in Manchester who systematically pollute the air, and systematically pay the fine—the ridiculous fine that is imposed; it is a mere bagatelle—it is much cheaper to pay the fine than to put up new plant, and so on"?—I believe all that is true. I do not think that it is just to say that in any part of Manchester the smoke nuisance is greater than it was. The authorities in Manchester have taken more trouble than they did a few years ago to bring cases before the magistrates. Manchester and Salford have gone on extending, and in all the new parts a great deal of smoke is produced, and speaking as a magistrate I have had some experience of dealing with smoke cases myself, and I should think that the system of leaving to the manufacturer—of course we are all either manufacturers or the friends of manufacturers—leaving to the manufacturers the administration of the law against offences which are almost peculiar to manufacturers is a mistake.

5583. Have you not a stipendiary magistrate?—Yes, but the amount of work to be done in Manchester is simply enormous. We have a number of courts sitting every day, and I do not think that any of the smoke cases come before the stipendiary and the procedure in the other courts often amounts to an absolute failure of justice towards the community.

5584. Do you think that the local authorities are as careful to prosecute as they should be?—It is very discouraging to the local authority to have such inadequate fines imposed, and one of the results of inadequate penalties is that the prosecuting authority gets more or less indifferent. Our Manchester and Salford Sanitary Association has used every effort or, at least, has made many efforts to stimulate prosecutions, but there is not the least doubt that a stricter enforcement of the law, and a change in legislation giving higher penalties, would produce a great improvement.

5585. You are familiar with the law as it stands which says:—"Any fireplace or furnace which does not as far as practicable consume the smoke arising from the combustible used therein, and which is used for working engines by steam, or in any mill, factory, dyehouse, brewery, bakehouse, or gas work, or in any manufacturing or trade process whatsoever; and any chimney (not being the chimney of a private dwelling house) sending forth black smoke in such quantity as to be a nuisance shall be deemed to be nuisances liable to be dealt with summarily in manner provided by this Act"?—That is the general Public Health Act.

5586. Yes, that is the Public Health Act outside London. Then a further section says: "If satisfied of the existence of a nuisance the local authority *shall* serve notice to abate." That is peremptory; there is nothing permissive about that?—But you know how the law has to be administered by a large number of superintendents, and there is not the least doubt that a great deal of smoke continues to be made without any attack being made upon it in the courts.

5587. Do you think that any change for the better might be caused by investing the factory inspector with the duty of initiating prosecutions in matters of that sort? It seems to me to be germane to his general duties? —Yes; I think that if the number of inspectors was a good deal increased that that would be a distinct advantage.

5588. You think that there are not enough at the present moment?—There are not enough to attend to fresh work. One or two of my colleagues on the Bench have made a point of dealing with as many cases as they possibly can. What they are anxious to do is to improve the conditions in Manchester, and they complain bitterly of the indifference and of the positive opposition of many of the other magistrates.

5589. Would it involve the manufacturer in much expense if he had to comply with the requirements of the Act?—It would sometimes involve the removal of the works from a site altogether too small to one of adequate size

5590. That would be a good thing, would it not?—It would be; but it would be enormously expensive, and you will never get the law so administered as to cause such costly removals by manufacturers themselves.

5591. Would not a readjustment of his plant in its present position answer the purpose very often?—The production of smoke is really the result of over-driven furnaces. If you have adequate boiler room, and adequate furnace room, and a well-paid fireman carefully looked after, without any special appliances you can prevent smoke. But the greater part of the smoke is produced by furnaces that are too small for their work.

5592. Do you think it is due to careless stoking?—Very often. But still there are mills and works of different kinds where the furnaces are so over-driven that they must always produce a great deal of smoke. But it has to be remembered also that it is very discouraging for manufacturers to find such a very large amount of smoke coming from the houses. Some years ago we had a careful investigation made in different parts of Manchester by the chemists connected with Owen's College—Dr. Bailey was one of the analysts—and they found that in those parts of Manchester where manufactories were most numerous quite half the smoke came from dwelling houses. So long as houses give off smoke in that way the manufacturer not unnaturally thinks that he is very unreasonably dealt with if he has to go to a very large expense to diminish his share of that half of the smoke that comes from manufactories. You divide the smoke into half and half; half comes from the manufactories and half from houses; and the manufacturer has to lessen his contribution to the half coming from the manufactories, and the householder, unless he chooses as many people do to clean their chimneys by setting fire to them, is not worried at all. No action is taken against him. I believe that unless this cloud can be made, like Wordsworth's cloud, to move all together, it will not move at all. I wish very strongly that this Committee would give attention to the possibility of lessening the amount of smoke in all houses. A few months ago a large party of Germans were sent, partly by the German Governments, to inquire into housing conditions here, and I was asked to meet them in Liverpool, and I went over to them. One of them said, "I have been in Birmingham to-day and I want to ask you how is it that you in England do not prevent the smoke as we are doing in Germany?" I said, "We do; we have a law against smoke coming from manufactories and that is more strictly enforced than it used to be." He said, "But you do not do anything about the smoke from the houses." I said, "We have no power to deal with that;" and he replied, "But we have, with the result in Hanover, where I live, that in the last ten years two-thirds of the smoke has been put an end to." That, I believe, is the case in other German towns.

5593. Do you know what the law is in Germany?—It is a general law, the Gewerbeordnung for the German Empire. I applied to the German Consul in Manchester for the law, and he wrote to the officials in Hanover, and they sent me an account of their procedure; but I could not get any reference to any particular Act which attacks the smoke from houses. It is the application of the general principle, that anything that causes injury to health must be stopped. One of the Germans told me that even in Germany the procedure is rather difficult —that you require to have medical testimony to the effect that the smoke from the particular house is causing injury to health, but that testimony is given, he said. The result is that they have very considerably diminished the amount of smoke coming from the houses.

5594. (*Mr. Struthers.*) Have they any special apparatus or any contrivance in the houses?—They use a great number of apparatus. The heating of the German houses is generally by stove, and a great deal of wood is used, and coke is used also; but they do have open fire-places, and they have some kinds of apparatus which prevent smoke. I think really if the Committee is taking an interest in the subject of the prevention of smoke they are rather fortunate in getting me as a witness, because I regard myself as the one just man in respect of this. I met with the Arnott grate over thirty years ago, which was invented by Dr. Neil Arnott sixty or seventy years ago. I met with it in a house in Manchester—the house of a dentist—and he told me that he had had it more than twenty years, and that it warmed his room well and prevented smoke. I got one of those grates and tried it, and I have ever since used it. I have it in my dining-room, drawing-room, study, and a bedroom. It is an absolute success. I have had the grates in use in different houses; they are economical, and they have an open fire. You can arrange them so as to warm a room thoroughly well, you are never bothered to ring a bell for a servant, because you have a supply of coal under the fire for the whole day.

5595. (*Chairman.*) Are they unsightly?—Not very unsightly—to the eye of the social reformer they are beautiful. I had one sent up to Essex House, and I had a beautiful *repoussé* copper case made for it which cost me £65, so that it might be used in a drawing-room. Every one admires the fireplace, but that, I am afraid, is because of the *repoussé* work. But the drawback to the use of the grate is that it is rather expensive—it costs £7 10s.—and you cannot have it made into an independent stove standing in front of the closed fireplace, at a less cost than £12 10s., but still it is most economical. Half an hour after the fire is lighted it is smokeless.

5596. You say it costs £12 10s.?—Well, it is £7 10s., in an ordinary fireplace, but if you use it as an independent stove, standing independently of the ordinary fireplace, it costs £12 10s.; but it is worth the money to anyone who can afford the initial expenditure. I heard Sir William Gull say that he had used one of the Arnott grates for twenty-five years, and he regarded it as a cure to the smoke nuisance so far as houses are concerned. I will send one up to the Committee. I have one in a packing case ready to send to any society who will test it. Unquestionably, if it were possible in England to get legislation, and to have part of the poor rate remitted on all smokeless houses, it would be a good thing. They use expedients, I believe, of that kind in Germany. That would certainly lead people to introduce Arnott grates and "well" grates, which make comparatively little smoke, and there would be a distinct reduction of smoke in that way.

5597. But surely in this description you are giving here you are referring to smoke from houses rather than from factories?—I am referring to the whole mass of smoke, half from houses and half from factories.

5598. In the industrial districts you get most of the smoke there?—Yes, but there you get house smoke as well, concentrated, because you have a large proportion of small houses.

5599. But surely there are other pollutions that pass into the atmosphere besides smoke, I mean from the various factories, noxious vapours of other kinds, are there not? —Yes, in some parts of Manchester.

5600. You cannot treat the manufacturer and the householder on a parity?—Oh no, there are special evils caused only by the manufacturers.

5601. With reference to vapours of a noxious description? —There, in that part of my memorandum, I am only speaking of smoke and soot and the sulphurous acids that come from the combustion of ordinary coal.

Mr. Horsfall.

5602. But you admit that there are other very unwholesome ingredients taken into the air. Is there no effort made to prevent that?—Yes. Action is taken by the Town Council every now and again when some active set of citizens bestir themselves.

5603. But there is no habitual vigilance on their part in dealing with the matter?—No. Very grave evils are detected when there has been careful inquiry. It was found that manufacturers were passing poisonous and inflammable gases into the sewers and a very serious explosion resulted from that.

5604. That would seem to show that other means should be taken to make manufacturers amenable to the law—they do not seem to have much public spirit?—Some of them have public spirit and some of them are absolutely devoid of it, but the majority have a little.

5605. And like other classes they must suffer from their worst members?—But I should be particularly pleased if the Committee would give to the lessening of smoke from houses some attention, and I think it perfectly possible that the Arnott grates could be introduced.

5606. (*Mr. Struthers.*) How do you explain the fact that this Arnott grate is not so well known in spite of its great merits?—It is partly the result of the misfortune that Dr. Arnott possessed too much public spirit when he invented his grate. He wanted the community to have advantage of it as early as possible, and he did not patent it, and it has not been worth anyone's while to spend much money in making it known. There was a firm in London who some years ago did their best to make modifications of the Arnott grate in order that they could patent it, but they more or less spoiled it and they made it in a deteriorated form, and it was so inferior that when I tried it I had to give it up. But the Arnott grate is really a most admirable piece of mechanism. If there was a larger demand for it it could be made much more cheaply.

5607. (*Chairman.*) It has been known for seventy years you say?—Yes, for sixty or seventy years.

5608. Would you advocate the treatment of all those cases before a stipendiary magistrate instead of before magistrates?—Yes. As a general rule that would be an excellent thing.

5609. So that none of the judges in those cases should be the persons who are largely instrumental in creating the nuisance?—I think that it would be a very useful change.

5610. Should you say in Manchester at large that there is no healthy sentiment on the subject of sanitation and hygiene generally?—No. There is a comparatively small set of people who care a good deal about it, but the majority of well-to-do people live out of Manchester and they care very little about it.

5611. But you have had this Manchester and Salford Sanitary Association in existence for a great many years?—Yes.

5612. And its work has not had a considerable effect upon public sentiment apparently?—It has been partly the cause of almost every improvement that has been effected. It has co-operated with the most public spirited members of the Town Council. I do not think that it would be an exaggeration to claim for it a considerable share in every improvement that has taken place with regard to the condition of Manchester and Salford since it came into existence.

5613. Has much been done in Manchester to diminish the evil of overcrowding?—Not very much. The town councils have built some houses in those districts which at one time were the worst.

5614. Are there any bad slum centres in Manchester still?—May I give you some of the facts and figures that have been collected and will be shortly published in our report. There is an atrocious state of things. In the first place the census figures of 1901 show that we had 207 one-roomed houses, which were overcrowded, containing 738 persons—overcrowded in the sense that there were more than two persons in a room. There were 886 two-roomed houses overcrowded, 355 three-roomed houses, 830 four-roomed houses. In 2,278 houses there were 16,653 persons. That is in Salford, not Manchester. In Manchester there were 34,137 persons in overcrowded houses. This is by the census of 1901. Our examination revealed many cases like this: No. 10, B—— S—— Street, back-to-back house with two rooms, is occupied by two adults and four children. The bedroom, with a cubic content of 773 feet, is used for a workroom for sewing and washing. The living room, containing 1,046 cubic feet, is living room and sleeping place too for the six inmates. By the Local Government Board standard the requirements would be 1,600 cubic feet." We have many back-to-back houses.

5615. They have been removed in Liverpool?—And they have been very much reduced in number in Manchester.

5616. Have you cellar dwellings in Manchester?—We say we have not.

5617. But you have?—I only know that one case came before me as a magistrate in which a man told me that he lived in a cellar dwelling, but I have seen the official assurance that there are none.

5618. How does the local authority meet its obligations to inspect its nuisances in this particular matter?—When a case is reported to it, it is very careful. The medical officer of health discharges his duties, I think, with a great deal of zeal.

5619. You know under the Public Health Act of 1875 a nuisance is defined as "Any house or part of a house so overcrowded as to be dangerous or injurious to the health of the inmates." I should suppose that every case is a nuisance within the meaning of those words?—If some qualified person were delegated to go into the houses nuisances would be discovered. But remember the state of absolute dependence of many of the people who live in those houses. They dare not call attention to the evils existing. When members of our various associations find those evils, they are sometimes begged by the tenants not to report the cases because it will mean that they will have to turn out of the house.

5620. And they have no place to go to, I suppose?—Quite so; and it is most inconvenient to go from that part of the town. The only conceivable way in which many of the causes which operate in the houses and ruin the health of the people can be got rid of is the adoption of a system which German towns are being forced into of having what is called continuous inspection of houses. Since 1901 all towns in Saxony, with over 20,000 inhabitants, must have continuous inspection of small houses, and in Wuerttemberg all towns with more than 3,000 inhabitants have it. Stuttgart, with 181,000 inhabitants, introduced the system of continuous inspection of all small houses, and of servants' and apprentices' rooms in larger houses, in 1902. It has 120 unpaid visitors, who are aided by paid officials. The visitors would be fined if they did not accept the office when they are appointed. The system has been introduced into villages in Saxony. You must have every house entered and reported upon. You cannot expect very poor people to report, nor can you expect their neighbours to do so; and no voluntary organisation can be strong enough to visit all the small houses in a large town. It must be made the duty of some person to go into every house periodically to examine it and call attention to those defects in it which are interfering with health.

5621. (*Dr. Tatham.*) Is not that the duty of the sanitary authority, under the law at the present time?—Not to visit each house periodically.

5622. But to supervise the conditions of the houses generally?—Yes.

5623. (*Mr. Struthers.*) Any house where there is a suspicion?—But they ought to have a suspicion of every house. Every house that is small, and even the servants' rooms in larger houses are probably wrong, and ought to be visited. May I just read this:

"No. 7, —— Street. House in very bad condition. Walls and ceilings damp and falling. This house has five rooms, and is occupied by four families—15 individuals."

"No. 1, —— Street. House very old and damp. Very dirty house and tenants. House smells."

"No. 9, —— Street. Walls and ceiling damp. Landlord seems unwilling to keep house in repair."

"No. 10, —— Street. Back kitchen and living room very damp. Sanitary authority has requested landlord to attend to repairs and drains."

"No. 9, —— Place. House terribly damp, and back bedroom walls literally wet: rain comes in and makes bed damp. Every pane broken. Tenant seems inclined to be negligent, but has no encouragement to keep house tidy owing to bad state of house."

"No. —, —— Street. Two-roomed house. Invalid child in bed in bed-room, which is very damp. Water dripping from ceiling on to bed and floor. Wet patches on walls."

Respecting closets our report says: "But there are some other reasons for wishing to hasten the departure of the back-to-back house. A back-to-back house means no yard. Sanitary conveniences have, therefore, to be provided either in the court on which the houses look or in the street. Of both arrangements examples have been given in the descriptions of districts. What such arrangements entail can, however, be better gathered from our illustrations. In the first, the closets shown stand in a court. There are five closets in the block; they are usually in a filthy condition, and certainly not more than two of them are fit for use. The second illustration shows one side of a row of back-to-back houses with the closets entered from the street. These closets were found in a filthy condition, standing open to all comers. Incidentally it may be noticed that in this last illustration the closet adjoins the living room and is under the bedroom of one house. In another row of back-to-back houses examined, it was found that the smells from the closet made the room above uninhabitable, yet the house was let and occupied. It is not surprising that decent and modest people shrink from using conveniences of this kind probably with evil results to their health."

Respecting narrow, dark streets the report says: "Incidentally we have referred to the narrow streets which are common to the districts investigated. Very wide streets are infrequent in Manchester even in the centre of the city. The difficulty of getting room for two tram lines must have made this very apparent recently. But in the poorer districts it is quite easy to find scores of streets only 24 feet wide or less. In the districts described there are streets measuring only 15 feet across, and two streets are 9 feet 2 inches and 9 feet 4 inches respectively. These very narrow streets have the prefix "Back" to their names, but, all the same, they contain the front entrances to several houses."

Incidentally the investigators mention many cases of dark rooms, though as a rule no note has been made unless the light was greatly obscured.

In —— Court the houses are dark owing partly to the smallness of the windows, partly to the nearness of high buildings."

"In S—— Place rooms dark owing to nearness of a wall and opposite houses. A high wall rises within three feet of back door making kitchen dark."

"In 1902 Dr. Ransome said: 'Many years ago I pointed out that there were certain districts in Ancoats where the sputum of consumptives could exist for many months and retain its virulence, while at the same time that identical sputum in a comparatively short time lost its power of reproducing the disease in my own house in Bowdon.'"

5624. (*Chairman.*) Is it not the obligation of the local authority to discover those nuisances and not to wait until they are informed before the exercise of their power of inspection?—But we know enough of the life of the poorer classes, and of the working people, to be nearly certain that in two houses out of three there is something prejudicial to health. It is no use visiting two houses, you must visit all three. We ought to have a regular organised system of examination for small houses.

5625. What would be the use of imposing fresh obligations upon the local authority if your allegation against them is that they do not utilise the powers that they have, and that they cannot utilise them?—My suggestion is to impose on local authorities duties that they can perform. At present they have duties which they cannot perform. It is simply impossible without visiting the houses to know which are the houses that are seriously wrong.

5626. Supposing that they did discover this, their power of dealing with the problem would remain in its present state of paralysis, would it not?—They use the power when their attention is called to the evil.

5627. That is my point. Do they make any appreciable effort to inform themselves of the number of cases where if they were informed they should act?—Well, I must not be unjust to the local authorities. You are asking me, do they perform a duty which they cannot perform? The only way in which they can discover these defects would be by getting the information in the way I have indicated.

Mr. Horsfall.

5628. Do they court information?—They certainly do not refuse to accept information that is offered them.

5629. Do they go out of their way to get it at all?—That I cannot say. I regard the system of municipal government in England as simply imbecile at present. The fact that we have a principal officer elected only for a year, and that then he must go out of office, and that he is the only man who is in a position to take part in all the work of the committees, that is simply childish. By such a system you cannot get efficiency, and all the councillors are elected for three years, and they again go out of office, and who is to give continuity.

5630. Is not there a body of permanent officials in every Town Council?—But when you speak of the permanent officials, you have, for instance, the chief medical officer of health, but he is only in a subordinate position; and his freedom of action is very much interfered with.

5631. And his tenure of office is insecure except in London?—Yes. He cannot give offence to all the members of the Town Council, and he ought to be able to do so

5632. Because he is liable to dismissal?—Yes.

5633. Would you suggest that the Local Government Board should have a veto upon his removal from office?—I would deprive the local body of the right of dismissing the medical officer of health. Then there is the Town Clerk; he is overwhelmed with work, and he has not the right of addressing the public. The men who are in the leading positions and who have responsibility are inexperienced and do not hold office long enough to familiarise themselves with their work, and the men who are continuously in office are in subordinate positions. We seem to be a set of children in England with regard to our municipal arrangements. The Germans give the Buergermeister a salary on which he can live; and in Prussia he is appointed for twelve years; and if they do not re-appoint him they have to pay him a pension, and therefore they appoint a young and capable man in the first instance, and keep him in office as long as they are able to get good work out of him. The Buergermeister is practically appointed for life, and he has lots of time for carrying out any policy for the public good that he has formed; and the Buergermeisters do form policies, and get them carried out. Municipal government in Germany is really splendid as compared with what we have here.

5634. In urban sanitary districts there is a little more continuity, because very often the chairman does hold office for some years?—I do not know about that. The Buergermeister is a salaried person, and he can give all his time to the work of the municipality.

May I just speak of some of the results of those bad conditions? I want to call your attention to this fact, that Sir Ian Hamilton, who came into very close contact with the Manchester regiment, which is, to a large extent, really raised from the Manchester district, wrote to me of it in these terms: "So you see I can claim some knowledge of your fellow-citizens Well, you may take it from me that I never met men who showed more grit or resolution whenever they found themselves in a tight corner; but I hope I will not give you, a Manchester man, offence, if I say that their physique was hardly equal to the fine standard of their determination and courage. I have often remarked to other officers that the Manchesters would never be fully appreciated by anyone who had not seen them in difficulty or danger. From one point of view, of course, this may be taken as praise, inasmuch as what is born in us belongs to us more entirely than anything we may acquire; but I cannot but think that it is the fault of someone that these brave and stubborn lads were not at least an inch or two taller and bigger round the chest, and altogether of a more robust and powerful build."

Those are the pick of a very large number of Manchester lads.

5635. I suppose they came up to the minimum standard?—They were the survivals from the innumerable men we had rejected in the year that preceded the war; out of 11,000 men who offered themselves, only 3,000

Mr. Horsfall.

odd were accepted. Well, then, there is another piece of evidence. Professor Meyer—who is the head of the Zoological Museum in Dresden, and who came over on a tour of inspection of museums, wrote notes, which were not intended for English consumption, but were merely to be read to his colleagues and published in the Transactions of the Museum—speaks of the miserable condition of the people of Manchester and Salford. He gives an account of the Salford Museum, and his impression was a very unfavourable one. He said that the place was dirty with soot, and as it happened to be a public holiday the Museum was full on that day of a degenerate lot of people, the like of which "we have not in our German towns." And that is amply justified. I received the report from Dr. Meyer because he had read some pamphlets of mine and agreed with what I said. I mention this to show that this was not written as an insult to England, or with any desire to give offence to the English people.

5636. This is not due to great poverty, is it?—It is due in part to poverty and in part to drinking and to wrong conditions of life—all these things go together. You cannot say which is cause and which effect.

5637. Mr. Rowntree talks of primary poverty; that is, where the means are so small that under the most favourable conditions they could not keep a family?—It is not generally the result of primary poverty, but very often the result of secondary poverty. Dr. Meyer said that of Manchester it was "An incredibly sooty town, with over three-quarters of a million inhabitants. Dresden, which, in this respect, has an unfavourable distinction in Germany, is a real paradise compared with Manchester. We must deplore the course of a civilisation which produces such misgrowths and makes hells of places where human beings have to dwell." If the popular notion of hell is a correct one, Manchester ought not to be described as a hell, because then the smoke presumably would be consumed.

5638. But Dresden is a much dryer place than Manchester, is it not?—Dresden is a very damp place, it has as bad a climate, I think, as damp can make it.

5639. (*Mr. Struthers.*) But surely it has not the rainfall of Manchester?—No, but it has a heavy rainfall.

5640. Of course it has a continental climate?—Yes, but of the worst possible kind. I knew a Scotch family who stayed there for three winters, and the father said that he would take his children next winter to Glasgow in order to have a better climate. Mr. Marr, who is the head of the Mens' House of our University settlement in Ancoats, tells me that they have a great difficulty with their dramatic performances. A stranger of 5 feet 6 inches looks a giant on the stage with Ancoats people. There are large engineering and machine building works at Ancoats. Mr. Marr says that on several occasions he has passed through a crowd of the workmen, and they have the stature of school boys; and that is the case. I stood in a great crowd on the occasion of the opening of a boys' club by the Duke of Clarence. I had to leave early with my wife who is of middle height and she looked over the heads of most of the crowd. The average stature of the people of Manchester and Salford is very low.

5641. (*Chairman.*) There are some racial causes to account for that. There is a large admixture of Celtic blood in Manchester?—There is, but I do not think that that is the cause. We have blood from all over Great Britain. There was a great influx into Lancashire when cotton spinning was beginning to develop. I am sure the local conditions have a great deal to do with it.

5642. The type has deteriorated in Manchester and its surroundings, do you think?—I have not the least doubt that the children of immigrants into Manchester deteriorate. There is no doubt about it at all, that the population in Manchester is inferior in physique to the inhabitants of smaller towns and of the country. I should not like to be understood to say that the people in the worst parts of Manchester are as poor as the people fifty years ago were there. I do not think that is the case. The sanitary arrangements have been improved.

5643. And your water is much better?—May I show you how the water from Thirlmere reaches some Manchester houses. In one instance we found forty-eight houses sharing one tap; once thirty houses; once twenty-six houses; once twenty-two houses; twice twenty houses; once sixteen houses; once fifteen houses; once twelve houses, and so on.

5644. Those are all matters that the local authority might deal with?—If they liked they could do so, but they have the indifference of the whole community against them.

5645. They can do so under the Health Act?—Yes.

5646. You attribute one of the causes of physical deterioration to the absence of such a system as that known as the Elberfeld for dealing with poverty. Would you kindly describe that system a little?—The possibility of it is due to the existence of the right of the German Government to claim from every citizen in civil life that he shall accept an unpaid post. Under the Elberfeld system the whole of a town is divided into very small districts and to each of those districts one of the citizens is told off. It is his duty to visit all the working class families that are likely if things go a little badly with them to need help, and to make himself familiar with the circumstances of their lives, to give them advice which in his opinion will tend to get them out of difficulties, to give them such advice as for instance how to get situations and the best work for their sons. Then if one of the families that one of the visitors is responsible for does get out of work or need help from public sources the visitor has to report the case to the organisation of the district that includes his own small one—and if they approve of what he proposes to do then an amount of money is paid through this man to the family for the time during which it is needed. The system is working so well in preventing poverty and in helping the people who have fallen into poverty that it is now being in its essential features applied by all the large towns.

5647. And it is optional in its application?—Yes, each town decides whether it will adopt it or not. In Berlin for two million people they have not found it possible to work the Elberfeld system thoroughly, but in nearly all the other large towns it is in use. It requires a very large number of people to work it. In Hamburg, in 1902, there were 1,563 visitors, each of whom, on an average, had the care of 11·8 poor persons.

5648. On what principle are they selected?—Well, the men of experience get names and get suggestions from all parts of the town.

5649. A man cannot refuse?—If he refuses he has to pay a fine.

5650. (*Mr. Struthers.*) There is no remuneration I suppose?—No.

5651. (*Chairman.*) How long is he called upon to serve?—Three years. A very large proportion of the men think the work very useful, they get a sense of usefulness to the whole community and they remain in office far longer than the law compels them. In Cologne, for instance, there are a great many men who have been in office six years and longer. The system differs from our system in preventing poverty. The visitors can give so much useful advice. After all, one of the great causes of poverty is ignorance.

5652. Have these people any executive duties?—No. In every town where the system is in use there is a considerable staff of paid officials who help these men and do all the secretarial work.

5653. (*Mr. Lindsell.*) They are paid by the State?—Only by the municipality. The same principle of the duty of the citizen to serve the State makes possible that other system, which I think is absolutely necessary if we are to improve the houses that are injurious to health. The Town Council can tell off any number of citizens to take the office of visitors for these dwellings.

5654. And they would collect facts as to overcrowding?—Yes.

5655. And about sanitation?—Yes. Germany has far greater difficulties on the whole than we have, because, except in Bremen, in all the towns in Germany the ordinary house inhabited by the ordinary working man is a very tall house, very often a five-storeyed house, and the

average number of people living in a German house is very great indeed. In Berlin the number is 52·6; 12·3 households. When you get bad conditions in tenements in a very large house it is very much more difficult to remedy the evil than in a one-family house. But great care is being taken by Germans to improve housing. I brought this just to show in detail some of the work done in German municipalities. In Stuttgart the office that compels the visitors to inquire into the condition of small houses also works a dwellings-bureau. They keep in a central part of the town a list of all the small houses in the town, the number of rooms in them, the dimension of the room, the way in which the house is situated, and so on; and it is the duty of every householder when he has tenants leaving to send an intimation to the Central Bureau by one of these cards (*producing the same*). Then it is known that that house is to let, and when a man wants to change his house instead of going and wasting half a day in different parts of the town he goes to the office and asks for a three-room or a two-room house, says that he is willing to pay so much rent, and they tell him at once of the houses which are likely to suit him.

5656. That is because it is a small place?—The population is 181,000.

5657. (*Mr. Struthers.*) One three-roomed house is not the same as another three-roomed house. It might have a better outlook and better air. How do you do then?—Yes, but is not it a great gain to the working man to get to know that there are certain conditions that he wants that are complied with. It saves him a lot of time, and this system is said to save the householders in Stuttgart at least £5,000 a year by doing away with the necessity of advertising.

5658. (*Mr. Lindsell.*) And agents?—Yes. Consequently it is not very popular with the newspapers.

5659. (*Chairman.*) What steps are taken to make the German householder responsible for bad arrangements in the houses that he lets? Is he made responsible much more rigorously than the householder in England is?—I cannot say more.

5660. But in effect?—In effect, certainly. The German police are much more strict than ours are.

5661. You will admit that that is one of the evils of our system, the slowness to bring responsibility to the owner of insanitary property?—Yes. May I tell the Committee about the evidence that we have got, that it is not only the bad effect of dwellings that lowers the health Our visitors say that it is often bad habits on the part of our working people. Would you like to hear that?

5662. We will hear all that you have to say upon that point?—I have taken part in two attempts to provide better dwellings for working people in Manchester. Some years ago we built some excellent houses in Holt town—tenement houses of three storeys. The property was too small to enable us to pay for a very well-trained attendant, and we had, therefore, to leave a great deal to the tenants. Those houses which were certainly potentially perfectly wholesome, got into very bad condition because the tenants were so careless, so absolutely devoid of public spirit. The property lay on a slope and we provided a good playground within the place for the children, but the slope, of course, drained downwards, and the houses on the lower part were constantly having their walls saturated with moisture, because no tenant would take the trouble to look at the sink and take away pieces of paper and other obstructions to the drainage. Through the effect of bad conditions, the general level of intelligence and public spirit in the town has been brought very low. I mention this, because I think it is one of many proofs that we must look to education as well as improvement in the houses for any improvement of life.

5663. Education in its widest sense, not education as received in schools?—Yes, education as it might be in the schools. Well, then, the second attempt was in the Jersey Street Dwellings; there we house some 600 people. The property does not pay. Twice or thrice for a half year together we have had a dividend of 2½ per cent. The whole property is managed as a social experiment and it was started by a very intelligent and philanthropic German. A lady who has a considerable staff of voluntary assistants works in the most devoted way for our tenants. We have boys' and men's club-rooms and a good playground. The directors spend far more on entertainments to the people than our small dividends in the exceptional years amounted to, and yet, so strong are the bad influences of the neighbourhood, and acquired habits, that the death rate in these buildings is over 35 per 1,000. The property is surrounded by other blocks where the death rate is over forty, and one block has 53 per 1,000.

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5664. Is that largely due to the high rate of infant mortality?—Yes, there is a high rate of infant mortality, but the death rate from all ages is very great, and a considerable proportion of our people die in public institutions. We provide homes for the poor, and the rent in our houses is very low, so that we get the poor families. We have gradually eliminated the worst class, but we still try to get the poor. Our experience, I think, is a proof that though dwellings must be improved if our towns are to cease to be so fatal to the race, many other changes must also be made, because these rooms really, if they were occupied by healthy well conducted people, would make a perfectly good family life possible.

5665. But these changes you refer to are in the habits of the people are they not?—And also in the habits of their children.

5666. Are those cases of secondary or are they cases of primary poverty?—Some are primary and some are secondary.

5667. Have you formed any opinion as to how this section which is sunk in what is called primary poverty is to be dealt with?—I have formed a very clear opinion. If we lessen "secondary" poverty by better education and better municipal government, we shall also lessen "primary" poverty, and we shall make what remains more manageable. The material that we have in Manchester is excellent. Mr. Russell has got a lot of lads in Ancoats, and I think he is to give evidence here or has given evidence—at any rate I wish you had him here, for he knows more about our Manchester young men than anybody else. He is a splendid fellow who devotes all his leisure time—and his leisure time is in great measure taken from his sleep—to work amongst the Ancoats boys. His influence upon them is very great. He gets the boys to break off their bad habits and actually to take part in helping the people who are poorer than themselves. They are doing splendid work. Mr. Russell's and all our experience shows that our Manchester boys respond at once to good physical training. A Swiss who was living in Salford told me "Your Manchester boys seem to be born with athletics in their blood," they are so fond of exercise. Most boys have no chance of getting physical exercise in the town. We have open spaces, some of them fitted up as open air gymnasia—parallel and horizontal bars, too large for boys; the bars are too big in diameter for boys and they have flags underneath them, so that if the boys fall they hurt themselves seriously. Many do not know how to use this apparatus, and if under the influence of bigger boys they use it and they get hurt accidentally that has a deterrent effect upon the more timid boys who most need exercise. Some years ago the Open Spaces Committee, a voluntary association in Manchester, obtained permission to manage one of the large open spaces in Manchester for a couple of years. At that time it was simply an open space with no provision for gymnastic exercises. We at once fitted it up for gymnastic exercises and provided one attendant and afterwards we got a second attendant. In the course of a few weeks the number of children who used that ground I should think increased 100 fold.

5668. You do not agree with what Mr. Rees says that the Manchester children are losing the instinct of play?—Yes, so far as the majority is concerned, but with encouragement it returns. We know that a very large proportion of Manchester boys do not know any organised games. But still the instinct is there and can very easily be revived.

5669. He says that they are losing the instinct?—He means that they do not play, not that they would not play if they were encouraged. I should think that the number of children who came to this ground increased by one hundred-fold, and for the two years that we had the place

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it was an unquestionable benefit. Then we handed it back with all the gymnastic apparatus to the town council, to the Parks Committee, and it continued to be more useful than it was, but it is not as useful as when we looked after it. We had two attendants. They have only one. I wish to make this recommendation: it would have the best influence upon the younger inhabitants of our towns if the open spaces in large towns were regarded seriously as a means of educating the people; if they were provided with gymnastic apparatus for people of all ages, for young boys, for older boys, and for youths; if they were placed under the care of really competent attendants, men trained to know how children ought to play, and how gymnastic apparatus ought to be used; and to keep all these men attending to their duties there should be a well-paid inspector appointed to visit all the grounds in succession.

5670. You mean an inspector of playgrounds?—Yes, a master of the revels if you like, to make the open spaces available as schools of all kinds of healthy physical exercises. I am perfectly certain that in a couple of years the usefulness of our grounds, so far as effect upon the boys is concerned, would be increased a hundred-fold, and so far as effect in bringing a large proportion of the community to the use of the grounds is concerned the increase would be still greater. That would justify the town council in providing more open spaces. The open spaces are so irregularly and so badly used at present that many people think on the whole that they are rather sources of injury than of advantage to the children.

5671. Do you not think that a great many of these boys would be incapable of making use of them from being underfed and badly nourished and so on? Some would.

5672. They are just the class that you wish to benefit most, but they are least fitted to make use of the advantages?—I doubt whether the poorest class is the class which most needs help. I believe that the class of those who suffer from secondary poverty needs just as much help; their children do not get the exercise needed for health, and do not know how to get it at present.

5673. My point is, could the children of the poorest class of all make much use of those opportunities if they were granted to them?—I think they would if they could get them. I mean those who are in a feeble and unhealthy state?—Well, the injuriousness of systematic physical training on underfed children is very much exaggerated. In my experience there are almost no children however underfed they may be who have not enough of the influence of youth about them to amuse themselves in some way. It is very much better for them and the community that those children should use their little energy in right ways than in wrong ways. There are no underfed children in schools that would not be benefited by good physical training. Then a great deal of the underfeeding and malnutrition is due to the fact that the children do not use their lungs; they do not assimilate the food that they do take. A great number of the children stoop. We all notice a large proportion who do not know how to breathe. They do not breathe through their noses; they do not hold themselves erect and do justice to what lungs they have, and that might be very greatly improved by good physical training in the schools, and the kind of physical training that I have referred to might be given in the open air of the playgrounds. I ought logically to have begun with the training in schools.

5674. There is much room for improvement there you think?—Yes. In the German schools for years they have had two hours a week given to physical training, and that is for boys who are going to serve in the army, who are sure of having a long period in which their physical development will receive a great deal of attention. Our children who are not going to receive physical training in the army after they have left school have had in the majority of schools until lately no physical training at all. Now the Code says at least one hour a week must be given to it, but as our children need it much more than the German children they ought to have at least two hours a week.

5675. (*Colonel Fox.*) You consider that two hours is the least that they should have?—Yes, the least they should have, and I think that part of the training given in the two hours ought to be of a kind to prepare children for using those opportunities that they will have for getting exercise when they leave school. They ought to be trained to use in the elementary school apparatus that they will find in the open air gymnasia even if that does not reach the ideal which might be reached in the school. All children ought to be taught at school some social games that will induce them to take trouble on holidays to leave their neighbourhoods, if necessary to get more exercise. Some Manchester boys are willing to go miles. We had a control of some fields outside Manchester for several years, and we were besieged by boys' clubs who wanted the opportunity of playing cricket and football in those fields.

5676. At the present moment you are speaking of young boys in elementary schools?—Yes, of boys who had been trained in elementary schools.

5677. All boys who leave school at fourteen?—Yes.

5678. There are many elementary schools without playgrounds, and you must remember that the climate often will not admit of their being used?—It is wonderful what weather they will play in.

5679. But in addition to that, in a large proportion of schools they have no drill halls; that is a thing that is very badly wanted, is it not?—Yes.

5680. They have no covered gymnasia, and in many cases, especially in the voluntary schools, neither playgrounds nor drill halls, and absolutely no room for any form of physical training except between the desks?—Yes.

5681. Do you consider that there should be something done to supply all those schools with some kind of covered sheds or drill halls for physical training?—I do think that physical training is so very important not merely for the body, but also as part of mental and moral training, that no school ought to receive any grant at all or be allowed to be used for the education of children unless it provides the means of physical training.

5682. Would you apply the same thing to girls?—For girls also. I would not allow schools unless they had sufficient space for physical training in fine weather and in wet weather.

5683. (*Chairman.*) Of course the more that could be done in the open air the better?—Certainly. And in relation to open spaces for physical training I might say that I think all our teachers want a great deal more training as to the value of fresh air than they have hitherto received.

5684. (*Colonel Fox.*) You know that training colleges exist for teachers to be taught, but they can only accommodate one-fifth of the teacher population?—Yes.

5685. But do not you think that these teachers, both men and women, when they attend these training colleges should be trained to a knowledge of hygiene, and for their bodily welfare taught exercises, whilst at the training colleges?—I think so. All teachers ought to be trained for long periods.

5686. Do you think that the instruction both in the class-room and playground would be much better if the teachers were thoroughly trained at the training colleges?—Certainly. I do not think that any one fact does more to condemn our system of education since 1870 than the miserable physique of a very large part of the teachers themselves.

5687. I do not know whether you are aware of the fact that we have had a committee sitting—an inter-departmental committee composed of Scotch and English members, who have given us an elaborate book on physical training for the use of boys and girls in the elementary schools. Do you consider that that book alone is anything like sufficient? Is not a staff of instructors required?—I believe that if, by some miracle, we could give our teachers and managers a due sense of the value of fresh air and exercise, that the doing of that would be worth a million times all the books in the world on physical training. It is the influence of the teacher that we must rely upon. Books are invaluable only as a means to that end. May I give an illustration of the ignorance prevailing in all ranks of people connected with schools? As a manager of a school I have gone to village school before the annual

inspection. I have found the room very close and I have had the windows opened. His Majesty's Inspector has arrived and he has taken the class at one end of the room, and he has begun to feel the back of his head (some of His Majesty's Inspectors are bald you know), and he has turned round and said, "There is a very strong draught, will you kindly shut that window." and the headmaster has done so. And he has afterwards gone to another part of the school and found another draught, and he has had that window shut also, and that too when the open windows were the only means of ventilation for himself and the teachers and everyone connected with the schools.

5688. (*Dr. Tatham.*) Were you a manager of the schools?—Yes, I was one of the managers.

5689. Is there any ventilating system in the school?—We have a ventilator in the centre of the ceiling. Whether it is carried out properly or not I do not know, but I know that we rely upon the windows when fires are not used.

5690. (*Mr. Struthers.*) It would be worth while to find out whether the cord of that ventilator was broken or not?—Well, if the cord was there, I do not think that it was used.

5691. (*Dr. Tatham.*) Is that part of a manager's business?—One man is helpless. You must, in order to get a proper result, have the majority of the people in authority trained to have things of that kind thoroughly carried out.

5692. The opening of the windows might create a violent draught?—But it is better than nothing. I do not believe that any draught is so dangerous to health as foul air is. But in this case it was not a question of a violent draught, but the question of a current that could be felt on the very susceptible bald head of an elderly gentleman.

5693. (*Mr. Struthers.*) But that very susceptible gentleman might get a bad cold from it, and that owing simply to the fact that the ventilators were not in good order?—The ventilator would probably cause a draught perceptible to the susceptible gentleman also.

5694. (*Colonel Fox.*) You attach great importance to the teachers learning physical training?—Yes, I had an opportunity of speaking to a friend who had held high office in the Education Department, and I said—"After your experience, don't you agree with me that if we concentrated our attention upon the physical training of children and only gave mental and moral training to the amount necessary, to make them as healthy and strong men and women as they possibly can be made, we should get better mental and moral results than we are now doing, when we are neglecting physical health so glaringly"; and he said, "I entirely agree with you."

5695. Then you consider we are over-taxing the brains of the children with the education that we are now giving them?—In two of the schools that I visited lately, I found large classes of what are called the infants, including real infants, because their parents send us children below three to get rid of them, but including also children of five, being taught arithmetic.

5696. (*Chairman.*) You can refuse to take them under five years?—Yes, but there is so much rivalry that in some of the schools in Macclesfield, for instance, they provide mattresses for the children. Well, I have seen infants being taught arithmetic; that is to say, that the children who could be taught arithmetic were having their brains absolutely misused. They were being taught how to write sums, and to learn by words that eight tens make eighty. The younger children who could not take that in were being carefully trained at great expense to hate lessons. I do not think that children's brains are over-taxed but misused; they are asked to take in things that they cannot understand, or that cannot be made interesting to them, and that simply leads them to neglect and hate their lessons.

5697. And often sitting in a polluted atmosphere, too?—Yes; almost always, I should say, except in the large schools.

5698. (*Dr. Tatham.*) You made some remark in answer to the Chairman this morning with regard to the condition of Jewish children as you know them in Manchester, and you were saying there was a very considerable number of them?—We have over 16,000.

5699. In the neighbourhood of Cheetham Hill?—Yes.

5700. Compared with Christian children do you think that the Jewish children are healthier and better fed, and better attended to by their mothers?—I can only judge by the evidence of Jewish friends. I should say that they are certainly, that the Jewish mothers as a rule have a strong sense of duty towards their children even the poorest, and then the Jews are a much more temperate race; there is not nearly so much drinking amongst them.

5701. Do you know Dr. Eichholz?—I have never met him.

5702. Dr. Eichholz has very considerable knowledge of Manchester, and especially of educational matters in Manchester; he has examined the schools there for some years?—Yes.

5703. Dr. Eichholz confirms what you say that there is a very considerable difference between Jewish children and Christian children; that is to say the Jewish children are very much better looked after and better fed in every respect, and they are healthier children than Christian children. Would you say that that is the case?—Yes. Does Dr. Eichholz say whether the Jewish houses are better ventilated in the east end of London? I have learnt that the Jews do pay more attention to having their windows open.

5704. (*Chairman.*) The evidence is that their houses are over-crowded?—I know that some houses occupied by Jews are.

5705. (*Colonel Fox.*) The Jewish people in the east end of London are more closely packed than the Christians, and they take in lodgers and pack their rooms full?—Do they open their windows more than the Christians?

5706. No, I do not think so. But notwithstanding that fact they derive much more benefit from proper food than the Christians do?—And they do not waste their money to the same extent.

5707. They all say they are more abstemious?—Yes.

5708. (*Dr. Tatham.*) Mr. Rees, whom you know, and who gave evidence a few days ago, said to us, "I should be inclined to doubt the results of Dr. Hall, of Leeds, and so far as they are sound there is one factor enumerated omitted, viz., that the Jews are a sub-tropical race, and they mature more quickly; at thirteen you would expect the Jewish boy to be more advanced than the English boy, just as you find the English boy more advanced than the Norwegian boy." Is that in accordance with your experience?—I have not had experience enough of young Jews to be able to say that.

5709. Amongst the various philanthropic endeavours which I know you to have made in Manchester for many years you spoke just now of the Manchester and Salford Association for the improvement of dwellings—is that the correct name?—Yes, the dwellings and surroundings of the people.

5710. Has that organisation been in operation for some time?—It is about three years since it was formed.

5711-13. Is it a success so far?—So far it has given its time and attention to making an examination of typical parts of Manchester and Salford, to the housing conditions existing there, and I have given the Committee some of the results of those investigations, those facts about the bad water supply, and we have facts also as to the altogether inadequate provision of closets and the neglected condition of the closets. We have got, I think, a great deal of most valuable information through our action.

5714. (*Dr. Tatham.*) With regard to that other association, the Manchester and Salford Sanitary Association, with which you have been associated, you have in connection with that the Ladies Public Health Society, have you not?—Yes.

5715. Is that now as it was in my time, on the lines of the Elberfeld system?—Partly. It is doing work in every way admirable. That seems to me one of the best examples of intelligence on the part of a municipal council that I know. The Ladies' Health Society started as a purely private society; ladies take districts and visit them. Then it was found that more constant work was needed than ladies could give—I do not know whether you had anything to do with the change.

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5716. A great deal?—You had to do with the initiation of the system I think.

5717. A great deal of it, but that is ten years ago?—It was proposed that the town council should help those ladies by paying sanitary mission women for each district that had a lady visitor; the suggestion was accepted and work on those lines has gone on ever since. The sanitary mission women give the whole of their working time to visiting the houses and making friends of the people, giving advice and reporting any defects in their houses—anything that is alterable in the habits of the family each mission woman reports to the lady who is in charge of the sanitary district; and in time of infection when any disease is about they supply them with carbolic acid and things of that kind, and other disinfecting agents given gratuitously, and in this way the habits of a very large proportion of the families of the districts are being distinctly raised. The death rate of children has been diminished, and a considerable number of workpeople have been induced to sleep with open windows. Then the ladies—some of them—have mothers' meetings not on religious lines, but on sanitary lines. One of them meets in our settlement.

5718. (*Mr. Struthers.*) You say it does not go at all on religious lines?—Not at all, unless you use religion in a very broad sense.

5719. (*Dr. Tatham.*) Not on sectarian lines?—Not on sectarian lines. One mothers' meeting meets in our settlement, and there the mothers now form a most intelligent and well-informed set of citizens, taking an interest in many aspects of public life. No work could be better; no work could more clearly prove the advantages of systematic visiting on the Elberfeld system of poor law relief.

5720. I asked you those questions because I wanted to ascertain whether the state of things which I myself knew to exist ten or twelve years ago are still in existence in Manchester. Do you know whether the number of district visitors has increased?—It has increased but not very largely. It is very difficult to find ladies who have the necessary tact and have the control of enough time.

5721. Have the corporation taken any deeper interest in the matter now than they did ten years ago? Do they employ and pay a larger number of district visitors?—I think they have increased the number of mission women as the number of ladies increases. They take a most justifiable pride in the work.

5722. Do you happen to know the number?—This last year there have been 32 ladies and 22 health visitors.

5723. You spoke just now of the almost hopelessness of there being anything better to be looked for in the future with regard to the method of laying out of streets and of buildings, in those portions, say, of Manchester outside the city boundaries: will you tell me exactly what you mean by that: is it a question of bye-laws?—I can do that best by comparison. We all recognise, all those who take an interest in the welfare of the working classes in the large towns, that if the present deterioration is to be checked it must be partly done by the substitution of more wholesome houses and more wholesome surroundings for the worst property now in the central districts. How is that to be effected? The town council cannot build all the houses needed: private citizens must take their part in the work, and there must be a great increase in the activity of building societies. The town councils, the central government, must be prepared to do what the authorities in Germany are doing, and advance money on very low terms to building societies who will comply with certain conditions. The Government, of course, do that to a considerable extent now. But that work must be stimulated. Now what is going to induce building societies and private citizens to take part in this work? I should invest some money in houses—there is nothing I would make greater sacrifices for than to improve the conditions under which the Manchester work-people live. I cannot do anything, because I cannot find any place where if friends and I were able to build, say 100 dwellings with perfectly wholesome surroundings, it is not always certain that the effect of the whole would be ruined by the narrow streets, by the bad property, which under our existing arrangements the town council would allow to spring up around it.

5724. Are you speaking now of the city of Manchester?—I am speaking of the suburbs of Manchester.

5725. I quite see now what you mean. Supposing the corporation of the city of Manchester insist upon the observance of the best possible set of bye-laws, the district outside Manchester could not be compelled to use the same?—No; and if I built in Manchester, the Manchester Town Council would allow the property to be ruined by narrow streets near it.

5726. Is not that at the bottom of the whole difficulty?—Yes, it is one chief cause of the difficulty.

5727. That jerry-builders congregate on the outskirts of large towns, that they cover the ground with their wretched habitations, and that in the course of twenty or thirty years afterwards when the area comes within the control of the great corporation the whole mischief is done; is not that the reason?—That is the reason—a chief reason. I have consulted with men in Liverpool and other towns, and we all agree that the control of the outskirts is the all important thing. How are you to get that?

5728. (*Chairman.*) By making them enlarge their boundaries earlier than they do?—I think so. I think that our larger towns ought to have larger powers of incorporation of the surrounding districts than they now have, and they ought to have the right and the duty to make building plans for the incorporated districts. That is one of the points that I specially wanted to call the attention of the Committee to.

5729. (*Dr. Tatham.*) How would you deal with those areas which are outside the municipality, because you see you can extend the municipality to-morrow, but in six months' time there will be an outer zone of districts where the jerry-builder congegates and puts down wretched buildings which he calls houses—how can you control the jerry-builder?—There ought to be no part of a densely populated country like England that is outside the domain of a competent authority.

5730. Quite so; then you would insist upon the use of bye-laws?—Everywhere.

5731. Of such a character that it would be impossible to build houses of an improper character?—Certainly, and which would make it impossible to construct sets of narrow streets. Some narrow streets you must have unless houses are to be unreasonably dear; and Germany now recognises that it has made a mistake in insisting upon all streets in the new parts of towns being too wide. But no narrow street ought to open into another narrow street. The main thoroughfare ought to be wide, and we ought to have a considerable proportion of tree-planted streets in the new parts of the town.

5732. That seems to be at the bottom of the whole thing?—That is at the bottom of the whole thing, and if every part of a town and of the districts surrounding a town could be under the control of a competent authority a new order of things would dawn. We should no longer have the semi-slums erected on the verge of our towns which are the despair of all thoughtful citizens at the present moment. Mr. Austin Taylor quite agreed with me. He said that the control of the outskirts is what we have to fight for now.

5733. You know very well, and I know too, that the corporation of Manchester of whom we have spoken has been considerably hindered in the race for health, if I may use the term, by the fact that the districts which they have incorporated in recent years have been built under the direction of authorities which have misused their position?—Yes.

5734. And that really the slum property which they have been obliged to take into the city is of such a character as to be almost worse than anything in the worst parts of Manchester?—Yes.

5735. I know myself that they have suffered severely?—That is the case. And the property built to the south and the north of Manchester at the present moment is much of it of the most miserable character, although one authority in Levenshulme acts with great intelligence. Until the powers of the councils of the large towns are increased, and until the districts just outside the towns are brought under competent authorities, these evils must go on.

I want to show the Committee this, which is a general plan of Cologne. Cologne used to be a most unwholesome town. It was the town where Coleridge counted "two

and seventy stenches, all well defined, and several stinks." Well, it has felt the rapid increase of urban population with the rest of Germany. It has grown immensely since 1870. Now this book here (*producing same*) gives a view of the building regulations of the town. This is the old part of the town, with Deutz on the other side of the Rhine. The streets *here* are many of them extremely narrow; great improvements have taken place, hundreds of thousands of pounds have been spent in breaking through the blocks of buildings, and letting in the air and improving the pavement. But still unless the whole of Central Cologne is to be pulled down conditions very favourable to health cannot be created there. But the central portion has become the business part of the town, and it is deserted at night just as a large part of the City is in London. Now in order to insure that the air from the country shall not be cut off from this central part of Cologne, and that the new districts shall be wholesome, these public building regulations have been made. I will give an explanation of the plan and of the building regulations, translating part of a description published by the municipal government of Cologne:—"New building regulations came into force on July 1st, 1901. They established the so-called 'Zone' or District building system, by which all the building sites in Coeln are divided into four classes, as is shown on the accompanying plan. The First Building Class includes the districts within the line of walls on both sides of the Rhine, with the exception of the sites for which 'open building,' the Fourth Class, is prescribed, and with the exception also of the main thoroughfares in the suburbs Nippes and Ehrenfeld. The parts of the town which are in this First Class are indicated on the plan by blue colouring. The Second Building Class, shown on the plan by red colouring, comprises the suburbs of more urban character, while the suburbs of more rural character belong to the Third Class. On the plan the districts included in the Third Class are left uncoloured. The parts of the plan which are coloured green indicate the districts which belong to the Fourth Class, that of the so-called 'Open' or Villa mode of building. These separate building-classes are distinguished from each other in two ways, by differences in the number of storeys and in the height of building allowed in them, and by differences in the degree to which the sites may be covered by buildings.

In the First Class buildings may have four storeys and be of a height of 66½ feet.

In the Second Class buildings may have three storeys and be of a height of 52½ feet.

In the Third Class two storeys and a height of 38 feet are allowed.

In the Fourth Class two storeys and a height of 52½ feet are allowed.

In the First Class 75 per cent. of each site, or 80 per cent. of a corner-site, may be built over.

In the Second Class, if the buildings do not exceed a height of 26 feet, 75 per cent. of a site may be built over; if the buildings exceed 26 feet in height, not more than 65 per cent. of the site may be built over.

In the Third Class, if the buildings do not exceed a height of 20 feet, 65 per cent. of the site may be built over. If the buildings are more than 20 feet high, not more than 50 per cent. may be built over.

In the Fourth Class 40 per cent. of a site, and 50 per cent. of a corner-site, may be built over.

In the Fourth Class each building must be at least 16½ feet from the boundary of the adjoining sites, and at least 33 feet from the next house.

The chief advantage of the new building regulations consists in this, that they take account of the peculiarities of all parts of the town, and that they fix the mode of building even for those plots of ground on which military rules do not at present allow any buildings to be erected, so that, when the prohibition is removed, it will be known at once what kind of building is allowed, and thus a disorderly use of the ground is made impossible. Further—and this is to be welcomed both from the hygienic and from the æsthetic point of view—a large area is reserved for 'open' or villa building, so that when, in the, it is to be hoped, not distant future, the circle of fortifications which at present checks the development of Coeln is removed, there will be round that part of the town which now lies within the Walls a broad band of villas, branches from which will extend on the south to the South Park and the Villa Colony of Marienburg, on the West to the Town-Wood, and on the north to the Flora District."

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This arrangement allows fresh air to get into the centre of these large towns. This arrangement allows fresh air to come through an openly built country to the old town in all directions, and however much Cologne increases in size there will always be this district with wide streets, many of them planted with trees where it will be always pleasant for the poorest people as well as the richest people to take exercise. Cologne can never be ruined now. It may increase tenfold in size, and the people of the poorest districts will always have a substitute for the country, if they have not the country itself. Other towns in Germany have adopted the same plan, Leipsic, Frankfort, Magdeburg have adopted, and all other towns are adopting, this system of what is called building zones or building districts.

5736. (*Mr. Lindsell.*) But those towns are not so close together as Manchester, which has towns a little way off?—The town council of Manchester should apply to the Government for the compulsory joining of Manchester and Salford, and it would seem to be so absolutely necessary for the welfare of both of the two towns that this would be granted, and then they could be treated as this densely built district of Cologne is treated, and then building regulations would be made to ensure that as far as possible this large central district should be reached by fresh air always coming from the country. But in Manchester the town council has so little prevision that, when they had a splendid tract of country to the west of the town, the Trafford Park estate, from which the prevailing winds blow, offered to them, they were not prepared for it, and it was snapped up by a speculator. It is a perfect gold mine. It is on the banks of the Manchester Ship Canal, and it has now a great part of it covered by new houses and new large manufactories, and it would have been invaluable, partly for increasing the wealth of the town and partly for keeping an open space, to allow the west wind to come in to Manchester.

5737–8. Is there no part of Trafford Park available?—It is all in the possession of a building company, it depends upon their enlightenment. The corporation afterwards had to buy at a high price a large tract to the north of Manchester, a quarter from which the wind very rarely blows. *That* is the building plan for Cologne. *Here* are the building regulations for the suburbs of Berlin. All this has been planned out years beforehand. Here you have regulations as to the proportion of sites that may be covered, which affect land as far as seventeen miles from the centre of Berlin. *Here* too they have taken into account the quarters from which the wind habitually blows, and they have reserved more districts for open building on those sides than on others. Those are with reference to Berlin. Then we have building regulations for Magdeburg, where exactly the same system prevails. *These* colours indicate the districts in which different amounts of sites may be covered and different heights of buildings may be erected. The building regulations confine manufactories to specified districts. For the purpose of showing that a town, the growth of which is regulated by a carefully prepared building-plan, secures wholesome environment for workmen's dwellings which are in the town and not in the suburbs, I submit a copy of part of the official plan of Frankfurt am Main. The plan shows the position of three new blocks of workmen's dwellings in the new north-eastern portion of the town. These dwellings have not better surroundings than have most other workmen's houses in the new parts of Frankfurt and other large German towns. It will be seen that the great width of the principal streets and the proximity of the broad tree-planted Rothschild Allee and Guenthersburg Allee, with the shrubbery at their intersection, make it easy for the tenants of the workmen's houses to reach in a few minutes places where they can enjoy abundant light and fresh air, and either exercise or rest. Their dwellings, therefore, are incomparably superior, in respect of pleasantness and wholesomeness of surroundings, to any new dwellings which exist in Manchester or any other large English town. The width of Burg Strasse is a little over 18 yards, and that of the Guenthersburg Allee is 80 yards. Frankfurt, with 289,000 inhabitants, has 57 tree-planted streets, the length of which is 20 miles. The task of its Town Council in improving its housing system and in laying out the

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new parts of the town with streets of adequate width, and with an adequate supply of open spaces, has been much facilitated by the town's possession of land. It owns 16½ square miles of land, while Manchester, with nearlytwice as large a population, has only a little more than 1½ square miles, all of it in public parks.

5739. (*Colonel Onslow.*) You would have great difficulty in applying the rules to Sheffield and right across England from Sheffield to Burnley, that part seems to be one town as you pass through it in the train?—Yes, but when you look carefully at it there is a good deal of open space.

5740. Well, there is a certain amount?—It would be a great thing to preserve a proportion of that and to obtain wide tree-planted streets, and to bring into the mind of the inhabitants the fact that their districts could be kept pleasant and wholesome. They have not a notion that the central authority can possibly do things of this kind; but in a German town everybody knows that he has to submit to these restrictions and that he will get the advantage of it. I wish now to offer evidence which seems to me of some importance. I brought this book, "Eigenes Heim," by E. Pfeiffer, to show how the existence of those regulations as to the width of streets and the height to which buildings might be carried, and the proportion of sites that may be covered, affects the private builder or the building association. This is a very useful book, which was given to me by a member of a building society in Stuttgart. They have built a large number of houses outside Stuttgart. They bought their land, and as a building plan did not yet exist for that side of Stuttgart, they could not do anything immediately. They had to go to the special office connected with the Stuttgart Corporation and say, "Now we want to build, will you prepare a building plan for our district?" Their request was at once complied with, and streets were marked out. They rather grumbled at first, because the plan showed that they must make this very wide street with a double row of trees, and that they must have a similar street going from it at right angles, which must also be planted with trees, and they said, "It is very hard to give up so much of our land and go to all this expense." But they built all these houses and then they found it was an immense advantage to them to have these wide streets. It has made the whole of their little colony far more attractive.

5741. (*Chairman.*) You attach great importance to the trees?—I attach immense importance to the trees. I know no one fact that is having a worse influence on family life in Manchester and Salford than this fact, that for the majority there are no places where a decent working man can go with his wife and children on a summer evening to take the air, and to watch the children play. Family life is stamped out in Manchester and Salford by the impossibility of parents and children enjoying themselves together. But these street plans provide that possibility, and in Berlin and in the biggest towns in Germany I have hunted in vain for any part of the town where it is not possible by a few minutes walk for a family to all go together to some pleasant tree planted street. A tree planted street seems an emblem of civilisation and intelligence, and the absence of it an index of the contrary qualities. In this Stuttgart colony there is a very low death-rate. The people are very happy in their houses—they are not very beautiful—and a great many houses are sold to the tenants, and the whole is an excellent piece of work. I am perfectly certain that all over England there are people who would be delighted to share in similar work if they had a similar security for the environment of those houses. I do not think there is a clearer duty for people like myself than to take part in the building of wholesome houses, but I will not do it—I cannot do it—because there is no protection for the environment. May I pass on to the last subject that I need trouble the Committee about. I want English citizens to be prepared at school for co-operating with the town council. At present nothing can be done because the town council have not large enough views, but if they had large enough views they would have the dead weight of ignorance of the citizens to resist them. All that I have said so far tends to show that we are a stupid and almost effete people in Manchester and Salford, and yet no mistake could be greater. We have excellent material in Manchester, it only wants organising and preparing. I brought this formidable looking parcel just to show what good work Manchester children can do. We have in Manchester, in connection with the University, a practising school for the students in the Day Training College, the Women's Day Training College. We manage it on utterly un-English principles. We show our belief that work can be done only by people who know how to do the work, and so we have had the curriculum of our school prepared and all our school methods devised by the mistress of method, and the school is controlled by her and a committee, which includes Professor Sadler and several other Professors of Owen's College. Our curriculum, I venture to say, is the best curriculum which is in use in any elementary school in England. It is intended for the purpose of giving the children an organic body of knowledge, a body of knowledge of which each part is closely connected with the rest. Geography and history are taught in connection with each other. The school songs have relation to the other subjects. The children receive very careful physical training.

5742. (*Colonel Fox.*) Do you give them two hours a week?—About three hours and a half; physical exercises (drill) two hours a week, and organised games about twenty minutes daily, more than twenty minutes in fine weather. The children are kept a great deal out in the open air. We have school journeys in the summer. Our school is really managed as a school of full health, of life.

5743. (*Mr. Lindsell.*) It is all under the Elementary Education Code, is it not?—No. We have kept it quite independent of the Education Authority.

5744. You get no grants?—We have no grants. The deficit is paid by private subscription.

5745. (*Mr. Struthers.*) Do you charge fees?—We charge 1s. a week, and we get children of the social standing of those families who send their children to the Board schools and Church schools.

5746. (*Mr. Lindsell.*) The parents of your children prefer to pay 1s. a week to you rather than go to the Board school?—Certainly they do.

5747. That rather does away with the ideas of its being an elementary school?—We do not wish to get grants at present at the cost of freedom of action.

5748. Your school is rather a type of what you consider ought to be?—Certainly. We have children of the Board school class and of the elementary school age. The work that is done in our school could be done in any board school or in any Church school if the managers had sufficient freedom of action and had sufficient knowledge of education and only trained teachers.

5749. (*Chairman.*) You think that yours is a type to which they ought to conform?—Yes.

5750. (*Mr. Lindsell.*) Have you got the time table?—No, but I will send the Committee the plan of studies.

5751. The shilling a week puts it above the category of elementary schools?—Certainly.

5752. That can hardly be taken as a model?—Except that we could just as well do the work without charging the shilling. We had a discussion in the Committee as to what we should charge. Most of us were in favour of the charges made by some of the Board schools in Manchester when our school was opened. But the mistress of method gave us reasons why she would rather have a shilling charged, and, on our general system of deferring to competent people, we gave way on that point. But I assure you that the character of the school is in no degree influenced by the amount of fee we charge. We do get just the children that would go to the Board school but for the existence of ours. Now one of the results of the working of the school is that the children attend in the most admirable way.

5753. (*Mr. Struthers.*) What is the percentage of attendance?—We have some delicate children who cannot go to larger schools and who keep down the average attendance. It is over 90 per cent. in fine weather. The children really dread the holidays, they are so happy in their work. One mother told us that she really thought that she would have to live in the same street because her little girl insists upon being brought to the school in all weathers. Several families have come to live here in order that their children may attend. The teachers are full of enthusiasm, and what will appear wholly incredible to the Committee, so are the managers; and many parents are

much interested. We are all proud of the place, and we all rejoice in the work. When visitors, like Archdeacon Wilson, come to visit us they do not believe the drawings have been made by the children, not from models, but out of their own heads. *These* are calendars made by some of the children, as records of nature study. These children have been taught brush work for one and a half years, having only a little time every week given to the subject. A girl made *this* drawing from what she had learnt about clover in the school. Many of our children know nothing of plants when they come to the school.

5754. (*Chairman.*) What age are the children who do these drawings?—These children were between twelve and thirteen.

5755. (*Mr. Struthers.*) Did you happen to see the drawings at the study of nature exhibition?—Yes.

5756. Did you see a set of drawings by children of twelve and thirteen which might fairly be compared with those that you are exhibiting?—I do not remember them now. *Here* are drawings done by slum children in Bermondsey, and *these* are done in a village school in Cheshire. I saw the whole of *that* done by a child in the school. *Those* are all done by children, many of them the children of costermongers in Bermondsey, attending a large Board school. All the work is admirable for children of that age. Some of them were done by children at eleven.

5757. (*Colonel Fox.*) You are developing the sense of sight in doing these things?—Yes. The child's whole nature.

5758. It is just such children as these who become drunkards in Manchester?

5759. (*Mr. Struthers.*) I do not follow you?—Children of this class and with those capacities have hitherto often become drinkers, and the difference is entirely one of training.

5760. (*Colonel Fox.*) Do you mean to say that because they have excitable brains that they become drinkers?—No. But because the healthy tasks and habits given to children in this school have not been given to the past generation, Manchester is filled to so large an extent with drunkards. What we have to explain is not that there is physical deterioration and moral deterioration, but that there is so little of it, and you can only account for that by the very good quality of the race—how it has resisted its environment.

5761. (*Chairman.*) Under the operation, I suppose, of counteracting influences?—Yes.

5762–4. (*Mr. Struthers.*) Do you mean that the spread of this kind of workers would tend to decrease the drunkards in the next generation?—Yes.

5765. What is the connection between doing this kind of school work and preventing children from becoming drunkards in their after life. What is the intermediate step?—The intermediate step is this, that these children are being prepared for using every opportunity they can get of going into the country, of going to the museums, picture galleries, and of reading wholesome books; of living on the better side of civilisation in Manchester. Most of our drunkards have been carefully prevented by the absence of all decent training from living on that better side of civilisation, having been forced into the public-houses because they had no tastes to lead them anywhere else.

5766. (*Chairman.*) It is a mere awakening of their better instincts?—Yes.

5767. When you have a high state of civilisation you must prepare people to resist the innumerable increased temptations that that increased civilisation brings with it by training them to use the better side of civilisation.

5768. (*Mr. Lindsell.*) We are doing that now, you think?—So far as schools are working on those lines; but so far as the schools are concerned where little children are forced into habits of inattention by badly trained teachers teaching them arithmetic when they ought to be taught kindergarten work, and having their senses dulled in that way, there we are only training children for the public-houses.

5769. (*Chairman.*) Are not you unduly despairing of the existing system?—If I was trying to represent the whole system I should be misrepresenting it, but I was taking the weak parts, and that there should be so many weak parts shows how faulty the whole system is.

5770. (*Mr. Struthers.*) And the better system, how could the system be applied?—But you must remember that the excellence of this particular school that I am speaking of comes not from anything in the English system, but from Miss Dodd's having gone abroad for her ideal.

5771. Do you happen to have visited many of the other Board schools?—Yes; and some excellent work is being done.

5772. Do you think that the work done in the other schools is inferior to what is being done in this school?—Yes. Such good work can only be done in schools in which all the teachers are trained, in which the classes are small, and in which the curriculum is prepared by teachers of great experience.

5773. Do you know them so intimately as to definitely compare them?—I do know them sufficiently.

5774. Have you got here one of the better class schools who have done drawings to compare them?—I have seen them in exhibitions, and we are very closely in touch with the whole school system by this fact that our art museum lends collections of pictures to a great part of the schools in Manchester, and I come in contact with the people who know most about these things. But I must not be misunderstood. Most admirable work is being done in the Board school system—in provided schools now, and very good work is being done in some of the Denominational schools; but execrable work is being done in a great many of the Denominational schools, and a great many of the small Board schools not in Manchester.

5775. (*Mr. Lindsell.*) They have all equal chances; they are all under the same Code and the same authorities?—Yes.

5776. (*Chairman.*) It is the fault of the administration rather than the system you think?—A system which makes bad administration certain in many places is not good.

5777. (*Mr. Lindsell.*) I did not know whether you were attacking the present system of education, or whether it was the way in which the people administer that system. You admit certain results in certain schools, and if that is done in one, why not in all?—Because Manchester is a large and a wealthy town, and it has had the choice of members of the School Board from a very large number of people. The system made it, therefore, possible in large towns to have tolerably good schools; but the system has also involved the formation of Boards in very small districts where there were really not competent people.

5778. That has gone now?—Yes; but I have to report upon the results of the past order of things. The new order of things will give better results.

5779. (*Mr. Struthers.*) There are two things to be distinguished, the question of the administration of schools, and the Code which regulates, to a certain extent, the lines on which instruction is to be given in those schools. The mere fact that some schools do admirable work under the Code shows that the Code system is not in itself necessarily a bad system?—You will remember that I distinctly denied that any Board school is doing such good work as the practising school.

5780. I was not quite satisfied that you had made such an investigation into the comparative merits as to justify you in giving such an opinion?—Well, I know enough about the whole school system in Manchester to know the exceptionally good schools, and I have made inquiries from people who know the schools better than I do, and their opinion is that there is not any school in Manchester that has a curriculum in which the different subjects are so closely connected as they are in our own school.

5781. Have you ever invited the inspector of schools of the district to inspect the school, and compare it with the other schools?—Mr. Scott Coward, who is the Inspector of Training Colleges, speaks very highly of our school, and says all the work done in the training college is amongst the best in England.

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5782. Meaning that there are others which may stand very much on the same plane?—Well, that is the opinion of the Inspector of Training Colleges.

5783. I was thinking of the inspector for the district, has he been invited to inspect the school? Have you ever had any independent inspector?—We have had Professor Sadler.

5784. But he is personally interested in the school?—He is one of the Committee, but he does not take so absorbing an interest or so large a part in it for it to be possible to be a question of personal pride with him. He speaks of it as unique in his experience of English schools.

5785. But you have no independent inspection by any outside authority except members of the Committee?—The Inspector of Training Colleges, Mr. Scott Coward, has seen the school and notice of it appears in his report.

5786. (*Colonel Fox.*) You know I go about the country in my capacity as Inspector of Physical Training, and I take great interest in this drawing, and in nearly all the schools I have been to, I have seen scores of schools where they do things of this description, and just the same sort of thing all over the country?—But have you met with work so good?

5787. Oh, quite?—I do not at all say that work as good as the drawings is not done in scores of schools.

5788. (*Mr. Struthers.*) You are not familiar with the education that has been going on in recent years so as to be able to compare the system now with what it used to be—it is very different from what it was?—Well, I should not like to say. I have a lot of letters about the food of the people in Manchester from Miss Hobbs and from members of the Ladies' Health Society.

5789. (*Chairman.*) We shall have Dr. Niven here who will be able to give us information upon that point?—I doubt whether Dr. Niven knows as much as these ladies do.

5790. We shall also have the representatives of the Manchester Ladies' Health Society, too?—Very well. I have not spoken about one thing and that is the misuse of Sunday in our large towns. Here we have a state of things in which the great majority of people are absolutely separated from religious organisations. The Bishop of London says that in the east end of London perhaps one family in 100 is now directly connected with a religious organisation. In Manchester a large proportion has also severed itself, and yet we go on arranging the use of Sunday as if the mass of the people went to places of worship, and as if the opening of any place of recreation would take them away from religious duties. I want to urge that places where wholesome physical exercises can be got should be open on Sunday afternoon. That the play-grounds should be opened and that attendants should be there, and that boys should be encouraged to drill and go to rifle ranges on Sunday afternoon. Remember that we have for generations opened only the places where people could drink on Sunday afternoons; that we have compelled those who do not go to church to look for recreation only to places where drink is sold, and we wonder that drink is the chief amusement of the English people. Has not the time come when an effort should be made to reverse that, and to open on Sunday afternoon the places where recreation that is conducive to good physical and mental and moral health can be obtained.

5791. You have a great deal of Sunday music now, have you not?—Where can boys get physical exercise? Boys do not care for music, but they do care for exercising their arms and legs.

5792. (*Mr. Lindsell.*) You have got to reckon with the Nonconformist conscience, you know?—We have to reckon with a great deal of Conformist and Nonconformist prejudice.

5793. There is still a spirit of puritanism about?—I think that it is more inertia than anything else. They think the system has gone on in the past, and they do not recognise that there is reason for altering it.

5794. (*Chairman.*) You think it is a subject for consideration what should be done in that direction?—Yes.

5795. (*Mr. Lindsell.*) Do you think that it would have a direct bearing on the physical condition of the race?—I am perfectly certain that you cannot divide life into compartments. You cannot divide people's lives into Sunday feelings and week-day feelings. What they learn to like to do on Sunday afternoons they would like to do other days.

5796. (*Mr. Legge.*) Do you know anything of the industrial schools?—I have been to the industrial school at Ardwick.

5797. Do you think their curriculum a good one from what you have seen of it or their general system?—I have never been so deeply impressed by any set of facts that has come to my knowledge in one day as I was by what I saw at the Ardwick School. I thought that considering what I knew of the homes that these boys came from and the conditions under which they had been sent to school, and what they had become, that we had there the solution of a great many of the questions respecting the training of all children. The change from the physical condition in which those poor boys reached the school to their robust and healthy and cheerful appearance when I saw them seemed to me to be little less than the result of a miracle. I saw the boys drilled; I saw them doing gymnastic exercises; I went through their workshops and I spent a great part of the afternoon with them, and I thought that in the management of our schools we have a great deal to learn from the industrial school.

5798. You think this curriculum would specially suit the children in slum quarters in big towns?—Certainly.

5799. And so the extension of the system in the direction of day schools of the same sort would be an advantage?—A very great advantage.

5800. (*Mr. Struthers.*) You have given us a lot of valuable information about the state of things in Germany in respect of various points. Would you mind putting in some of the documents on which you base your opinion?—Should I send you a copy of the book on the Building Society at Stuttgart?

5801. Yes, and any book describing the Eberfeld system and about the new schools in Germany where they are all provided with shower baths and so on, the *précis* of the facts on which those paragraphs are based?—I think what would be most useful to the Committee would be a copy of the volume of the Report on the housing of Manchester that I have myself prepared, in which I give an account of the best work in connection with housing, and the improvement of the environment of the people in Germany that I have heard of. In that volume I give, for instance, an account of the work in connection with the schools in Breslau, where in spite of there being 423,000 inhabitants they teach over 500 gardening in the town, where they are giving shower baths in all the new schools,

5802. (*Colonel Fox.*) You say you do not like to see those public-houses open on a Sunday and all the other places closed. Do you approve of the present beer-houses on week days?—I think we have far too many beer-houses. The number of places where drink is sold is so great that the police cannot adequately supervise them. I think that the right policy is to very greatly diminish the number of the public-houses; to insist upon things besides intoxicating things being sold there.

5803. On the same principle as Lord Grey's Public-House Trust?—Yes.

5804. Is that what you would suggest in place of the public-houses?—I should suggest Lord Grey's public-houses.

5805. (*Chairman.*) With a restaurant?—Yes.

Dr. THOMAS MORISON LEGGE, M.D., called; and Examined.

Dr. Legge.

5806. (*Mr. Legge.*) Will you say precisely what your official position is?—I have been Medical Inspector of Factories and Workshops since June, 1898.

5807. Had you any previous official experience?—I was Secretary of the Royal Commission on Tuberculosis—the second Commission.

5808. What are your duties?—To conduct special and general inquiries into questions of health; to exercise a general supervision over the work of the Certifying Factory Surgeons, particularly in regard to those industries where they have duties under special rules or regulations for dangerous processes; and the principal work is to receive and take action on all cases of anthrax, or of poisoning by lead, phosphorous, arsenic, or mercury, received from medical practitioners under Section 73 of the Factory and Workshop Act, 1901. I have also to advise the staff of the Factory branch generally on medical questions affecting the factory administration.

5809. Which of those various medical duties takes up most of your time?—The investigation of cases of poisoning by lead principally, questions of ventilation, and the removal of dust by fans.

5810. So that the major part of your time is taken up by investigating the health conditions of certain trades scheduled as specially dangerous?—Quite so.

5811. And they really have not any great bearing upon the health conditions of the population at large?—No. All the persons who get affected in that way undergo deterioration of health.

5812. Yes; and so in that way affect the general population?—But I have not had time to conduct inquiries into the physical condition of general workers.

5813. Can you set out what statistical information your Department think has any bearing upon the health of the population?—The chief inspector issues an annual report which contains the tables supplied by the certifying surgeons, or rather, information supplied by the certifying surgeons as to the degree of injury from accident; the examination of the children and young persons, as the case may be, seen by the certifying surgeons before they are admitted into the factory, and the number that they reject.

5814. Then you issue certain tables to the *Labour Gazette*?—Yes, only of the cases of industrial poisoning.

5815. Then I suppose from time to time members of the staff of inspectors make special inquiries of a statistical kind. We had one of the inspectors lately before us from Newcastle?—He made an inquiry into dock accidents, I think.

5816. And also into children at Dundee?—That was purely on his own initiative.

5817. But some of the lady inspectors have made special inquiries, have they not?—They have made general inquiries, but no collection of physical data as to health.

5818. Then perhaps you will give a summary of what information you are aware of either in this country or abroad?—Yes, this is the memorandum:—On pages thirteen and fourteen of Parliamentary return of the Rules and Regulations made by each Factory Inspector, dated 11th May, 1836, are given the heights of 1,409 children and young persons between the ages of eleven and eighteen. In the Minutes of Evidence of the Committee on the Bill to regulate the labour of children in mills and factories of the United Kingdom, 1831 to 1832, are many references to the physical condition of the workers, but I can find no general statistics. On pages 336 and 337 of the Annual Report of the Chief Inspector of Factories for 1900, Mr. Wilson, Inspector of Factories, gives the results of heights and weights of 169 boys and girls employed in mills in Dundee. In 1902, I made observations on over 500 brass workers in Birmingham, in the hope of being able to compare their health with that of a corresponding number of iron workers and lead workers. Use was made of the accompanying form which was filled in by the workers. I subsequently made measurements of height without shoes, weight in clothes, minus coat and boots, chest measurements, strength with a dynamometer, and made examination of heart, lungs, etc. The data thus collected have been tabulated, and may be published in the Annual Report for 1903. Much information on the health conditions of factory children in Lancashire, together with physical statistics of 10,000 children is contained in the Report to the Local Government Board on proposed changes in hours and ages of employment in textile factories by J. H. Bridges, M.D., and T. Holmes, 1873.—Detailed statistical information as to the health of linen workers in Belgium is given in *Les Filatures de Lin—Etude d'hygiene professionelle. Rapport D'Enquête presenté à M. Le Ministre de l' Industrie et du Travail à l' Administration centrale.* An abstract (enclosed) of this report formed an appendix to my annual Report for 1902. In the International Congress on Hygiene and Demography held at Brussels in September of this year, papers were discussed on "How far can physiological methods help in elucidating the different phases and degrees of fatigue in different industries, and a resolution was passed urging that the several Governments should facilitate in every way scientific study of industrial fatigue." I think that the investigation by Dr. Glibert, of Brussels, is particularly instructive in showing how exceedingly difficult it is to get any knowledge of the health of workers in industries, where you have not a definite trade disease such as lead poisoning or mercury.

5819. With regard to the result of your study of the various returns, and so on, about lead poisoning, what general conclusion have you arrived at as to the effect of the administration of the regulations under the Factory Acts during recent years—has it decreased plumbism?—Yes, the figures bring that out distinctly. They have reduced it from 3·9 to 1·4 per cent. of those incurring risk, and that is in one trade, the china and earthenware.

5820. That is the trade which is the easiest to investigate?—Yes.

5821. What about poisoning by arsenic?—Its use is limited to very few industries, and where it does occur it does not produce anything like the same deterioration as lead does. It creates discomfort, but not so much injury to health.

5822. What about mercury?—That affects the workers very detrimentally, but it is limited in use to not more than a few hundred persons who are engaged with mercurial salts. I do not think one thousand persons in the kingdom are exposed to risk.

5823. What about phosphorous necrosis?—That has been practicallly stamped out.

5824. Even amongst match-makers?—There was no case reported last year, and in the previous year only one or two.

5825. Have you had no cases of phossy-jaw?—There were no cases last year. There is no other injury except phosphorus necrosis among lucifer match-workers and they do not suffer in any other way—their health is just as good as that of workers generally.

5826. Then as to anthrax, is that a serious matter at all, as affecting the general population?—It is exceedingly important to those engaged in horse-hair and the woollen and hide and skin industries.

5827. When you say that it is important in these industries it is in the localities where those industries are carried on?—Yes.

5828. What population of the workers in Bradford are exposed to danger from anthrax?—Well, probably the total number employed on wool is very large, but the total number who come in contact with the dangerous classes of wool would perhaps not be more than a few thousands. The number of cases would not be more than twenty a year.

5829. Well, now, outside these trades specially scheduled as dangerous, and which after all do not affect in the gross a large mass of the population either young or old, what do you think is generally in other industries the most deleterious condition in which people have to work?—Well exposure to injurious dust I should put first.

5830. Would you put that before work in humid atmospheres?—I should, as being more injurious.

5831. But not nearly so many people are affected?—No. But it is very difficult to find the injury to workers in humid atmospheres. One expects that it must be there, and it is brought out by Dr. Glibert in the investigations

Dr. Legge.

into the linen workers in Belgium. It is just a slow undermining of the health. It does not incapacitate them from working.

5832. Are not those the very trades in which there are most children and young persons employed?—Certainly, there are a large number.

5833. They are textile industries, are they not?—Yes, and there is female labour.

5834. It does not affect a considerable portion of the population?—But it is a serious question.

5835. It is not only working in a humid atmosphere, but in an artificially heated one also that is bad?—Yes. It has been made the subject of a special inquiry in this country, and recommendations have been made as to the ventilation which should be enforced with regard to it, but it is difficult to estimate the actual incapacity that is caused by it.

5836. As regards these matters that come in the field of factory administration we are moving ahead?—Certainly.

5837. And the right lines are being laid, you think?—Yes.

5838. Would you be prepared to go so far as one of our witnesses in saying that factory certifying surgeons should absolutely prohibit married women and mothers of families from working at all in factories?—That is absolutely impracticable.

5839. What is the law at present? They are prohibited from working for a month after confinement, are they not?—Yes.

5840. Would you be prepared to recommend an extension of that period?—No. I should not, for the reason that I do not see how they are to be supported during a longer period. I think theoretically it is most desirable, but it is not feasible. I remember receiving a letter from a medical man in Denmark asking me about our law and as to who supported the women during that period; did the State give her support, or did the employer pay her, because if neither did was not her state worse than if she was allowed to work as she pleased?

5841. (*Chairman.*) If she has a husband should he not support her?—But even then they want as much money as they can get.

5842. (*Mr. Legge.*) But still there are countries in which there is a period during which they are prohibited from working longer than in England?—It is three months in Switzerland.

5843. And before childbirth, as well as afterwards, it is compulsory?—I think in those countries there would be some insurance scheme by which support would be given during that period, and there is nothing of that sort here.

5844. But we are not looking at the matter only from the point of view of the mother, but also from that of the child, because we have had other evidence, from ladies who know a good deal about the poor, that a very large proportion of the mothers in the poor quarters of the town suckle their own children, and if the mother is in attendance at the factory she cannot be conveniently feeding her child at the same time?—No.

5845. So that if it were possible to make some provision for the time would not it be well?—Yes.

5846. (*Mr. Lindsell.*) But supposing this woman were the wife of an ordinary artisan, he has to support his wife always, but the man whose wife is in the factory has only to support her during a limited period. Should not he be made to support his wife?—I should say the expense of living in town is greater than it would be in the case of the labourer, and it would be more difficult for him to do so.

5847. (*Mr. Legge.*) It would be a very good thing if one could get the returns of the number of married women who work in that way?—Yes. I know that in the city of Huddersfield the medical officer has tabulated year by year the number of children born of married women working in the factories and women not working in factories in which he tries to show that the death-rate is not greater amongst that class working in factories.

5848. Could you send us that?—It is not sufficiently complete, in that it does not give the number of the population of the respective classes of women, so that you cannot work out a percentage. I wrote to him once and asked him, and he replied that he thought he could after the census figures were obtained.

5849. (*Chairman.*) You have not the number of married women working in factories, have you?—No.

5850. You could not get it?—No, I think not, without a very prolonged inquiry.

5851. (*Mr. Legge.*) You will agree that it would be a good thing to have a Central Bureau to collect the physical statistics of the country?—I should think it most desirable.

5852. You mean generally, and as regards the section of the popluation that comes within the Factory Acts?—Yes.

5853. We had Dr. Cunningham of Edinburgh before us and he was very strong from the scientific and social point of view of having a Central Bureau of Statistics. Supposing there was such a Central Bureau I suppose the certifying surgeons could be utilised for the collection of a good deal of information?—So far as the factories and workshops are concerned, I do not see what other means you could use for collecting the material.

5854. I thought the inspectors, generally, found no trouble in their duties in factories and workshops?—They would not have the time.

5855. Do you think they would resent it? Your point, I took it, was that the owners of factories would resent the intrusion of more people?—They would not resent the intrusion of certifying surgeons.

5856. Or other people?—They would most certainly.

5857. I suppose these certifying surgeons, in addition to their undertaking any special inquiries, could by grafting on the collection of physical facts in connection with their examination of children and young persons, be continually providing a body of valuable statistics which could be compared from period to period?—But it must be very clearly laid before them what they have to do. The certifying surgeons are medical practitioners; they have their own private practice in the majority of instances. It is only in a few districts—the big industrial centres—where they give up the whole of their time—in such places as Bristol, and the Potteries, and Blackburn, and Bolton, and big manufacturing districts.

5858. Have you formed any idea what would be the cost of a special inquiry by the certifying surgeons?—I believe there are just about 2,000 certifying factory surgeons, as every district must have one, in the same way that every district must have a medical officer of health or surveyor. Their main duties are: (*a*) To examine children and young persons under sixteen for certificates of fitness for employment in factories; and (*b*) to investigate and report on accidents and cases of poisoning. But of these 2,000 certifying surgeons not more than 120 of them reside in districts where they have to examine more than 1,000 children and young persons, and only fifty-seven are in really very large industrial centres, where they have to examine every year more than 2,000 children and young persons. Assuming that it was desired to have observations of 250,000 workers in each of the principal industries?

5859. You mean 25,000 workers?—Yes, 25,000 in each industry, 250,000 in the nine industries, of cotton, wool, jute, linen, iron and steel, letterpress printing, clothing, confectionery, and coal mining I should like to see the data collected in fifty selected certifying surgeons districts. The distribution of the population in these industries in each district would first have to be made so as to determine the number of observations necessary, and this being done comparison would be possible of the physical condition of the workers at the same age and employed at the same work in widely different districts in the kindgom.

5860. Or in the same districts at different times?—Yes. When I made my examination of the workers in brass, I could not examine, I found, more than forty persons a day, so that if one were to limit the number of examinations to forty a day, and these fifty certifying surgeons were to carry out the work, it could be done in less than six months.

5861. What fee do you think should be paid ?—I do not think that they could be asked to accept less than 1s. 6d. for a complete examination.

5862. What do you mean by a complete examination ?—I would provide them with forms on which they could take the height and weight and chest measurements. I would ask them to obtain a statement as to nationality, also as to whether the workers were born of parents living in the country or in town, and to note whether they had any physical defects or deformities. I think it would also be most desirable to have an accurate statement of the condition of the teeth, because, so far as my own observation goes, it is there I have noticed the most marked deterioration.

5863. Have you got anything about flat-footedness ?—I do not notice that, one notices it infinitely more in waiters and waitresses than in factory workers. That is owing, I think, to the former having to go round sharp corners of tables, and they spread their feet out to get round.

5864. (*Mr. Struthers.*) Forty examinations in the day ?—Yes.

5865. And it would cost about £2 10s. ?—Yes; I work it out that if the payment were made at the rate of 1s. 6d. for each person, the total sum required would be £18,750, or £375 for each certifying surgeon.

5866. (*Mr. Legge.*) How long would it take ?—Less than six months. I do not think that it would be necessary to repeat it again for ten years. I do not think I would ask the certifying surgeons in those big industrial districts always to be carrying on these investigations.

5867. That is all very well from the factory point of view, and comparing the health of one occupation with that of another, but supposing the information collected by these people could be co-ordinated by the Central Bureau, with similar information that would be asked for by medical officers inspecting schools and so on ?—Yes, I should have them working in harmony with, and indeed instructed by, the Central Bureau as to how to make their measurements so as to make them comparable. The only difficulty that I see is in the carrying of the weighing machine. Although I have one specially made and conveniently packed up to take it in a hansom, I found it a very troublesome thing to carry about and get upstairs with.

5868. (*Chairman.*) You could not dispense with weight. There is a normal relation between height and weight ?—No. It is a definite figure. I believe it is quite right to dispense with it so far as recruits are concerned, because their weight increases so quickly owing to the better food that they get. Of course, the factory people do not get the better food.

5869. (*Mr. Struthers.*) It does not vary with the height ?—No. It quite reversed one of the tables of the British Association Statistics; so far as the height of Scotchmen were concerned they were the tallest, but when it came to weight it was the Welsh, I think, who had the advantage.

5870. (*Colonel Onslow.*) A tall man is very often a thick set man ?—Yes.

5871. (*Mr. Legge.*) That is so with regard to adults, but is it not the case with regard to growing children, the relation between height and weight is almost exact and constant ?—There is a relation. I would not say that it is constant or exact.

5872. (*Mr. Struthers.*) But it might be that it would be well to have the weight taken for some time, to see whether it corresponds with the height ?—It is quite possible that some simpler form of weighing machine than that I have could be utilised.

5873. (*Colonel Onslow.*) The form used in nursing homes generally is a very useful form. It is a box with an arm to it ?—That is the one that I carried about, but it weighs so much.

5874. We use them in the Admiralty recruiting station ?—But in taking these observations they would have to carry it about from one factory to another.

5875. (*Chairman.*) Could you not insist upon their all having one ?—No. You mean in the factories ?

5876. Yes ?—No, I do not think so. *Dr. Legge.*

5877. (*Mr. Legge.*) You have special means of testing the atmosphere have you not ?—Yes.

5878. We had a lady this morning who wanted a sort of thermometer to hang up in any room, and by simply looking at it you could detect the degree of foulness or thickness of the air ?—You cannot have that. There is no such instrument, I mean. This apparatus which enables you to tell the vitiation of the air in five minutes accurately is not the easiest thing to work. It requires some slight knowledge of chemical apparatus.

5879. A man who can use the blow-pipe and that sort of thing, I suppose ?—Yes. I mean the apparatus devised by Dr. Haldane.

5880. (*Mr. Struthers.*) Have you no test to show the amount of carbonic acid by the discolouration of the paper ?—No. Many attempts have been made to devise one, and it is only by this apparatus of Dr. Haldane that we have been able to do it accurately within five minutes. It has always hitherto required a chemical calculation.

5881. (*Chairman.*) Do you think that the recent Factory Act has done all that can be done to secure proper ventilation of factories ?—I think Section 7 can do all that is required—at least it is as much as we can work.

5882. Mr. Rowntree, who was here a day or two ago, appeared to think not ?—Unfortunately no standard has been fixed.

5883. The Acts permit the Home Secretary to prescribe one for any class of factory—has he done that ?—No. The recommendation of the Committee does not meet with the approval of the society of medical officers of health and other bodies.

5884. (*Mr. Legge.*) It is too low ?—They think that it is too generous.

5885. (*Mr. Struthers.*) It is too low ?—Yes.

5886. (*Chairman.*) So far as this clause is concerned it is not brought into operation ?—It is certainly brought into operation in the hands of the inspectors.

5887. How can it be brought into operation ?—I take this apparatus into a factory, and if I find that the air has a high percentage of carbonic acid gas I should certainly try to put that section into force.

5888. Do you think sufficient is being done ?—It would be better if a standard could be fixed.

5889. Because of the variety of views of different inspectors, one being more tolerant than another ?—Yes.

5890. (*Mr. Struthers.*) Could you prosecute the factory owner if you found too high a percentage of carbonic acid gas in the air ?—I should be quite prepared to do so.

5891. Do you think that you would succeed ?—I should say one would.

5892. Of course it would be open to them to bring a contrary expert who would be instructed to say that this amount of carbonic acid gas was not deleterious ?—Yes. It would be contested.

5893. It would be simpler to have a definite standard set out do you think ?—Certainly. And I think to start with it would be better to make that standard a low one than to have too severe a one, which is unfortunately what the medical officers of health wish.

5894. You mean the medical officers of health in the Local Government Board ?—No, throughout the country through their society. They are an incorporated society, and they have passed a resolution condemning this suggested standard.

5895. (*Mr. Legge.*) They thought it too low ?—Yes.

5896. Do you remember what it was ?—The standard in the Ventilation Committee's Report was twelve parts of carbonic acid per 10,000 during daylight and twenty parts per 10,000 during gaslight; and the Society of Medical Officers of Health would not go beyond nine parts both day and night, because they said to allow a higher standard during gaslight might be interpreted as encouraging the use of gas. It would be quite impracticable to work a standard like nine parts both day and night. Fifty per cent. of the factories and workshops throughout the

Dr. Legge.

Kingdom might be at times beyond that standard and therefore they would disobey the order.

5897. (*Chairman.*) With regard to this question of the factory inspectors. We have taken a good deal of evidence about the pollution of the atmosphere in Manchester and so on, and the reluctance of the local authority to prosecute manufacturers for the breach of the law, in allowing noxious vapours to come into the atmosphere. Do you think that the duty of prosecuting might preferably be placed in the hands of the factory inspectors instead of the local authority in matters of that sort?—At present the factory inspector is concerned only with the conditions inside the factory.

5898. I am quite aware of that; but in the interest of the public health, with which he is supposed to be charged, is there anything inconsistent with his existing sphere of duties if he was employed in matters of that sort to put the law in motion?—Except that it would mean such an enormous increase in the staff. For instance, there are only two factory inspectors for the whole of Kent including a large part of London.

5899. (*Mr. Legge.*) How many have you in Manchester and Salford, for instance, with assistants?—There might be perhaps fifteen to twenty for the district all round Manchester.

5900. (*Chairman.*) In a district like that, could they undertake those additional duties?—I think that the local authority is the right party.

5901. Except that the local authority does not act, as we understand?—Our experience is that, so far as the getting work done by the local authorities is concerned, we have no difficulty in the big towns. In Manchester, for instance, sanitary matters are attended to at once.

5902. That is not the opinion of Mr. Horsfall?—That is our experience.

5903. (*Mr. Legge.*) You mean as regards any plaint?—So far as the duties under the Factory and Workshops Act is concerned, the local authorities in big towns do it very efficiently. Very often they wait until attention is called to defects by the Inspector.

5904. (*Chairman.*) That is where they are between the hammer and the anvil; but where it is left to their own initiative, that is the point?—Quite so.

5905. (*Mr. Struthers.*) Would not it do to have a central officer to have the power to call attention to the neglect of smoke nuisance — we are told that they do not do their duty?—That would be a matter for the Local Government Board, which is in direct relation with Medical Officers of Health. It seems to me more a matter for the Public Health Department than for the Factory Department, which is concerned with the work actually going on inside.

5906. (*Mr. Legge.*) But then the Local Government Board have no control of local Medical Officers of Health?—They have. Every Medical Officer of Health must send his Annual Report to the Local Government Board, and in a great many cases the Local Government Board pay half the salary of the Medical Officer of Health.

5907. (*Mr. Struthers.*) When they pay half the salary the Local Government Board would have the power of preventing dismissal without their consent?—The authority must have the consent of the Local Government Board before dismissing a man.

5908. (*Mr. Legge.*) But then the Local Government Board could call upon the Medical Officers of Health, part of whose salary is paid by the Board, to devote particular attention to any particular matter within their sphere of operations?—Yes. Then, such action would be of immense value in the rural districts, because it is there that the local authorities are inert, and it is in those cases that the Medical Officer of Health does not devote the whole of his time, and he is liable to dismissal at a very short notice. If you had combined sanitary districts, and had one Medical Officer of Health to a large number to make it worth his while to give up the whole of his time to it, it would be infinitely better.

5909. (*Chairman.*) Most county councils have that power at present?—Yes, but it is permissive in England. I think that it is obligatory in Scotland.

5910. (*Mr. Struthers.*) They cannot dismiss him without the consent of the Local Government Board?—Quite so.

5911. (*Chairman.*) As to the question whether the Factory Act in small workshops is applied to any large extent, Mr. Booth in his book seems to think it is not?—In men's workshops very many of the sections of the Act do not apply, and unless there is some injurious trade carried on I should say that the number of factories and workshops which the inspector has to visit in the course of a year are so many that unless a visit is very desirable he leaves those small places alone.

5912. They escape notice?—They do. They are not visited from one year's end to another.

5913. (*Dr. Tatham.*) You say in your memorandum: "I have not found many persons obviously suffering from consumption in factories except where they have been exposed to hard silicious dust, as in ganister mining." With regard to this exposure to hard silicious dust, have you noticed any great amount of pulmonary tuberculosis amongst them?—It is very slow in its action. They may work from ten to fifteen years before they begin to show signs of it.

5914. Does it take the one form of fibroid phthisis?—Yes; and they get tubercle grafted on.

5915. That is generally the case?—It is the cause of death.

5916. Fibroid phthisis is frequently the cause of death amongst the ganister people?—No. I think that has been brought out by Dr. Haldane's investigations in the Cornish tin mines.

5917. In the report that he recently issued?—Yes.

5918. (*Colonel Onslow.*) Do you lay great stress upon the matter of teeth?—Only where the teeth are exceptionally bad.

5919. But it is pretty well known that teeth are bad in all classes of society, it is not confined to any one class or any one industry?—But one finds great differences in teeth in the different parts of the country. In Yorkshire it is much worse than elsewhere.

5920. Do you attribute that to a local cause or water, or the air, or any particular cause?—I am not able to fix upon the cause. I do not think that it is water. I do not agree with the view of the soft water theory.

5921. I know from our records that we have a far larger number of rejections from bad teeth in some parts of the country than in others, but there appear to be nothing to show why that should be, and you cannot help us in the matter?—I am not aware of the cause of it.

5922. (*Chairman.*) There is no necessary correspondence between bad dentition and general deterioration?—Of all the causes that would occur to one as likely to produce bad teeth, I should say injudicious feeding in the first years of life was the most important.

5923. Do not you find cases of bad teeth just as, or even more, numerous in the upper classes than amongst the poor?—I do not think so. When I am looking for lead poisoning I always look at the teeth, and in that way I have seen many thousands. The teeth of the working classes are, in my opinion, much worse than those of the well-to-do.

5924-5. That is when exposed to specially adverse conditions, you mean?—Not necessarily.

TWELFTH DAY.

Monday, 22nd February, 1904.

PRESENT.

Mr. ALMERIC W. FITZ ROY (*in the Chair*).

Colonel G. M. FOX.
Mr. H. M. LINDSELL.
Mr. J. G. LEGGE.
Colonel GEORGE T. ONSLOW.
Mr. JOHN STRUTHERS.
Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary*).

Dr. ARCHIBALD KERR CHALMERS, M.D., D.P.H., called; and Examined.

Dr. Chalmers.

5926. (*Chairman.*) Will you kindly state your qualifications to give evidence, and what your experience is in this matter?—I am a graduate in medicine of Glasgow University and hold the Diploma in Public Health of Cambridge—I graduated in 1879, and in 1891 I was appointed assistant, and shortly thereafter junior medical officer of Glasgow. In 1898 I was appointed sole Medical Officer when Dr. Russell, my senior colleague, was transferred to the Local Government Board, Scotland, as Medical Member.

5927. You have been responsible for the condition of health in Glasgow since 1898 then?—Yes.

5928. Are you able to form any opinion as to whether the physical condition of the people is becoming worse?—I think that the death rates afford an indication of the movement which has taken place in the health conditions.

5929. And that is so far favourable?—Yes, uniformly favourable, taking it over a series of years, and taking the whole population. But I have noticed certain exceptions, particularly among the population occupying one-apartment houses. Among these the death rate is excessive.

5930. There is a diminution in the number of that class of houses?—Yes, to some extent; but their proportion is decreasing more rapidly.

5931. Would it be possible by the direct action of the local authority to reduce that evil much more rapidly than it is being reduced?—I have an impression that if we had a power somewhat similar to what exists in New York, of compelling the owners of those houses to bear some responsibility for their condition in respect of cleanliness, it would be useful.

5932. Have you no power of the sort now?—The power is against the occupier.

5933. But you have this power against the owner have you not? If the house is totally unfit for occupation it can be closed?—So far as the house is concerned, if it is an insanitary house, but I am thinking of the conditions that may exist in a house which in respect of structure complies with sanitary requirements.

5934. That is perfectly true under the Act of 1875 in England. I do not know whether it is the same in Scotland?—We have a corresponding Act.

5935. It defines a nuisance as being "any house or part of a house so overcrowded as to be dangerous or injurious to the health of the inmates" and the local authority can close an overcrowded house?—Yes, on a second conviction, or if it is an insanitary house.

5936. But its being overcrowded renders it a nuisance whether the sanitary arrangements are sound or not?—That is quite true. I was thinking of the condition of internal dirtiness, both of the persons themselves and of the houses.

5937. You could hardly make the owner responsible for the dirtiness of his tenant, could you?—They seem to find it work satisfactorily in New York. May I read the section which applies to New York?

5938. Yes?—I have a paper here which contains the result of an inquiry into the death rate of one-apartment houses, and on page 21 I say this: "In a pamphlet on the tenement house legislation in New York, prepared for the Commission of 1900 by Mr. Laurence Veiller, its secretary, I find the present law stated in the following terms: 'The owner of a tenement house was further required to thoroughly cleanse all the rooms and halls, stairs, floors, and windows, as well as the doors, walls, ceiling, privies, cesspools, and drains of the house as often as the Board of Health might require.' Further, that 'whenever there should be more than eight families living in any tenement house in which the owner himself did not reside there should be a janitor, or house-keeper, or other responsible person living in the house, and having charge of the same, and it was left to the discretion of the Board of Health to decide when such janitor or house-keeper should be required.'"

5939. And it would be his duty to report to the Board of Health any conditions unfavourable to health which might grow up in the houses?—I take it that along with this there would be power of eviction in the case of a dirty tenement.

5940. Exercised by the janitor?—No; the owner I assume. He is responsible.

5941. No doubt. How far is it the case at present that any rule is laid down as to the minimum of soundness and sanitary convenience in houses, below which it shall be the duty of the local authority to prohibit their occupation?—I think the standard is rising. A house that may have been regarded as fairly sanitary ten years ago would scarcely be so now.

5942. In your opinion does the local authority exert itself as much in that direction as it might do, or is it paralysed by the difficulty of making anybody directly responsible, consequently, by the difficulty of disposing of the people by any abrupt or positive action in that regard?—The policy of the municipalities varies somewhat. There are waves of strong feeling, usually accompanied by acts of displacement, and then an ebb tide sets in.

5943. Is there a sufficient knowledge of what is going on to enable them to act when called upon?—Do you mean whether they exercise the power of inspection?

5944. Yes. Do they know what black spots there are in the places they are called upon to administer; or is there a lack of information, too. Do the tenants really concern themselves about it?—No. They sometimes complain of their neighbours, but I very much doubt if they frequently complain of conditions which they themselves create.

5945. Their neighbours may be no worse in their habits than themselves?—That is so.

5946. There is no *esprit de corps* among these people then?—I think not.

5947. You would say that the standard is improving?—I think so, very definitely. Taking Glasgow as an illustration. I now certify houses under the Housing of

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the Working Classes Act which ten years ago so far conformed to the standard existing at that time, that the introduction of water closets made the difference between the house which was regarded as sanitary and one which was not. That obviously represented the level of sanitation at that time. One talks of insanitary areas at the present moment, but, although it is the same phrase, it means something different from what it did thirty years ago.

5948. And, of course, your water supply is very good in Glasgow?—Very good.

5949. Have you many houses in Glasgow all fed by a common tap, or does each house get its supply laid on?—Most of them have; but in Glasgow we have certain elevations on the boulder clay, and to ensure a continuous supply to houses on these situations there is a provision whereby a house which is from 150 to 200 feet above ordnance datum must be supplied with a cistern. This is filled at night, but is only required in houses standing on higher ground.

5950. Do you draw any definite conclusions from the decrease of the death rate in Glasgow?—Well, one would be that the general conditions under which the people are living are better than they were, and that the people themselves, taking it on an average, are improved. There is a very interesting experience in Glasgow which has an important bearing on this point. In the sixties there were several years when the death rate was very high, and during the seventies the surgeons began to perform the operation of osteotomy to counteract the injurious effects of rickets on bones. Without any definite figures I may express the opinion that these operations are very much less frequent now. But, on the other hand, the number of operations for contracted pelvis in childbed have increased in recent years (we are going through that phase even now), so that we seem to be getting the same generation in the childbearing period, presenting in another form the results of rickets in childhood. Whereas osteotomies have increased in number.

5951. Do you think that the cases of contracted pelvis are more frequent now?—Yes. I speak from information given me by the staff of the Maternity Hospital.

5952. And it is now affecting the grown women?—Yes, but belonging to the generation which, as children, required osteotomies, but moved fifteen to twenty years further on.

5953. Do you think that the children of the present day will not reproduce it?—It is the experience of the surgeons that they have not the same number of osteotomy cases now to deal with.

5954. Has infant mortality now remained much the same in Glasgow, or diminished, under five years of age?—Under five years of age it has gone down.

5955. But under twelve months what is the case?—It has moved very little indeed. I had an opportunity, during the last census, of comparing the death rates under five years for several census periods. I do not think I submitted with my *précis* any figures showing this, but I may quote them from my last annual report (1902). In 1871-2 it was 106 per thousand; in 1880-2 it was 82 per thousand; in 1890-2 it was 78 per thousand; in 1900-2 it was 67 per thousand, and for the single year 1902 it was 58 per thousand.

5956. Now as to the one year old children—have you any statistics?—In this same report, I have the figures for 1873, 1874, and 1875, and I have compared them with the years 1898 to 1902. For the earlier series of years the death rates per 1,000 births read, 154, 149, and 153; and for the later, 147, 143, 145, 141, and 126. The low rate in 1902 is related to the low temperature in the summer and autumn of that year.

5957. You attach considerable importance to the registration of still-births, do you not?—I consider it is very important in connection with infantile mortality, especially as to the number of deaths in the first four weeks of life.

5958. Still-births do not touch them?—No, not directly, but it would give some indication of how the death rate in the earlier weeks of life was related to that of children born dead in the last months of gestation, were these registered. Quite one-third of the infant deaths occur in the first four weeks of life.

5959. Is that due to their mothers not suckling them to any extent, or leaving them to go to factory employment, or to what do you attribute that?—It is partly due, I think, to under feeding, but is related to the condition of the mother during pregnancy.

5960. Is that due to them being employed in factories?—That would be one cause, although I do not think that a large proportion of the married women of Glasgow work in factories.

5961. Is it due to alcoholism?—The food of the mother during pregnancy must influence the vitality of her child, and alcohol will play an injurious part at this period.

5962. Do many of those mothers suckle their own children?—I cannot give you actual proportions, but a considerable number do.

5963. Is the supply of milk for infants good in Glasgow?—Well, up to the present it is the ordinary milk supply. The corporation are just now in process of forming a depôt for the preparation of milk for infants' food. But diarrhœa is not one of the things that affects them in the early weeks of their life to a very large extent.

5964. It is not dyspepsia, is it?—No.

5965. Or is it that they are feeble?—A very large proportion of the infant deaths result from immaturity at birth.

5966. That is rather inconsistent with some of the evidence which we have had before us, which is to the effect that the condition in which the parents live has not a bad effect upon the children—that nature appears to bring the next generation into the world in as sound a state as if the conditions were favourable?—Well, the congenital conditions are causes. There is an interesting series of experiments by Dr. Noel Paton on the feeding of pregnant guinea pigs, where these sows had been fed on good food, but where it has been deficient in quantity. The vitality of the litter, I understand, was impaired. But the results of his inquiry have been published.

5967. Does he attach more importance to quantity than quality?—Quantity alone seems to have a decided influence.

5968. Should you say that the poorer classes of Glasgow suffer from bad nutrition more than those in any other big town?—I do not think I have found that. This question of infantile mortality is one that one can hardly generalise upon.

5969. It is a question you have had with you for some years, so that some opinion might be formed now. As far as I understand, it is one of the standing blots on sanitation? That is so. Both sanitary and social conditions enormously influence it. It varies in the districts of Glasgow from 63 to 217 per 1,000 births, while the rate for the whole city is 141. It would seem to mean little, but that, I think, arises from the large proportion of it which is due to conditions of immaturity at birth. These alone caused about one-third of the total deaths of infants. In the more variable elements, such as diseases of respiratory and digestive organs, I believe some reduction is occurring.

5970. It varies at different times of the year too, very materially?—Yes, in autumn. The effect is shown in the small proportion we have in 1902, which was a cold autumn.

5971. Are the illegitimate children on the increase in Glasgow?—I do not think so.

5972. The number diminishes elsewhere, I think?—I think the proportion of illegitimate children is decreasing.

5973. (*Dr. Tatham.*) Do you know how much it is?—I have the figures, and will supply them (*Appendix*). The death rate amongst illegitimate children is almost double.

5974. (*Chairman.*) To what it is compared with the legitimate children?—Yes.

5975. Have you arrived at any conclusions based upon expectation of life in Glasgow at different periods during the last century?—Glasgow has had three life tables constructed at separate periods during the last century. One was constructed by Mr. Duncan, the manager of an insurance company, for the years 1821 to 1827, and the second was for the years 1832 to 1841, and the third for

the years 1881 to 1890. In the first one the expectation of life at ten years of age was forty-two years. In the second period it fell to thirty-seven, and in the third it rose to forty-four, and a corresponding difference exists at all the other decennial periods of life. These figures are in Table A.

5976. I observe that the differences in all ages given here are in favour of the present compared with fifty years ago ?—Yes.

5977. There was a great declension between the second and fourth decade of the century, and a great improvement during the last fifty years ?—The depression of 1832 to 1841 is related, I think, to the enormous rush of people to the towns early in last century.

5978. Before there were any clear notions as to what sanitation meant ?—Yes. And I think that it affected adults mostly before it began to tell upon the children.

5979. Should you say that during the period you have known Glasgow, the appearance of the people indicates a depression in their physique ?—Are they smaller and more jejune to look at ?—No. Take rickets as an illustration. There is less apparent deformity now than there was.

5980. Is that owing to your having a better water supply ?—That is one factor. Loch Katrine was introduced in 1859, but much has been done subsequently to remove insanitary areas.

5981. (*Mr. Struthers.*) The water supply was blamed for the rickets ?—Yes. It was suggested as an objection to the introduction of Loch Katrine that the absence of lime would produce rickets.

5982. (*Chairman.*) When you come to a later period of child life have you noticed a diminution in the death rate ?—At all ages up to the *post* mature period the death rate has decreased. Some time ago I took out the figures referring to the death rate of the school periods of life, but they apply to Scotland generally—they are not limited to Glasgow.

5983. Do they apply to the whole of Scotland ?—Yes. In that pamphlet presenting the results of an "Enquiry into the Vital Statistics of School Ages," on page 9 there is a short table giving death rates per million from all causes at certain periods of life. Taking it from five to fifteen the death rate fell from 7,699 in 1860-62 to 4,847 per million in 1890-2.

5984. That is with regard to Scotland as a whole ?—Yes.

5985. Is that represented in Glasgow too ?—Glasgow experiences part of that decrease.

5986. What opinion have you formed as to the operation of the improving hygiene of towns ?—That the expectation of life, and by implication the standard of vitality, has been increased.

5987. But it is not as general as it might be ?—I think not. My impression from the inquiry, to which I have alluded, into the death rate of one apartment houses is that there is a proportion of the population, numbering over 100,000, who have not shared to any considerable extent in the improvement.

5988. One-seventh of the population in fact ?—Yes.

5989. Speaking from the experience of Glasgow alone, it appears from your memorandum that a much larger proportion of its population fails to share in the advance of recent years than the decreasing death rate suggests?—Yes. On the basis of the census return of 1901 I was able to make a comparison of the death-rates in houses of various sizes, and the results showed that, notwithstanding a decreasing general death rate, one seventh of the population widely scattered throughout the city still maintained an appallingly high rate.

5990. It is not connected with any one district ?—No, it is scattered all over. The district rates vary very much.

5991. (*Mr. Struthers.*) It is connected very closely with a particular type of house is it not ?—Yes, the one apartment houses. A "house" in Scotland would mean a different thing from a "house" in England. We mean by a "house" actual apartments occupied. Our "house" corresponds to your tenement. We speak of a building with three or four floors as a "tenement"; and of one, two, or three rooms occupied by an individual family as a "house" Yours is the other way. It was excessive in all the elements which result from insanitary conditions of living. It had a zymotic rate almost twice that of the city; its phthisis death rate was twice that of the social grade represented by two-apartment houses, and its death rate from respiratory diseases was 7·6 per 1,000 compared with 4·6 for two-apartment houses, and 4·3 for the city. You will find that in Table 1 on page 9 of the pamphlet on the death rate.

5992. It is not one of the tables that you gave, is it ?—Yes, it is in Table C of my memorandum.

5993. (*Chairman.*) You would not even go so far as to say with regard to the class resident in these tenements that it is actually a condition of retrogression with them ?—Well, it is difficult to form a definite opinion, because there is very little to compare it with in the past. I think the osteotomy illustration sheds some light upon this question. If rickets as a form of bone disease were still as prevalent, it is in this section of the population we should expect to find it. But my experience is that it is not so prevalent.

5994. Therefore you argue that the condition of this class is better ?—Yes; better as a class, but when the individuals are descended from a rural stock they are probably not so physically fit as their ancestors.

5995. There are a larger number of persons subject to these conditions than formerly ?—The proportion is decreasing.

5996. Would you say that thirty or forty years ago there were 104,000 people living in one-roomed apartments ?—Yes, thirty years ago—in 1871—there were.

5997. The larger number of those people came in from the country—or their parents did, and to that extent they are worse, I suppose ?—If you could compare them with their ancestors in the country I expect they would be worse.

5998. Is there any outflow into the country of the wreckage, as they have been called, of Glasgow ?—In search of what ?

5999. Because they are incapable of existing in Glasgow under the conditions of labour and the overpressure ?—I am afraid that the difficulty in all towns is to deal with this unskilled labour class, who expect to find there the casual employment which they desire.

6000. The class that sinks to the lowest level—they remain a permanent evil in the big towns, do they not ?—They tend to aggravate the evil in the big towns.

6001. But when they no longer earn a subsistence wage what happens ?—Then the energy is taken out of them.

6002. And they would then be the object of charity ?—Yes.

6003. Is it not your opinion that the first step in any improvement is to deal drastically with that class ?—If one could.

6004. Have you formed any opinion as to how it might be done ?—The suggestion in my mind regarding the effect of placing the burden of cleanliness on the owner of a tenement occupied by persons of this class would be that these people would find it increasingly difficult to get house accommodation. You would then have them as vagrants and would be able to deal with them.

6005. And the community would be obliged to take charge of them ?—Yes.

6006. If you are going to impose a minimum standard of cleanliness, and so on, through the action either of the local authority, or the action of the landlord upon these people, and turn them out because they do not subscribe to it, then it devolves upon the State or community to take charge of them ?—Yes, if you had shelters of some sort, where they would be compelled, short of being sent to a labour colony, to observe certain standards of cleanliness you would have made some steps towards teaching them the value of cleanliness.

6007. Would not it be necessary to adopt some scheme like that of the Salvation Army in connection with labour colonies ?—I am not quite familiar with the recent suggestion; but the necessity of having recourse to labour

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colonies for a very considerable section is, I think, rapidly gaining a general acceptance.

6008. General Booth says that "It is beyond question that there is a section of the population, who by one means or another, contrive to subsist at the expense of the community without work. This class is prominent in times of bad trade and scarcity, and, being skilled in habits of 'sponging' and other objectionable courses, manage to secure a large proportion of the help intended for the genuine worker, who, without any fault of his own, has fallen out of employment." Then he goes on—"As a class they are constitutionally averse to work, partly because they have never felt its necessity, having learned how to exist without it, and partly because they have never been sent to any sustained and remunerative labour which they were capable of performing." Then he further goes on to say that "Much of the charity dispersed in the large cities finds its way to this class. It is thus rendered not only unproductive of good, but made into a source of positive evil, helping to support a section of the poor that so largely propagates disease, and demoralising all who come within its influence"?—I think that all towns have a large number of this class.

6009. And now as to his proposal for dealing with them, "(a) That the vagrancy laws be so amended as to give magistrates the power to commit to colonies or settlements, established for that purpose, vagrants coming before them under certain prescribed conditions, for periods of not more than three years: (b) That municipal and poor law authorities be empowered to establish labour colonies for such vagrants, and that they or any charitable society doing so may—on receiving the licence of the Home Secretary—receive and detain vagrants so committed to them, for the purpose of employing them, the licence to be issued after such inspection as the Home Office may determine (much as in the case of the Inebriates Acts); (c) That such disciplinary powers as the Home Secretary may think necessary be granted under bye-laws, as in the case of inebriates' reformatories; (d) That the cost of maintaining such colonies be provided by a contribution from the Treasury, at the same rate as it now contributes to the support of inebriates' reformatories, and that municipalities, county councils, and other authorities be also empowered to contribute at such rates as may be agreed upon." Should you think that that would be a scheme that might to a large extent deal with and finally extirpate the evil?—That is the general trend of opinion, I think, in all writings dealing with this question.

6010. Do you think that the time is ripe for the application of such a remedy for dealing with this problem, which you admit is at the bottom of the whole evil?—Yes, I do think so. I believe they have a similar scheme in operation in Belgium.

6011. Do you think that a scheme of that sort might be enlarged so as to cover the case of parents who habitually and wilfully neglect their children, so that the children might be withdrawn from their custody, and placed in some kind of public nursery, and the parents made the debtors of the State, and if they evade the obligation sent to a labour establishment until they discharge the debt?—I think that you could gradually reduce the number, and that would lead a certain number of them to alter their habit of life.

6012. It would be an inducement to them at any rate to alter their life?—Yes; one of the difficulties just now in that connection is that if a man and his family fall to the level of living in lodgings or in sub-let houses it is almost impossible for him to regain his original platform. If he gets to the state of what is called with us the farmed-out house class he never rallies; he has no opportunity, the landlords will not have him, and he simply goes on paying a high rent for very indifferent accommodation.

6013. In fact, he goes from bad to worse?—I am afraid that is usually the case.

6014. (*Dr. Tatham.*) Speaking of this submerged seventh, if I may use the term, which, you think, represents your great difficulty in sanitation in Glasgow—one-seventh of the population which certainly shows no improvement, if it does not actually show progressive deterioration. Do you think it is practicable, so long as these people remain in the slums which they now inhabit, to improve their sanitary condition at all under any circumstances?—No; there can be no improvement so long as they are allowed to occupy insanitary houses. But beyond displacing them, I am afraid you must aim at improving the people themselves. It is the habit which the slum engenders which makes the greater difficulty.

6015. Do you think so long as they remain in the slums that it is possible to improve the people?—No, they are being displaced from the slums, and the tendency is to push them on to a gradual improvement.

6016. It has been suggested that the way to deal with people that we are speaking of is to force them to leave their slums, to get them, if possible, into the country and to follow them, or rather to enable them to get into the country by a system of cheap transit trains or trams. Has that occurred to you as a possible cure for the difficulty?—My impression is rather this way, that if you plant a certain number of industries in the outskirts you will attract a certain number of people from the towns, but I do not think that the submerged classes will be attracted, or that you will be able to compel them to live in the country, and return to work in the towns.

6017. Why not?—Because they consist largely of unskilled labourers, and there is a surplus of them already. If a man is in regular employment he may travel to the outskirts to his home; but if he is dependent upon work at docks or casual work at railway stations, then he lives pretty near where he is employed frequently, and he would not always have the half penny to pay for the tram. But where it is a question of pressure upon the skilled workman, I think that, as a means of getting him in the country, it would be better if the work went out first and attracted him.

6018. Do you think that the number of rooms inhabited by a family may be taken as a fair measure of the health of that family?—It would appear to work out in that direction.

6019. That is what I understand from your report. Your main difficulty is with those who inhabit one or two rooms?—It is chiefly a difficulty of those who inhabit one room. I think our death rate without that difficulty of the one room would be something like eighteen or nineteen per thousand.

6020. Amongst the one-room population what is the mortality at present?—Thirty-three—32·7 is the decimal.

6021. Not far less than double?—Pretty nearly.

6022. Amongst the one-room population, I think, you say that pulmonary tuberculosis is much more fatal?—The pulmonary tuberculosis rate among them is 2·4 per thousand. It is only 1·8 in two rooms and ·7 in all the other houses. For the whole city it is 1·8.

6023. With regard to the mortality of infants under one year of age, you agree with several witnesses whom we have had here that really that is not substantially decreasing, and has not been decreasing?—My impression is that it is not decreasing.

6024. Speaking generally, do you think that this is a question of food very largely—do you think that children are badly or improperly fed?—It is difficult to say why, with the general knowledge increasing, and with the facilities and better opportunities of getting food, that it should have remained while all the others have improved. That forces one back to look upon the mother as being the cause.

6025. Do you think really, as a matter of fact, the feeding of infants has improved of recent years amongst the class that we are speaking of?—I very much doubt it.

6026. Do you think that young infants who are not suckled by their mothers obtain any sufficient quantity of milk?—No, I very much doubt that. Unless you wish to include condensed and preserved milks.

6027. No; I mean cow's milk?—Then I think not. I think the tendency of late in all classes is to have recourse to artificial foods, including condensed milk, and that is deleterious.

6028. We have had a good deal of evidence to show that infants practically get very little milk at all. They are fed on tea and even more harmful matters?—They very soon begin to be fed on tea, as soon as the child can drink out of a cup. Many are indifferently fed.

6029. I believe that you have in Glasgow a system of inquiry with regard to the deaths of all young children?—Yes.

6030. An inquiry by means of cards ?—Yes, the system of cards is applied to all deaths, and has been so for several years.

6031. Will you put one of those cards in either here or hereafter, so that it may be included in the Committee's Report ?—Yes ; I have a copy which I shall put in.

6032. So that so far you do get to know the circumstances under which all the deaths occur ?—Yes, we do. The position of the house and the number of people occupying it, and the sanitary conveniences and provisions generally —all these are noted.

6033. And then at the end of a quarter or a year, as the case may be, I presume you collate the records ?—Yes, and they get finally embodied in the Annual Report. The death rates for all diseases are calculated upon the cards, not upon the deaths registered.

6034. Your reports are recorded on those cards as units ? —Yes that is how I get out the one, two, three, and four-apartment houses.

6035. Do you think that the downright neglect of mothers is at the bottom of infant mortality ?—We have had evidence that that is so in many cases ?—I am afraid that that is only too true of large sections—that they are negligent in their maternal relations in this matter as in every other.

6036. You spoke of the mortality amongst illegitimate children—that the proportion amongst illegitimate was much heavier than amongst legitimate children. Do you think that that implies that legitimate children are much better cared for than illegitimate children ?—Yes.

6037. Is that markedly so ?—Yes.

6038. Other things being equal, where you have a large proportion of illegitimacy you would expect to find infant mortality greater ?—Yes.

6039. And do you find that to be the case ?—Yes.

6040. Do you think that the proportion of illegitimacy differs very widely in many of the districts of Glasgow ?— Very widely. I should be glad to submit the proportions of illegitimacy in one district as compared with another.

6041. You would be able to put that in your proof ?— Yes.

6042. You spoke just now of the water supply of Glasgow which is notoriously a very pure supply, it is almost like distilled water ?—I believe that it is used for chemical tests as "Ammonia free" water. I understand the custom of some chemists is not to distil the water but use it just as it comes from the tap.

6043. But some persons regard the purity of water supply, because of the absence of lime, as an objection?— It was urged as an objection to the whole Loch Katrine scheme.

6044. Is not it the fact that lime can be got from food of other kinds besides water ?—Yes.

6045. And therefore you would be very sorry to get another supply not so pure as that from Loch Katrine ?— I should be very sorry indeed to get another supply.

6046. With regard to your observation on the mortality under five years of age, you say the mortality of children under five was diminishing until 1830, after which it gradually increased, but since then it has very decidedly decreased, has it not ?—I think the introduction of the practice of infantile vaccination early in last century with the prevalence of typhus epidemics later on has been advanced in explanation, of the experience prior to 1830. On the other hand, the decrease has been marked during the last 30 years.

6047. And now it stands at what point ?—I have a Table B in the Appendix. This shows the average annual mortality per thousand for three periods, and under five the rates are 106 and 86, and 76 for males, and 99, 76 and 68 for females. The periods are 1832–41 ; 1881–90 and 1892–1900.

6048. Amongst the submerged one-seventh high infant mortality is a considerable factor in the heavy death rate you speak of, is it not ?—It is high. One-third of all our infant deaths occur in one-apartment houses. I could not take it out as a rate, because I had no means of getting at the actual number of infants born in these houses.

6049. (*Mr. Lindsell.*) Is there a very large demand for what we may call intermittent unskilled labour in Glasgow ?—I think there must be. I have no means of definitely stating how it varies. *Dr. Chalmers.*

6050. That is the kind of labour that is sought after by the submerged seventh ?—By a very large proportion. As to its being intermittent I am not so sure about it. I rather think that in the industries in which these people find employment the demand for labour would be pretty constant.

6051. How is it that these people get so low in the scale, if the labour is pretty constant ? One would think if the labour were pretty constant they would rise above the seventh that you speak of. Is it that they will not work or that there are too many of them or that the work is too uncertain to enable them to live better than they do ? —Bearing on that I began quite in the last month or two some inquiry into the food going into certain households. It was conducted through one of the charitable organisations, and they at once found—they were aware of it, indeed, before—that there was no relation between the total earnings of the individual householder and the quantity or quality of the food going into the household. Of course there is an obvious unknown factor in drink ; one does not know how much goes in that.

6052. Is this lowest strata composed mainly of people who will not work regularly, or is it that they cannot work regularly ?—Well there must be a number who will not, but it would be impossible to say how many who only work if they are compelled, from the possibility of starvation if they did not.

6053. Nothing could deal with this but some drastic measure of making them work by some means of bringing them back to habits of regular employment ?—That is the only way.

6054. Are they composed to a great extent of people who could get good wages if they chose ?—They might get subsistence wages readily enough. I do not know that the unskilled labourer often gets a good wage. It is very much the same problem that had to be dealt with by the Poor Law Commissioners in the 1834 Report. The number of unskilled persons constantly pressing on the market and displacing the regular worker causes a variation in his wage-earning power.

6055. And they are composed largely of people who come in the towns and fail to get work. Do you think that the labour market is overstocked ?—The unskilled labour market is overstocked in every town population, I think. The same thing creates the difficulty in connection with overcrowding in houses.

6056. You think with the exception of these one-house tenements the condition of Glasgow is fairly good ?— Well, judging from the death rate it would be fairly low for a town ; apart from the exception which I have mentioned. It would be reasonable if we had not that part. I do not mean that the statements are strictly applicable to all the one-room population, although the conclusions are based upon the census figures, but there are many of them so well occupied that we must take the term one-apartment as a barometer or index to other conditions.

6057. You said that instead of moving the working class population out into the suburbs, the best thing would be to have the works there and they would follow ? —If you could distribute industry the population would follow automatically.

6058. Do you see any tendency for industry to distribute itself ?—Not at the moment.

6059. Except that you mentioned that it was done in one or two large firms ?—There are individual illustrations of that, such as Port Sunlight.

6060. And the same idea is at the bottom of the Garden City is it not ?—Quite.

6061. Would it not be much better, instead of starting a large population like the scheme of Garden Cities, for the individual firms to move down and form a small population—a nucleus of their own ?—We have had an illustration of that on the Clyde. Fifteen years ago, or more, the Singer Sewing Machine Company took their works from the east end of Glasgow, down to Clydebank, nine or ten miles from Glasgow, with the result that although

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there has grown up around these works, and in connection with the shipbuilding yards in the neighbourhood, quite a borough, a very large number of the workers still live in Glasgow; and their reason would appear to be this—that in Glasgow, as in every big town, there is an opportunity for the younger members of the family also to get occupation, and that it is simpler and probably cheaper to let the father of the household travel to his work, than to have all the children travelling up and down.

6062. That outweighs the cheap trains and the cheaper houses and gardens and other advantages that they might get in a more open country?—Yes. Any scheme for planting out industries would seem to require that a selection of those which would give employment to both sexes is necessary for success.

6063. I suppose the development of water power and electricity would have a tendency in that direction?—One would hope for such a result.

6064. You can get your power now from a considerable distance, can you not?—It is a question of the facility of transport.

6065. But also, I mean, the machinery could be worked now by electric power for a considerable distance from the generating source?—Yes; that should help to disperse industries.

6066. Are there any industries now worked by electrical water power in the neighbourhood of Glasgow?—It is supplied in many ways, but I could not give you any illustration of one whole work being solely driven by electric power. There is a company which obtained an Act two years ago, the Clyde Valley Company, which is now, I believe, in process of putting down power stations, but I could not give an illustration.

6067. If that tendency goes on it will undoubtedly add to the good sanitary conditions of the working classes, will it not?—It would tend, undoubtedly, in that direction. I do not think that the difficulty exists with regard to the working classes, but with regard to the unskilled classes. When we speak of the working classes in Scotland we generally think of the artisan class.

6068. The unskilled grade, that would not help in any way, then?—Unless you could apply coercive power to get them taught a trade, I do not see how you could benefit them.

6069. (*Mr. Legge.*) You are aware, no doubt, of the efforts made in various districts to obtain a good supply of milk by means of special depôts?—Sterilizing depôts you mean?

6070. Yes?—We are at the moment forming a depôt of that sort.

6071. Under municipal sanction, and supported by the municipality, I suppose?—We hope that it will be self-supporting, but the original grant for the plant will be from the rates.

6072. Are you going to have little branch offices?—Meanwhile our scheme is that we are to have a central sterilising depôt, and arrange with the milk vendors for the sale of the milk. We will try that first of all.

6073. What is your object—is it to supply good milk in a general way, or is it with a special view to infants?—Wholly to infants.

6074. It is to provide good food for infants?—Exclusively—to begin with, at least.

6075. Do you anticipate that in the slum quarters the parents will make much use of that milk?—That remains to be discovered. That seems to be one of the points on which there is, at present, little or no information. Before this was formed I had an opportunity of seeing several of the depôts throughout the country—at Battersea, Liverpool, and St. Helen's; and no definite information was forthcoming as to their effect upon the total infantile death-rate, they were simply gathering the information regarding the section of the population that took advantage of it. One would naturally expect that people, who for other reasons are careful of the upbringing of their children, would take advantage of it.

6076. Do you think that it would be possible to do anything by the circulation of leaflets amongst the mothers of children, and handing them to girls at school to take home, leaflets regarding the feeding of infants, and particularly such a detail as where people can get milk, and at what price they can get sterilised milk?—In Glasgow quite a number of such leaflets are circulated bearing on the feeding of the children, and a copy is given to every parent who registers the birth of a child. That has been going on for twenty years or more.

6077. (*Chairman.*) Do they read them?—We hope some of them will.

6078. (*Mr. Legge.*) But we have had some very strong evidence that pamphlets are of no use, but that leaflets dealing with a certain point are very effective. If you had a single leaflet stating that milk was to be had in such a school district, at such a depôt, it might attract attention?—This is a general thing of four pages (*exhibiting the same.*)

6079. But this is too long. The idea is that it is best to have one side printed only, in large type, if it is to be of any use?—I see.

6080. Would you be prepared to go so far as to have milk sold in certain shops to mothers below cost price, the rest being made up out of the rates?—You would get back to an economical question then.

6081. Have you any strong view that, in the interest of the community at large, it is fair to make the sacrifice?—It is doubtful. That is the impression I have formed from my Poor Law reading. I have no actua experience; but I understand from the work of the Charity Organisation Society and poor law administratior generally, that any scheme which is economically false is rarely, if ever, justified by its results.

6082. We had a scheme put forward in connection with those depôts, each shop to be under the supervision of a medical man whose duty should be to weigh each child brought to the depôt, and prescribe for it as its weight went down, and so on. Speaking as a municipal official, what do you say as to the practicability of such a scheme?—I doubt whether you could carry it out on a large scale; but I think it would be desirable to carry it out in sections, so that you might have some knowledge of what advantage your dairy was producing.

6083. You might have a medical man who went round the depôts?—I rather suggest this in a particular distributing centre, so that if you had one man attached he would make a point of watching individual children.

6084. (*Mr. Struthers.*) Would you have an experimenting station?—Yes. I think that sterilisation is in its experimental stage.

6085. (*Mr. Legge.*) But you think it is still to be encouraged?—Yes; if only for the advantage which may be obtained from the bottling of milk. I think that milk should be dealt with more carefully than at present, and the example of a depôt may tend to bring about the exercise of more care in its handling generally.

6086. There has been a good deal in the newspapers of various towns indicating that wherever there is a foreign element in any town its children seem to be better nourished than the native children. I see in the papers that the Italians in Finsbury are better than the native children. What evidence is there of that?—I have not any. I have not been able to get at the foreign population.

6087. You would not call the Irish foreigners—there is a strong Irish element in Glasgow, is there not?—No, I was thinking rather of Poles.

6088. Have you many Jews in Glasgow?—We have Polish Jews.

6089. You cannot say whether the condition of the foreigners is better than that of the natives?—No; I have no information.

6090. Against the common statement in that regard one gentleman suggested that one should remember those foreigners are of sub-tropical origin in most instances, and therefore develop earlier—do you think there is anything in that?—Well, they are not living in sub-tropical conditions here—that occurs to me. But what also occurs to me is that the immigrant is a vigorous man, with a definite intention of bettering himself, and that is why he comes here, and forms an incentive which probably does not exist in the case of his neighbour, who is a native.

6091. Do you think that the state of things in the poorer quarters of our large towns is so serious as to call for admin-

istrative action, to secure the proper feeding of school children, by providing restaurants or kitchens in connection with the schools, and feeding the children at the school, recovering the money possibly from the parents by ordinary legal process?—It has been suggested—it has been a matter of observation indeed—that when children of a certain grade are fed at school and have a mid-day meal the afternoon work reaches a higher standard than when they are not fed, and have no mid-day meal. That is a question already demonstrated. But I do not know, and I am not prepared to suggest, that the condition is so bad over the general population. You probably will have an occasional school where extra food supplied to the children would be an advantage.

6092. Do you know the Rose Street Day Industrial School in Glasgow?—I am not familiar with it.

6093. And Green Street and Rotten Row?—I know of them in connection with infectious diseases.

6094. I suppose you would agree that the actual steps that should be taken to deal with the health of the population in any particular area is in the first instance a matter for the local authority to decide upon?—Certainly.

6095. And not for a central bureaucratic government to take in hand?—No.

6096. Do you not think that the central government might do a great deal in the way of stirring up local authorities?—I think that they could co-ordinate effort in the matter.

6097. What is wanted is some means of stimulating the public conscience in a particular locality?—Yes, that is so.

6098. Once that conscience is aroused it is pretty certain that effective measures will be taken, you think?—Yes, that is quite obvious, I think.

6099. Do you think that one valuable means of bringing this stimulus to bear upon the central government would be a central bureau of statistics dealing with the health of the country, and also engaged periodically in taking anthropological measurements?—There would be an advantage, certainly. One illustration that occurs to me is in connection with the Poor Law administration. I find myself constantly traversing ground which is interesting to me and also to the Poor Law Authorities; and the Charity Organisation is the same. If the work of these three departments were co-ordinated, and their information were made general, there would be an advantage.

6100. Do you agree that as regards anthropological measurements a proper scheme of carrying those out periodically all over the country would be of value? Would it not have a great effect upon Glasgow if from this central bureau there suddenly came down one day the result of a census, showing that in certain vital particulars the population, as compared with ten years ago, was distinctly on the down grade?—That would imply a new organisation constantly carrying on measurements.

6101. Yes?—At the present moment I am having certain measurements of school children in Scotland taken, but they are limited in scope, and do not include head measurements, but simply chest, height and weight.

6102. That is a matter for settlement. Dr. Cunningham, of Edinburgh, gave us a list of particulars of height, weight, and chest, and pigmentation, and width of shoulders, and hips, and so on?—Those are the skeletal measurements, apart from the head, which seem to me to be of importance.

6103. (*Mr. Struthers.*) Would you then take weight?—Yes. I am taking weight in this inquiry—weight, height and chest measurements.

6104. (*Colonel Onslow.*) I did not quite catch what you said about the one-roomed houses. Are the number of people occupying one-apartment houses increasing in proportion to the total number in Glasgow, or are they decreasing?—The proportion is decreasing, and the actual numbers are slightly decreasing. On the basis of the Registrar General's Report of 1871, the actual number was 144,919; in 1881 the number was 126,264; and in 1891 it was 123,643; and in 1901 it was 123,866. But that is not the actual number dealt with here; these numbers are defective, because there are included in the one-roomed houses lodgers occupying, it may be, one room in a house with two or more. The Registrar General calls that a family, and, consequently, he makes it a house. But the number of houses with only one apartment is smaller.

6105. The fact is that they are decreasing?—Yes.

6106. The very wretched class of the population of Glasgow are a very shifty body are they not? They come in from towns near and from Ireland to work for a short period, is not that so?—There is a very large proportion that is residential. They may move from one part of the city to another, but they remain within it.

6107. Then you think there is not a great influx coming in. Have you not got from the big towns of Paisley, and those manufacturing and mining districts a very large shifting population?—Do you mean whether there is a large proportion constantly going out and coming in?

6108. Yes?—I do not think that a large proportion is going out, except when trade is bad.

6109. Those apartment houses are occupied principally by those very low strata, are they not?—The one apartment houses are.

6110. Are those one apartment houses under the same conditions for letting as the higher class of house is in Scotland, with the usual custom of the inside letting?—Many of them are sub-let, or what we call farmed out. It is a word that has got into the Public Health Act—where you may have a room by the night.

6111. Is not there a place where the respectable poor in Scotland, especially in a place like Glasgow, can get a good home if they are not in regular employment without their being liable to be shifted during one twelve months? You know the custom that lettings all commence from Whitsuntide, and in February you have to give notice if you wish to remain on. Does not it act very adversely to the poor population who may have, owing to loss of trade or one thing or another, to move, and does not it cause great difficulty?—That partly entered into the discussion on our system of letting houses in Glasgow.

6112. It struck me that that would have a great effect upon throwing people into a worse class of house and overcrowding them?—Yes, and rather than taking one for fifteen months they would take it for a month.

6113. In England we have a weekly tenancy, and that would be impossible here?—It is not possible under the conditions of reasonable house occupancy with us. You could not get a better house in a better class district in that way.

6114. That rather helps to make this over-crowding?—I am not sure that it works in that way. It may, but I have no evidence that it does tend that way. The difficulties of this lower class in the farmed-out houses is their mobility; they may remain a few nights or a week or two only.

6115. You said with regard to this recruiting question, you are disposed to associate the Army figures with the convergence of unskilled labour towards the towns and the persistence of a high death rate in sections of the population such as that to which you have referred. With reference to the unskilled labour it is a curious fact from the recruiting experience that the recruits in Glasgow who are Glasgow bred and born are far superior to Glasgow people who have not been born there?—Those that come from the country, you mean?

6116. I do not say where they come from. They are the migratory people, the Irish, that come over, and the people that come in from the surrounding districts?—You mean the native born recruit?

6117. There are less rejections from those that are native born?—That quite supports the impression which the decreasing death rate creates; but I was not aware of the observation.

6118. It is a fact that I happened to have come across that we discover especially amongst the boys for the Navy, that the boys that have been born and bred there are better in physique than those that come from outside?—Then the boys for the Navy are enrolled early, before they become apprentices to any trade.

6119. They are between fourteen and fifteen years; and now it is raised to 15½?—Does it include those who go through the training ships?

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6120. No. That is one of the industrial ships. It struck me that your shifting population was the cause of this overcrowding and the bad physique amongst the general ruck of Glasgow recruits?—That has been ascertained by your observation?

6121. Yes?—It would depend very much as to the sources from which the men came who volunteered from Glasgow but were not Glasgow men.

6122. They come from everywhere?—That quite supports the general impression about the towns that, as a matter of fact, all over there is a general movement onwards.

6123. An improvement in the resident population of towns?—Yes.

6124. (*Mr. Struthers.*) You make very considerable distinction between this shifting population which habitually lives in one-roomed houses and the rest of the population?—Yes. I think they are socially marked off.

6125. And there is a very marked difference in all the heads of your statistics under the death rates from different causes, of the deaths from phthisis between the one-apartment people and the two and three-apartment people?—It is very marked.

6126. And there is also a marked difference between the two-apartment and the three-apartment people?—Yes, but of course there are two-apartment houses and some three apartment houses which are sublet in single rooms.

6127. You are still on the shifting class who are living in farmed-out rooms?—Yes.

6128. For a week or a day or so?—We had 275 two-roomed houses sublet in separate rooms as farmed out houses in 1901, and these would not be included here.

6129. Now the one-apartment house—the death rate in the one-apartment house differs according to the various districts, does it not?—Very much, but the populations on which these district rates are calculated are very small.

6130. What I was trying to get at was whether you think there is any other factor accounting for this big difference of death rate besides the one-apartment; do you think that this difference in the rate of mortality in the one-apartment people in the districts of the city is connected with any definite force, apart from the class of people?—I think that the habits of the people supply the other factor. One might hope that it is a want of knowing what hygiene is. It may take the form of indulgence in drink and irregularities in diet, but, after all, it arises from ignorance.

6131. But the difficulty is that the one-apartment and a certain proportion of the two-apartment districts do not represent the people of Glasgow—not even the working classes—only the migratory class?—Quite a large proportion are migratory, but a number of well-behaved people occupy one-apartment houses.

6132. Taking them as a whole, do you think they represent this migratory element—these unskilled ignorant people of dirty habits?—Yes.

6133. But speaking of the working classes in regular employment, do you think the general tendency of your statistics would be to show that they are in fairly good conditions of health?—Yes; apart from the special class we are considering I think the evidence is all in favour of advancing hygiene and improved physical condition.

6134. What is really wanted in Glasgow, and probably in other towns, is a concentration of attention to this population which has fallen below all reasonable standard of living?—I think so.

6135. You say that when people get into this stratum of society they find it very difficult to get out of it again?—In the case of the people in the farmed-out houses it is almost impossible.

6136. Does the ordinary landlord fight shy of them?—Yes. He wants to have some guarantee that the rent will be paid, and he wants to see their rent book; but these people have no rent book, and, consequently, they cannot give a guarantee, and he will not have them.

6137. I thought the Corporation of Glasgow were providing for people of that sort?—No! They always select their tenants. Every housing agency must do so.

6138. Are they tenants who would naturally, if left alone, have gone into the two or three roomed houses?—They would be likely in any case to select houses suited to their requirements; but by "selection" I meant that they must be respectable people—that for houses of a given size they must not be earning more than a certain amount per week.

6139. But having that limited income they show themselves to be respectable people?—Yes; their past record is carefully inquired into.

6140. But that would be a certain means of excluding the good people who happen to be driven into the lowest class, would it not?—I doubt it. I had a census taken of the farmed-out house population in 1901, and one of the questions asked was the reason why they were occupying farmed-out houses, because the rents paid are very high—roughly 5s. per week or £13 per year—and a very large proportion, over 60 per cent., at once replied "Drink," and they quite unhesitatingly put that forward as the reason why they were there.

6141. Still, there is a certain proportion of the entirely respectable people who are not habitual drunkards, who by misfortune are driven into this class, and find it difficult to get out, is not that so?—Into the one apartments, but I doubt if, apart from drink, many gravitate to the farmed-out house.

6142. But you have the provision of the model lodging-house—they have model tenements in the High Street?—Yes, but the High Street tenements, recently erected, are of a larger size, and with larger rents than those one-apartment houses.

6143. Are they let in one apartment or more?—I think that there is a certain proportion of one apartments, but they are chiefly two or three roomed houses. The Corporation have erected a number of one-apartment houses but they are not inhabited by the class who occupy farmed-out houses.

6144. And the one-apartment would cost more than 5s.?—5s. as a sublet or farmed-out house, but much less—1s. 10d. to 2s. 2d. per week—if occupied by the original tenant.

6145. So that that would be one way of escape at any rate for a certain proportion of the people who are driven down by misfortune into this class; for the town council takes care to investigate such cases to see that they are satisfied that they are respectable people, and they will take them into their houses?—Yes, in this way. I suggested some time ago that as there was a certain proportion of the population who never can get away from the farmed-out house unless you help them and provide shelters of some sort, if they pay regularly at the farmed-out house rate for three or six months that should acquire a market value and help to qualify them for an upper grade tenement. At present they go on paying for months this high rent, without the fact of regular payment creating any market value for them.

6146. But the municipal tenement, and the keeping them under their observation and promoting them to a better class of house if they prove themselves worthy of it, is one way of improving this class, you think?—I think it is.

6147. And an extension of that is perhaps as useful a way of improving the health of a town as anything that could be done?—That is so—the more important section of the sanitation of the town concerns itself with this very section of the population.

6148. Is there any other method of improving that section of the population on a different line?—If one could extend technical education to the unskilled class, obviously that is a method of raising them.

6149. But, of course, technical education can only follow on a really good general education?—That is so.

6150. So that it would be perfectly useless to try that?—But with a child of this class from the school at fourteen, with a leaving certificate, he is not even then qualified for any trade, and he takes what offers—the most rapidly remunerative form, which is usually unskilled.

6151. He becomes a messenger boy or takes up various casual employments, and never becomes apprenticed to any definite trade?—That is largely the cause of the difficulty later on in life.

6152. Have you thought of any way of getting over that?—I do not know that I have very definitely, but in a

general way: what I have said regarding technical education might be amplified by the suggestion that the training of a boy for work in after life should have some of the care presently devoted to his elementary education.

6153. You spoke of getting the population out of the town by distributing the industries over the country; you think that the population would follow industries?—They would be more ready to follow industries than to disperse of their own account..

6154. Curiously, in the case of the Singer Sewing Machine Company, which went down to Bowling, it did not work out that way?—No; and for the reason which I have suggested.

6155. The population actually lived in the town?—But I imagine that if industries became distributed, and you had varieties of them, the difficulty of finding occupation for all the members of a family would become less.

6156. It will not do to merely shift one industry, but you must have a certain variety of industries brought together at a definite centre, you think?—That is to say, to give occupation to men and women.

6157. The shifting of a Singer factory is no particular remedy?—That is so.

6158. The certain organisation of industries in order to make a town, to create a town with a definitely municipal organisation, you think that would be better?—That co-ordination of industries is partly the Garden City scheme, if I understand it aright.

6159. I think it is. I was very much interested by some remarks in your other pamphlet on the Vital Statistics of Children of School Age. These have been steadily improving?—They have been steadily improving.

6160. And not only as regards the general death rate between certain ages, but as regards that particular class of disease which has always been traced, at any rate by many people, to over-pressure at school—nervous diseases—those have improved, you say?—Yes, at school ages at least.

6161. As regards these you say as regards "the age period five to fifteen it fell 25 per cent., and at fifteen and upwards 10 per cent., but at ages under five it increased 5 per cent. Here, then, I think, we have an answer to the assertion sometimes made that over-pressure in schools tells on the nervous system of children." That is your conclusion?—That is the conclusion I have come to. I think I guarded that by this suggestion, that nervous disease usually runs a chronic course, and might possibly appear as a cause of death later in life. But from other inquiries as to the alleged increase of lunacy, I rather think that the decrease above indicated actually represents what is occurring.

6162. On page 23, more or less summing up your conclusions, you say—"They, the children at least, are displaying a vitality more vigorous than their predecessors, and leave their school years better equipped physically than they did?"—That is the impression I had when taking these figures out. It is my opinion still.

6163. What do you attribute this general improvement in the health of the children to; do you associate it with any particular causes?—A combination of causes: Improved facilities for food, improvement in housing and in school buildings, and a higher standard of well-being generally.

6164. Many witnesses have spoken about the defective ventilation of schools in Glasgow?—I had an opportunity, with the consent of the School Board, some time ago of making a contrast between mechanically and naturally ventilated schools, and the results appeared to be definitely in favour of mechanically ventilated schools. The observations only covered six schools—three of each kind of school.

6165. As to these mechanically ventilated schools, would you consider the atmosphere a healthy one for the time of day that they were there?—It might be made that. A good deal seemed to depend upon the individual teacher.

6166. But if mechanically ventilated it would not depend upon the individual teacher?—Yes, because the inlets have movable doors, which are under the control of the teacher.

6167. But if it is a large school of 1,000 or 1,500 would it not be as well to have a person looking after the ventilation, and not have it interfered with by the teacher?—That would have quite a definite value, I believe. One found, for instance, that one teacher closed the door because it was too hot, while the one in the room immediately above him did not close it at all. This possibly arose from the varying temperatures of air which is heated at a central point only. But by distribution of subsidiary coils in the smaller ducts these variations might be got rid of.

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6168. But you think that these mechanically ventilated schools, if the ventilation is decently looked after, are perfectly satisfactory to spend a portion of the day in?—My impression is that it is so.

6169. It would not be deleterious to the physique of the children in any way?—No, I think not. I saw nothing to suggest that.

6170. As regards the submerged population, I suppose it would be better than the conditions of ventilation they found at home?—Usually so. The ventilation of houses is notoriously bad, even in houses of a much larger size than those we are speaking of.

6171. You think that the children were better fed, and you connect that with the improvement?—I think that the food of the people generally has improved in the past thirty years or so.

6172. But there must be a certain proportion of the children of Glasgow who are not properly fed?—I am making some inquiry at the moment, but the number of observations is not sufficient to lay before the Committee. The impression one gets is that there is a considerable number of people who live not knowing in the morning where the food of the day is to come from; they live from hand-to-mouth as it were; everything is uncertain in their lives, and food is one of these things.

6173. But, I believe, that in Glasgow there is a systematic provision for supplying food for children of that class at the school?—Yes, there are refuges; it is through them partly that I am obtaining the information.

6174. It is what is called the "Poor Children's Dinner Table," is it not?—Yes.

6175. We have been told by one witness, at all events, that practically the state of things is such that no child in Glasgow ought ever to go to school starving?—That is a pretty accurate description of the condition. The Society carefully inquires into the condition of every child, and they get to know the really deserving families.

6176. How long has the Society been carrying on its operations?—That I could not tell you—but it is quite a number of years, probably from the eighties.

6177. But probably the physique of the people of Glasgow does not suffer from underfeeding so far as the children who go to school are concerned?—In these inquiries we have been struck with the preponderance of the defective teeth in children. The district we have started with is one of the worst—Cowcaddens district—and there, certainly, there are quite a large number of children with defective teeth.

6178. Do you connect the defective teeth with any particular social condition? We have had figures to show that the teeth of children belonging to a good school were really worse than those of the children of a poorer class?—I do not know how it will work out with us until we can get the observations extended.

6179. But do you have any oversight of the school buildings in any way?—In a general way they come under the purview of the Public Health Act.

6180. You deal with them practically from the sanitary point of view?—Simply in the direction of closet accommodation. But there is a definite provision in the regulations of the Education Department for this.

6181. Does the sanitary officer look after them as a matter of fact?—In that relationship only.

6182. But they never carry it into such questions as ventilation?—No; save in the inquiry I have mentioned, which was undertaken with the consent of the School Board.

6183. Have you taken the question of the medical inspection of schools into consideration, as to whether the School Board should have a medical officer to inspect the

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school buildings and the conditions of health?—The need for it was brought out prominently by the Physical Training Inquiry, and the inquiry now being conducted in Glasgow was suggested by that Report.

6184. Do you think it would be a good thing to have that medical inspection of schools?—If you put the children under a definite physical training you must. With one exception, I found that the decreasing death rate of children of school ages was in diseases of the heart. That is one form of disease which one wants to know definitely about before any compulsory physical drill is undertaken. If all the children are to have a certain definite amount of drill to do you must know the condition of the individual children.

6185. Do you not think that the conditions of exercises might be so gentle but cumulative that there would be no risk to children, except those who had heart symptoms which would no doubt be noticed?—You might grade the children in relation to the amount of exercise.

6186. The medical inspection would be very important from this point of view. No doubt, with a large Board like Glasgow Board, they would look very carefully as to the sanitary condition of a school; but take the case of managers of Voluntary schools, a school run by a single clergyman very often filled with the very poorest class of the population; I am thinking of Glasgow itself in this connection; there is no one with any power to see to the ventilation, the health conditions generally, except the school inspector, who is only able to visit that school very occasionally; do not you think from that point of view it would be well to have a distinct medical inspection of the schools?—From that point of view, certainly, it would be quite a definite advantage I think. I think it has been observed in certain of the public schools in England, for instance, that you have a definite increase in developing chest measurement which is quite inconsistent with tubercle. That is one illustration of the value, as far as I can see, that at once your attention is called to the fact that the children's lungs are not expanding in the regular way, then there is reason to inquire into the condition of the chest.

6187. You would have an examination of the childre[n] from time to time?—Yes, that would be part of the system.

6188. Supposing each child was examined as he came in and his condition definitely recorded, and then a visit was paid once in a fortnight later on to examine those to whom particular attention was drawn; would you be in favour of that?—Yes; re-examinations at definite intervals would be of undoubted advantage.

6189 (*Colonel Fox.*) You were speaking just now of a family living in one room; does that mean the father mother, and children?—Yes.

6190. How do they manage with their cooking in that case?—They cook in the living room, and sleep in the living room.

6191. You have also houses which you call tenements, or what?—A tenement with us is the whole building; a house is one or more rooms generally occupied by one family.

6192. But you have rooms for the skilled artisans who get a good wage. They have houses with more rooms, have they not?—Oh, yes.

6193. They have a sitting room, have they not?—Yes. Our custom is to have a kitchen, and in a single apartment house that is also the sleeping room. When you get into the two-apartment houses then they have a room and a kitchen. The room would be used for sleeping by a certain portion of the family, and the kitchen by another portion. And then you may have two rooms, where there is a bedroom, and so on.

6194. But then you have a great many houses, where you have the well-paid working classes, who have a sitting room which they never use?—It is very common to keep one for exceptional occasions.

6195. Therefore you entirely lose the space of that room. Would it not be much better to have one large room instead of a kitchen and a sitting room? They would have a fire always there, and would get more benefit out of it. But it seems that a good many of those people have a show room called a sitting-room, which they very rarely use. Is that so?—That is perfectly true.

6196 And then, as regards the unemployed, the lowest stratum—you suggest committing those people to a labour colony or settlement, do you not?—If I did, I had in my mind the permanently unemployed, the man who is unwilling to work unless compelled to.

6197. Is it that they are unwilling or incapable of working. Are the large majority of them capable of work?—They would be capable certainly. Many of them are quite capable of work.

6198. They are capable of work, you are sure?—I take it so. You mean the vagrant wastrel part of the population, who only work when compelled.

6199. If you send them to the colonies they are capable of doing some work, you think?—I have not any personal experience of the labour colony, but there is one in Scotland, and they have obtained very good results just from these very people, but with this difference, that they voluntarily offer themselves.

6200. Would you not compel them to go there?—Yes; but the people of the present colony are to be distinguished from the class that we have been describing generally by the fact of voluntarily surrendering themselves. That means an initiative on the part of the man, and indicates that he has some mental fibre left.

6201. Are those the people that you would send to the labour colony?—And also those who meanwhile fail to avail themselves of it.

6202. As regards cigarette smoking amongst boys, do you think it advisable to find some means of stopping cigarettes for boys up to the age of sixteen?—Well, I had to report on the subject about a year ago to the corporation, and my recommendation was that to stop smoking up to the age of sixteen, and to apparently sanction or approve of it from sixteen to twenty, would only get rid of half the trouble. What you want is to stop it until maturity, or further than the age of sixteen.

6203. You would go as far as the age of maturity?—Yes.

6204. (*Mr. Struthers.*) Would you say twenty?—Twenty or twenty-one was the age, but whether you could do that through legislative measures or by creating a conviction on the part of both children and parents that it is bad for them there is room for a great deal of variation of opinion. Unless you have parental influence in the matter I very much doubt the value of legislative interference.

6205. (*Colonel Onslow.*) You have been taking some measurements or making some arrangements for the height, chest, and so on, in children?—Yes.

6206. In the case of weight you make an allowance?—Well, the boots are taken off, and the chest measurement is taken over the under garment.

6207. How about the chest?—It is taken over a semmit.

6208. (*Colonel Fox.*) It is over the nipples and scapula?—Yes, over the nipples.

6209. (*Colonel Onslow.*) You take one measurement?—There are three measurements.

6210. The most valuable in your opinion is to ascertain the true (I do not mean the size of the chest) but the true physical thickness of it—the difference between the measurements?—I mean the difference between the greatest and the least measurements.

6211. You want the movement?—The range of movement. The difference between ordinary expiration and inspiration.

6212. (*Colonel Fox.*) By taking the measurement over the scapula you get a larger measurement, the best measurement is under the scapula?—Quite so.

6213. In making out these statistics it would be important to have that measurement everywhere the same?—Obviously, because you can make two inches difference in adults who had been accustomed to work.

6214. (*Chairman.*) Just one question; first as to the pollution of the atmosphere in Glasgow. Is that an evil from which you suffer to any large extent?—Yes, both smoke and fog we have.

6215. Fog is the act of God, and smoke is the act of man; but do the Town Council make use of their powers under the different Acts of Parliament to reduce the evil as far as they can?—There has been quite a definite

effort going on in recent years. Formerly the administration was in the hands of the police. In 1899 they handed it over to the Sanitary Department, and the Act has been vigorously enforced.

6216. Both as regards smoke and noxious vapours from chemical works, would you say?—Not vapours. Smoke is dealt with by the Sanitary Department, but vapour or gases from chemical works are controlled by the Alkali Acts.

6217. Have they both left Glasgow now?—The Alkali Acts have been in operation for many years.

6218. Are they quite excluded from the atmosphere by the municipal action?—A vigorous application is now being made of both Acts.

6219. And has as much as possible been done as regards the smoke nuisance?—I think so; I think pretty effectively during recent years.

6220. Do people note any improvement in the atmosphere of Glasgow; I cannot say that I do?—It would be difficult to say. We have fogs still as we used to have them.

6221. Do you think the law is strong enough?—It is strong enough, I believe, and there is a desire on the part of the manufacturer more or less to comply with the conditions.

6222. Then with regard to the town extensions. When the area of Glasgow is enlarged, do you find that you take in slums or thickly populated areas that grow up haphazard, so that the problem that the Town Council has to deal with in regard to overcrowded or insanitary areas, is often aggravated rather than relieved?—It is not the case, I think, that in pact extensions many insanitaay areas have been included. We have had a certain number of houses in these extensions which we have had to close up, but they were quite limited in their distribution.

6223. So with the extension of the city, the City Council have been able to acquire areas which they could lay out, or secure should be laid out, or some proper system in regard to density?—Yes, as a rule regulation comes in with regard to new buildings. But as to the effect upon the death-rate over some years, the effect produced by the included area only amounted to a difference of 0·8 per thousand; that is if it read twenty-one for the whole of Glasgow as extended it would be 21·8 for the original area. *Dr. Chalmers.*

6224. That is the only difference in favour of these urban districts?—Yes. The actual rate of the added districts was lower, but its effect on the death rate of the whole is as I have stated.

6225. That is not a large difference?—It does not represent the actual death rate of the added districts. In them it is about sixteen.

6226. (*Dr. Tatham.*) Does the jerry builder give you much trouble in Glasgow and the neighbourhood?—Not now; the building regulations have been revised twice in the last ten years.

6227. With regard to the zone outside the municipality of Glasgow does the jerry builder appear there and cover the ground with his badly constructed houses?—Probably in times past, but what is outside of Glasgow is now in the counties or in other boroughs, and the county administration of Scotland has been greatly improved since county organisation began, fourteen years ago.

6228. Are the building bye-laws the same in the town and the country?—They are not quite the same, but they are equally good. In the county districts the building bye-laws became operative only in 1897; and there is real effort in the counties to bring up the standard of sanitation.

6229. But where you come to take a suburban district into the municipality of Glasgow, do you not find, as has been found in many of the English towns, that the property which you are obliged to take in, or which you are taking in, is sanitarily almost worse than the central parts of Glasgow?—There are three neighbouring burghs to Glasgow and they have each sanitary problems of their own, and if they were included, we should have to deal with them; but the extensions that have taken place in the past—I mean in the recent past, ten or twelve years ago—included as a rule very good districts.

6230. You are very fortunate, and I wish that were the case in England generally?—Well, that is the case with us.

Mr. JAMES NIVEN, M.A., M.B., Cantab., called; and Examined.

6231. (*Chairman.*) You are Medical Officer for Manchester?—Yes. *Dr. Niven.*

6232. How many years have you occupied that position?—Since 1894.

6233. And previously to that time had you any special acquaintance with the district?—Yes; I was eight years in Oldham as Medical Officer of Health.

6234. Before you went to Manchester?—Yes.

6235. So that you have had eighteen years' experience?—Yes.

6236. What do you take to be the material conditions of the evidence on the subject into which we are inquiring?—I think that the materials for an accurate judgment as to the progress of the population are not in existence except to a very partial extent. If we had had accurate measurements, even if we had had the age, height and weight of school children generally, or of particular groups of the population which corresponded with existing groups over a prolonged period, I think that we might be in a position to form a better judgment as to what had been the progress with regard to the physique of the people.

6237. You attach a great deal of importance to anthropometric data for determining these points?—I do; I think that they are important, not only with the object in view but also with the object of observing the children. I think with regard to obtaining accurate data in the school, it is a very simple matter to have a weighing machine and a machine for taking the height. If these alone were recorded and registered, as they might be once in a term, the comparison of height and weight term by term would give an indication of the condition of the individual child.

6238. You would confine that to children of school age?—I would not if you could get like facts at other ages; but I mention the school because there it is practicable.

6239. But in the case of factory workers for instance there is no difficulty in getting hold of them is there?—I think that it would be difficult, and I should not be surprised if a certain amount of difficulty were to arise in the schools. I feel quite sure that, supposing any attempt were made to get the height and weight of factory workers, except in a very partial manner, and in places where the factory workers were very much influenced by the employers, difficulties would arise. It might be tried and it would be a good thing.

6240. What sort of difficulties would arise?—The people would object

6241. There is no indignity in it, is there?—There is not to us, but they would consider that we were unduly inquisitive.

6242. They are subject to suspicion?—That would be found a difficulty, but I do not say that it would be an insuperable one.

6243. The Anthropometrical Committee of the British Association twenty years ago examined something like 50,000 people, you know?—I do not remember that. Some of the tables would show that the number of people examined was not sufficient to justify conclusions.

6244. That was not from any repugnance on the part of the people, but it was owing to the Committee's want of resources?—Well, it is the case that the tables show a deficiency of data.

6245. That we are all feeling. Now would you please proceed with your evidence in the order in which you think best?—Now that we have got upon the subject of school children, might I explain what I feel about the education of the children?

6246. Yes; let us take it in the order in which you have prepared it?—I would begin here by taking the statistics of mortality. I think, although we have no other accu-

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rate data that we have some little help from photographs. I was informed by the Director of Elementary Schools in Manchester, Mr. Wyatt, that he is in possession of photographs of school children taken in schools, in the lower class of the population, twenty years ago, and recently; and that those photographs seem to show a very decided improvement in the clothing and physique of the children.

6247. Some have been submitted to us here, and they tell us the same tale?—Now I have here photographs taken by the chief clerk in the Public Health Department fifteen years ago and last year showing the slums in Manchester, and he took the worst places. It so happened that a considerable group of children gathered round the photographer, so that there are groups of children shown in these photographs, and as far as I can judge from these photographs they all tell the same story of improvement.

6248. (*Mr. Lindsell.*) In physique as well as in clothing?—Yes.

6249. (*Chairman.*) Is it more than a superficial improvement, do you think?—Of course that is a little apt to bias one's judgment. I admit that I think that that is so. Here are the five photographs of the slums in former times in the small envelope; and I put forward the rest in a certain order, in order that the best photographs may present themselves. The larger groups are recent and the others are old ones (*producing the same.*)

6250. (*Dr. Tatham.*) Are these Mr. Ellwood's?—Yes. I think I might also mention on this point that the superintendent of relieving officers in Manchester, Mr. Dewsnup, a man of excellent observing power, and generally a very intelligent man, is also of opinion that there has been up to recently, say a year ago, a very marked improvement especially amongst the children.

6251. (*Chairman.*) In Manchester?—Yes. He says that at present there are signs of deterioration.

6252. Showing itself during the last twelve months?—Yes, because there has been a great deal of distress.

6253. That is due to local causes?—Yes; that is temporary

6254. That is a fluctuating element in the question?—Yes. Now, putting that smaller consideration of photographs aside, as far as I can judge, we have only the mortality statistics to go by, and I give first the mortality statistics over the whole country, because they are necessary to check any conclusions which you may arrive at from Manchester. I take, except for the last ten years, from the Registrar General's Returns, the decennial death-rates at groups of ages in three registration districts which represent modern Manchester; taking for the last decennium the City of Manchester itself. Then I also show for the Manchester township (that is the central and insanitary portion of Manchester) the death-rates at groups of ages since 1851. These are corrected. These statistics show for the whole country, the city of Manchester also, immense improvement in the death rate at ages from five to twenty-four; for the whole country the improvement extends to higher ages.

6255. At thirty-five and upwards the death rates are getting worse?—So they did up to the last decennium; but if you look at the figures within the last decennium, there has been an improvement.

6256. But only in the last decennium?—Yes; but one must remember that if, as no doubt is the case, distress and physical deficiency at the younger ages has an important effect upon the physique afterwards, then the children recently passing into the older ages, both in the whole country and in Manchester, have been those children who have undergone, forty years ago, the physical deficiency which gave rise to those very high death rates at younger ages. Of course as things improve, we should expect that the death rates at higher ages would improve, and so they seem to do in the last decennium.

6257. (*Chairman.*) There has been no improvement in infant mortality?—Yes up to the last decennium.

6258. Under one?—Under five there has been an improvement.

6259. That is what you call "infantile mortality" under one?—Yes. I am afraid I have not the full figures.

6260. (*Dr. Tatham.*) Your Table 11 shows the deaths in proportion to births?—That is for the whole country. There was an improvement for the two decennial periods: but there was rather a retrogression during the last decennium.

6261. (*Chairman.*) Why was 1902 such a good year?—Oh: it was cool. The death rate from summer diarrhœa is low. You will see from the summing up, that except for diarrhœa, if you compare the average for the last six years with that for the six years preceding, the infantile mortality has diminished, except from diarrhœa. The total has gone up, but that is due entirely to the high diarrhœa death rate. I think there is no doubt that there has been a great deal of work done in teaching people how to feed the children.

6262. You think that has had an effect?—Yes.

6263. Do you think that is due to the operation of the Ladies Health Society?—We have done more than that; we have arrangements with the registrars of births and deaths who hand instructions to the parents how to feed the children. This has been done for a number of years.

6264. But what security have you that the mother reads them?—Perhaps one in a hundred at first did so. The proportion is constantly increasing.

6265. Does not the presence of the lady visitors secure that they are read?—But that is only in the poorest part of the city; they do not go outside the central districts.

6266. And that is where it is most wanted?—Yes.

6267. You attach great importance to this work?—Yes.

6268. You take care that every lady who takes part in this work is not only competent to give advice, but that she is tactful, and considerate, and sympathetic, and also that the advice that she gives is likely to be accepted?—That is so. Of course, they vary a good deal; but we train them, and they do their best, no doubt. Some of them are extremely good, and, of course, others are not.

6269-70. Have you any difficulty in getting the requisite type of person to undertake the work?—That I cannot say: they are appointed by the Ladies Health Society.

6271. The class of people who are paid 16s. per week?—Yes—some of them are excellent. They are like other classes of society; they vary in intelligence and capacity.

6272. Do the ladies themselves give much time and attention to it?—They do, but the practical work is done by the health visitors, at any rate in this work. Of course, I attach a great deal of importance to the work, and there is no doubt that it has done a considerable amount of good.

6273. What opinion, on the whole, do you form of the vital statistics of Manchester?—Well, I think, that as regards children of school age and young adults, on the whole, taking those death rates into account, their physical condition we may conclude has improved. There is such a marked improvement in the death-rate that it is impossible to avoid coming to that conclusion. I admit that a smaller change in the death rate might be attributed to causes which did not necessarily include physical improvement as part of them; but I think when there is such a great improvement as that, that we can only come to the conclusion that the physique has improved.

6274. I suppose that there are areas in Manchester, or people scattered all over it, who do not come up to these improved conditions?—That is true. That may be said to be true of the whole of the central district of Manchester, with regard to which I have given statistics—you may say that of it generally.

May I say with regard to that district, even—and with regard to that part we have to consider the poorest part of Manchester—that that must steadily, relatively, become poorer and occupied by an inferior class of people, because the whole population is increasing so immensely; and the poorer part undoubtedly aggravates the evil to the rest of Manchester.

6275. That is the sink of the place?—Yes, it is the most wretched part of the city; now, and in spite of that, the death rate in that portion is less than it was fifty years ago. The death rate in that central portion of Manchester has decreased, although formerly it contained samples of

the whole population, and now it contains the most wretched part of the population, and in spite of that the death rate is less than it was.

6276. Are not you keeping alive people who are better dead ?—It is not a matter of keeping them alive.

However, may I go on to say that the death rate of this, the most wretched part of the city, is now considerably less.

At ages five to twenty-four the death rate is less than it was sixty years ago in the whole of England.

6277. As to the future of those people when you do keep them alive, what effect will it have on the labour market—are they fit for work ?—I have not the slightest doubt about it. These figures show they must be quite good enough.

6278. Are they fit enough for regular sustained work or merely for casual labour ?—I think that they are capable of sustained labour certainly. May I say that I had an examination made of the poorer families in this district by a certain number of the health visitors, and one of the points some years ago we tried to find out was whether the people coming into the city from the country or the people who were produced there were the most vigorous; and the only conclusion at which I could arrive on examining the reports made to me was that there was very little difference—that the people produced in the city were quite as good as those coming in from the outside. Of course, with regard to the question of recruiting the ranks of casual or of sustained labour, that is a matter of education and feeding. I think you may take it that, if the children are well fed, properly clad and properly educated, a considerable proportion of them in any rank of society will find their way upwards.

6279. But in this particular section of the people of Manchester, are the parents less well-equipped for bringing up their children under favourable conditions than they were twenty years ago. One does not see why the condition of this central district should be getting steadily worse and worse?—They are improving. As a matter of fact, the district is improving in its worst features. The conditions with regard to housing are very greatly improved. The majority of the worst type of houses have been entirely cleared away—that is to say the back-to-back two-roomed houses—and a great many courts have been opened out, and inclosed spaces between houses have been provided. The houses, I may say, have been very often built close together at the back, so that there is not very much room, and the streets have been blocked at the ends. While these blocks have been removed the conditions of the backs of the houses have been improved at a pretty considerable rate, and altogether there has been a very great improvement in the condition of the houses in Manchester.

6280. Do you think there has been as great an improvement as might have been expected if the powers in the hands of the local authorities had been fully used?—Of course, there are powers in the hands of the local authorities—it is a question of expense very largely.

6281. And popularity?—Yes; the Sanitary Committee go as fast as they are able.

6282. Are they kept well informed of all the plague-spots in the town, is there a lack of information as to what the evils are ?—Not at all. They make systematic visits to those places to examine the houses that they are called upon to consider and condemn, and either they close them or alter them.

6283. We had it suggested that there was some lack of knowledge where the evils were that they were called upon to combat ?—I do not think that that is the case at all in Manchester. There is a little difficulty in arriving at the best course to pursue, but there is no doubt whatever as to the existence of many insanitary conditions.

6284. But I suppose it is the disposal of the persons who are inhabiting the dwellings which are closed which is the difficulty, is it not ?—That is a very great difficulty.

6285. In Manchester when you deal with them, are they transported to outer areas which are being opened up for the purpose?—There has been a large outer area taken just on the outskirts of the city in the north.

6286. Has that been laid out on proper principles ?—That scheme has not yet been provided, but a number of areas have been reconstructed in Manchester, and recently the sanitary authorities have been searching for areas in which they can erect dwellings in the city. The question is now in an acute stage.

6287. You give us your reasons for the high death rate and you describe the occupations of the persons living in the more central parts of the town. There is nothing in the occupations themselves which is particularly unhealthy, is there ?—No. Generally speaking, it is the lower class of labour, the poorly paid; it indicates the character of the class of people who live in the centre of the towns. A good deal of it, of course, is uncertain labour. That is another important factor.

6288. Do you say that intemperance is especially associated with a number of these occupations ?—Yes. I think that is so.

6289. More so than others ?—It is quite well recognised; Yes, I think so. For instance, running over them, one might say charwomen, coachmen, carriers, people employed in docks and harbours, etc., porters, messengers, bricklayers' labourers, masons' labourers, cotton operatives to a slighter extent, tailors, publicans, sailormen, barmen, hawkers, costermongers, labourers generally, printers and people employed in gas works; yes, there is quite an unusual proportion there.

6290. What is the second cause to which you attribute the high death rate ?—The diet is inadequate in a large proportion of the poorer families.

6291. Is that because they have not the money or that they choose to waste it ?—It is due, I think, partly to ignorance, and in not a few instances it is due to intemperance. But in a considerable number of instances it is due to ignorance, an ignorance of the best diet; that is a complicated matter.

6292. There is a great difficulty in supplying that information in the case of the adult population. You can only look to seeing that the next generation grows up better provided with the requisite information ?—I believe it would be possible to frame a sort of information, which could be distributed to the population generally advising them as to how best the money may be employed, when there is only a certain amount available.

6293. Do you think they would act upon such advice tendered in that way ?—To a certain extent, no doubt they would. Of course, there is always a lot of pressure brought to bear by their friends and those who take an interest in them, and by people instructing them, such as district nurses and health visitors. They often get assistance. Yes, I think a certain amount of attention would be paid to that.

6294. Could you not bring the food, already selected and prepared, to them. I have heard it suggested that some system of itinerant restaurants might be organised by which food properly selected and properly prepared might be brought to the doors of the poor, probably more cheaply than it could be done by the parents themselves ?—I do not think that would be good. I think the girls ought to learn.

6295. Yes, I am talking of the present generation. You think it may be impossible to indoctrinate them ?—Yes. I think with that as with many other schemes. I think that whatever is done in that direction should be done with a clear understanding that it was only a temporary expedient, that the proper way to attack the difficulty was to teach children how to select foods.

6296. You would make it a domestic question ?—I would make it a domestic question. I should make it a compulsory part of education. I should not leave it to be merely tacked on as a voluntary part of education.

6297. You discuss the remedies later ?—Yes. I have added this. I think it is right to say also that there is a good deal of casual labour and from one cause or another a considerable section of the population is reduced to poverty, and it is right to say that not only is intemperance a cause of poverty, but poverty is the cause of intemperance. People who have not enough food turn to satisfy their cravings to drink and also to support their enfeebled hearts by alcohol.

6298. I suppose want of fresh air and want of opportunities for exercise is another thing which drives people to the public houses ?—Yes no doubt. Of course they do have exercise; they go into the streets, but it is the dul-

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ness and monotony and want of opportunity of going into the country and so on.

6299. You are badly off for open spaces in Manchester, are you not?—We have very fine open spaces on the outskirts.

6300. But in the centre of the town you are badly off?—Yes, although here and there open spaces have been provided at the instance of the Sanitary Committee.

6301. There is a great difficulty in getting school playgrounds for the children?—Yes, there is a deficiency of school playgrounds.

6302. And I suppose they are not available except in connection with the school hours?—While there is a deficiency, especially with voluntary schools, there is a steady improvement. Every new school which is provided has a playground attached to it.

6303. Are there any means of using the school playgrounds on Saturdays when the schools are not open?—Yes, I think they are used, as a matter of fact. The teacher has the children there.

6304. But you can hardly expect the teacher to do it; he wants his holiday?—Yes, but he does it.

6305. It is rather hard upon him?—Yes. A great many of them take a very great interest in the children.

6306. Do you not think municipal action ought to come in there with a view to provide facilities for physical education and the physical training of the young after they have left school?—After they have left school?

6307. That is the period when they are so apt to lapse owing to all supervision being withdrawn. Very few of them, I suppose, go to continuation classes, comparatively?—I do not like to express an opinion on that subject offhand. I think that ample provision ought to be made. I think to a very large extent provision is made in Manchester. Every field that can possibly be obtained is snapped up all round the city for football clubs and cricket or one game or another. There is a very great eagerness on the part of Manchester children to get spaces for games.

6308. How is that done—by private agencies?—No, by the boys themselves.

6309. How have they the resources?—I suppose they manage to get a certain amount together. Of course that does not apply to the very poorest children.

6310. Those are the ones who want it most. We were told the Manchester child was losing the instinct of play because of the want of facilities for enjoyment after school age?—I think that is a great exaggeration. There are a large number of ragged schools in the city which take an interest in the very poorest children and put them through exercises. They are supplied with the means of giving thorough gymnastic exercises. Take, for instance, an institution like the Boys' Refuge at Strangeways, where they take in 450 of the most wretched children of the city. There they have a swimming bath and a fine gymnasium. They have gymnasia attached to the industrial schools. Swimming is immensely encouraged in Manchester. During the year ending November 7th, 1901, 339,252 baths were taken by scholars, of which number 177,258 were free. I have here the list. There are twelve gymnasia, many of them utilisable by comparatively poor children. I certainly do think that physical exercise is pursued to the limit of practicability in Manchester.

6311. Under present conditions?—Under present conditions, yes. In so far as that statement is true, it is only true in so far as the pressure of conditions imposes the absolute impossibility of exercise. I feel convinced of that.

6312. The impossibility of getting open spaces?—Yes.

6313. (*Colonel Fox.*) You know in a great many of these schools they have large halls, which they use for drill purposes and physical training?—In Manchester?

6314. In every town—the board schools?—Yes, they do drill, of course, in the school.

6315. But they have halls suitable for that?—Yes.

6316. And suitable for gymnasia?—I do not know that.

6317. I have been there and seen them in Manchester—large halls in the board schools?—Yes, there are large halls.

6318. These halls are not utilised in the evenings at all. Do you not think that you ought to make use of those for your boys? A great number of boys' and also girls' schools could be formed for physical training in the evenings after school hours?—You mean the boys and girls could have physical training after school hours?

6319. Yes?—Of course, the ordinary school children are drilled inside, in the hall of the school, but that is during school hours. I am speaking of times when you want recreation for children, perhaps to keep them out of mischief or to give them healthy recreation.

6320. Those halls are lying idle after school hours?—Yes.

6321. You say that everything is done at present, but surely there could be something else done; there is an additional means of giving them recreation which is not taken advantage of; those places are empty?—Of course, if you can get the children to go to those schools.

6322. They are most anxious to go there. I have inquired. All they want is some encouragement. I know several who have started this plan and they have got the use of the school-room by paying for the cost of gas, etc?—I think it would be a good thing in so far as it could be utilised. My information, however, is that at present there are a number of lads' clubs in various parts of the city where the boys have gymnasia and do exercises.

6323. There are a vast number of children who cannot get to these places, and they would be only too glad to have proper classes formed and organised in the board schools which exist now and are largely empty?—Yes, they could be organised.

6324. (*Chairman.*) There is some want of system, no doubt. But now will you describe the third cause as to the character of the housing?—The houses in the poorest quarters are old and therefore insanitary. They are without damp-proof courses. In a large proportion the space behind the houses is insufficient, and this space is often closed by houses. There are still about 3,000 back-to-back houses, badly ventilated, and closets accessible to the public. There are still a few courts left. But within the last twenty years great progress has been made in the closing of back-to-back houses as dwellings, and in converting them into through houses with yards. Several areas have been cleared and tenements or cottages on sanitary principles have been erected. There are in the centre of the city about 206 common lodging-houses, containing 5,831 inhabitants. These are, as a whole, insanitary, being old, and with defective day rooms and other conveniences. There are also a large number of houses let in lodgings, many of which approximate to common lodging-houses. The system of storage of excreta is mainly a conservancy one, the majority of the houses being provided with pail closets or middens. Ten years ago the drainage of the houses and passages was in a very bad condition.

6325. (*Dr. Tatham.*) With regard not to the drainage of the houses but the main drainage, how are you dealing with that now?—There has been a complete system of main drainage provided in the city, and sewage is now carried down to Davyhulme; it is partly dealt with by precipitation with lime, and partly it is subjected to bacterial action.

6326. Have you the whole main drainage scheme of Manchester complete now?—I believe so.

6327. Have you got over your defects with regard to the treatment of sewage; is it entirely satisfactory now?—The system which is in force in Manchester is not applied as yet to the whole of the sewage.

6328. Then you only apply your system to part of the sewage of Manchester?—It is only applied at present to part of the sewage.

6329. How do you deal with untreated sewage?—It is treated; it is precipitated, and the clear effluent is run off, but it is not subjected to the more complete purification by bacteria. Great advances have been recently made in regard to the drainage of houses, and the replacement of the pails or middens by water-closets. All new houses must be provided with water-closets. Further, since November 1st, 1890, a sufficiency of space in front of and behind houses has been secured, while streets no longer end blindly.

6330. (*Chairman.*) Some of the new streets are narrow?—No, all streets now must be 36 feet wide.

6331. Is that wide enough?—I think so, for cottage property. It is mostly ground and first-floor property which is erected. Of course with streets containing more important property or more important houses many of them are considerably wider than that; but that is the standard street. There is of course overcrowding in many of the houses occupied by poor persons. But the census housing figures for the population as a whole show that, with improving circumstances, the tendency to overcrowding diminishes, while the tendency to live in a better class of dwelling increases. Prosperity and adversity alike cause over-crowding in the poorest parts of the city. With a wave of industrial prosperity more persons want to have their own house, and more workers are wanted. Every house, good or bad, is occupied, and the overflow of workers leads to overcrowding. In adversity poor families take in lodgers, or they occupy different rooms in the same house, and overcrowding is caused in both ways. Overcrowding is inevitable among the poorest class at times.

6332. Now you come to the question of food. Of course there is first of all the condition of children before school age which you do not touch upon. That is of importance surely?—It is of importance, and I have attempted to go into that subject, but there is this difference, that the machinery exists for dealing with children at school age and it simply requires extension, while the machinery does not exist for other ages.

6333. It is therefore all the more important that we should consider it?—That is so, but of course one wishes to get at the maximum of immediate practical benefit if you can.

6334. In regard to the supply of milk in Manchester, is that sufficient?—I think you can get as much milk as you want.

6335. Has it reached the proper homes?—I cannot give you the exact proportion of milk per head.

6336. Do the children of the poor get it? I daresay as much comes in as you want, but do the poor children get it?—They do not all get it, that is quite certain.

6337. Is any attempt made at municipal distribution of supply?—No.

6338. Such as they have at Liverpool and St. Helen's?—No. That is not distributed for nothing.

6339. No, of course not; distribution does not imply that?—I think if we go into the question of milk it will take a considerable time.

6340. But there is no system under municipal patronage in Manchester?—No. I may say that I am not satisfied that that is the direction in which to deal with this subject of milk. We have done a very great amount of work in connection with milk in Manchester. It is a subject to which we have given an exceptional amount of attention, and an endeavour was made to meet the difficulties of the situation by voluntary agency. A company was started in Manchester, which had for its aim, to get milk from cattle guaranteed free from tuberculosis, and to get it from clean farms, to bring it cooled down and supplied to the people in a comparatively sterile condition, in fact, what we might call fresh milk. The object aimed at by those corporations which have taken up the municipal supply is to supply milk which is sterile, in which the organisms present have been rendered innocuous; it is subjected to certain processes of modification, run into bottles, the bottles placed in baskets, each bottle containing sufficient food for one meal. Then, of course, you require a considerable administration of visitors to persuade people to use the milk regularly and properly.

6341. That is what you have done to some extent in Manchester?— We have educated them, but in the other case you have to exercise pressure as well as thought in order to render the thing efficient. My difficulty is that I am not satisfied that the difficulties are overcome by simply sterilising the milk unless you also get the milk what one may call fresh, that is to say comparatively free from processes of disintegration such as occur if milk takes from twelve hours or upwards in transit, especially in summer, and has been subjected to impure conditions to start with. I think for the complete provision of a good milk supply we must start with the object of getting the milk brought to the town fresh.

6342. And to be sure that it comes from an uncontaminated source to start with?—Yes. I think that is very important also. If we are to do that a new milk supply must be provided, that is to say, farms would have to be provided round our big towns.

6343. Surely in Manchester you are close to a great area where milk is produced—Cheshire?—You must do one of two things. You must get your farms quite near the towns, so that the milk takes very little time to bring in and have it immediately under supervision to see that everything is right, stall feed your cattle, put them upon a uniform and regular diet as they do in the best American systems, and also in Sweden, or some means must be found for getting the farmers at a greater distance, to keep their milk under constant cooling, and carried in refrigerating cars in the city; either one or the other of those expedients would be necessary if you are going to get fresh milk. The question is a very difficult one. The difficulties are not overcome even when you have got a good milk supply. The good milk supply may be rendered futile by dirt in the house, by purchase of rubbishy fruit, and various causes of that kind. In fact, a necessary part of any very great improvement is the education of girls on these subjects practically.

6344. As to how milk should be stored?—Yes.

6345. And under what conditions it is fit for use?—Yes, and how children should be clad and cleaned, and so on.

6346. (*Mr. Lindsell.*) You say the detection of conditions must, in the first instance, fall on the teacher in the case of children?—Yes, I think so. When one remembers there are over 100,000 children in the elementary schools in Manchester, it is difficult to perceive how you are going to exercise sufficient observation upon that vast army of children by means of medical supervision. Not only so, but the teacher is in constant contact with the child. He sees it in various aspects. He especially sees the child having physical exercise, which is now generally given in the schools, and, therefore, he has many opportunities of judging of the physique of the child, which a medical man cannot have, not to speak of a great number of teachers that are in contact with children. I do not see that it is possible to get that necessary intimate knowledge of the children except through the teachers, and I am also satisfied, from my personal observation, and from general considerations as well, that to make the teachers as efficient as is necessary they will require special training on the classes of children by medical experts in the detection of conditions of illness.

6347. Would you make that a branch of the training of teachers?—Yes. I think that is quite necessary in considering the question of physical improvement.

6348. They would have to be taught what symptoms in a child indicate physical infirmity of some kind or another? Yes, I think so. The medical expert would take his classes, and he would show the teachers first what were the conditions of feebleness or inferiority in the children, and how to pick them out, how to detect defects of vision and of hearing, etc.

6349. You refer to the food question in your *précis*?—I would make one sharp division of innutrition, because in considering whether a child is suffering, whether it is obviously ill and emaciated, or out of sorts, and unable to do its physical exercises, and unable to concentrate its attention, it will be due either to innutrition or to some disease. The teacher must be taught both, in a rough sort of way, in order to make a rough determination, which it is, whether it is disease or want that the child is suffering from.

6350. If it were disease you would have him report the case, I suppose, to some medical officer of some sort?—Ultimately; of course, the first thing would be to inform the children that they must get medical advice. The child must be put under medical advice.

6351. I suppose they could not always obtain that medical advice?—I am thinking chiefly of Manchester, and there they have a medical officer to the educational authority. No doubt the teacher would report the case to the medical officer. He would then have to take it under his direct supervision.

6352. But where he found the state of the child was due to want of sufficient food, your suggestion is that he would report to the director of elementary education: if it were a physical defect he would report to the medical officer, and if it were want of food he would report to the director of elementary education?—Yes. That is a part of

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the scheme for dealing with it. It is a hypothetical scheme, simply to show how the thing might be worked out.

6353-5. You do not profess that it is to be absolutely cut and dried?—No. It is simply to show that it is practicable that a scheme can be devised.

6356. The teacher having found the child suffering from innutrition would report to the director of elementary education, and the next step in your suggested remedy is that the director goes to the school attendance officer?—Yes.

6357. His business is to ascertain the means of the family?—Yes.

6358. He has to go and inquire whether the family can supply food?—Yes; what the wages are, and what is coming in, and what are the necessary outgoings, and, therefore, what is the money available for food. Of course, that would take a little time. I think it would require an officer of some tact, but still it is a matter of detail to get the right sort of man.

6359. Would you also record the age and sex of each member of the household to the director. He would not report to the director of elementary education as to the age and sex of the whole family, would he?—That is merely part of the means. You must do that, because you cannot construct your dietary without it. The object of doing so is to construct a practicable dietary, to ascertain whether the money which is coming in will be sufficient to enable the parent to feed the children.

6360. (*Chairman.*) Would it not be better to go for the parents upon penal process and put it upon them to show that they have given the child sufficient food?—I do not think so. I think it is a matter in which we shall have to proceed carefully.

6361. (*Mr. Lindsell.*) You are looking to things which would not require legislation?—I think this procedure would require legislation, but if you proceed in the direct penal way against the parent it would lead probably to shifting of the population from one district to another.

6362. Then the director, having made these reports, he calls upon the teacher to say at what sum per diem the family could be supported, and what diets could be provided for that sum. You say that comes within the teacher's province?—I think he will have to be instructed in the matter.

6363. How could he say what sum the family could live on?—That involves an elaborate explanation. He would have the age and sex of each member of the family which has already been obtained by the school attendance officer. Professor Atwater, of America, has given a very great deal of work to the construction of dietaries, and has prepared a rough scale on which the members of the family get the proportion of diet; that is to say, the man gets, say, one; and the wife 0·9; a boy between thirteen and sixteen gets 0·8; and a girl of the same age, 0·7. You know, of course, the scale of diet. He must have the age and sex in order to be able to construct it. You take, roughly, let us say, 5d., upon a family of eight, and you apply that scale to 5d. You find that on adding the result together and multiplying by 7, the money yielded in that manner is just under what the family can afford, as you have already ascertained. Then that scale of 5d. is the scale of diet which they can afford. I have prepared a series of diets costing various amounts, 8d., 7d., 6d., 5d., down to 3½d., by which they can get the necessary nutrition, and they will see whether it is practicable for the family, and on what scale of diet they can do it to give sufficient nourishment to the family. Of course, the kind of article they purchase depends upon the amount of money available. I hope I have made my position quite clear. The teacher comes in in this way, that he would be furnished with diets constructed at different prices, but it would also be necessary for him to practice the arithmetic of diet construction so as to be practically familiar with this matter. He would be furnished also with diets of different prices, and he would instruct the family, knowing how much money there was available, what diet it was practicable for the family to use.

6364. Do you think the teacher could possibly do all this and all his other duties?—There would practically be no addition if the thing were systematised; it would make very little difference. He would not have to calculate any diet; it would be furnished to him. The diets upon the different prices would be furnished to him and all he would have to do would be to apply the .9, .8, and so on, which would be done in five minutes.

6365. Having got the scale, what is his next step; does he give it to the child to take home with him, or what?—No, it is communicated through the director to the family. The whole thing would be done formally.

6366. The teacher says to the director "This child wants a dietary at that scale," naming the scale?—Not the child. He says "The family can supply a dietary of such and such a scale, and the articles which they can get for the money are something like these."

6367. How is the teacher to find out that the family can supply the diet at that scale?—From the investigations already made by the attendance officer; he is supplied with the information which the attendance officer has procured, showing what money there is available out of the wages after paying the outgoings of the family. I know that the thing is done in a somewhat roundabout way, because I think it is undesirable that any summary procedure should be taken in the matter. I think it must be done with a certain amount of deliberation.

6368. I will not go through the successive stages. We have arrived at the stage where a teacher has told the director what the dietary means of the family are?—Yes, and what they can get on that dietary.

6369. Then the director sends some officer?—Yes, the attendance officer.

6370. He tells the family what diet is required and how it is possible?—Yes, and he also offers to supply the child with a complete school diet, but, of course, the parents must pay for that diet at a fixed scale, whatever charge it may be.

6371. This dietary is to be obtained at the school?—It is to be obtained at the school. The parent will have the option of feeding the child himself if he so chooses. Clearly under such a system it would become necessary to ascertain, whether the child was being adequately fed, or was not, before you can take any further action, and that involves taking the height and weight of the child. If upon two successive takings at intervals, say, of three weeks, you find that the child was stationary or going back, then it would become necessary to take action against the parents to compel them to feed the child himself properly, or pay for the food which was given. In that case the matter would go into the hands of the medical officer of the education authority. Of course, that is only my way of setting about it. I do not profess that that might not be greatly improved on.

6372. (*Dr. Tatham.*) In the event of its being impracticable for the parents out of their small earnings to provide sufficient food for the child, do you think that in any sense the authority should become responsible for the feeding of school children?—Yes, I think the child must be fed. I have put it down broadly that the child must be fed.

6373. We have had evidence before us here that in not a few cases children are brought to school or sent to school, as the case may be, practically half starved, and that then they are made to go through their various exercises at school practically on an empty stomach; do you think that that is a thing which should not be allowed under any circumstances?—Yes, it should not be allowed under any circumstances. I should lay down the broad proposition that the school children should be adequately fed.

6374. And if the parents cannot do it the State should do it in some form?—Yes. Of course, in Manchester it is done to a very considerable extent at present under a Free Food Fund.

6375. That is a voluntary fund?—Yes; I have here Mr. Wyatt's Report upon the subject (*handed in*).

6376. (*Chairman.*) What proportion of the children are fed in that way?—He gives the number of dinners served in the course of the year.

6377. But what proportion of children would require that free food?—I do not know.

6378. That is an important element?—Yes, that is the difficult part of it. I have not the slightest doubt that no voluntary system whatever in our large towns can overtake the deficiency of food. Then you are brought face to face with the larger question. There is no doubt that a lot of good is done under this free food system.

I see about £400 was spent on this object, and doubtless the child could be fed for 3d. a day. It would be easy enough to calculate. One pound would feed a child for eighty days, and £400 would therefore feed 400 children for eighty days, or something like that. The expenditure was about £400. I just give these figures to show the sort of operations. Of course, it is in winter, when they need food most, and when work is slackest, and more children are then suffering from deficiency of food. A large number of masons' labourers, builders' labourers, and so on, are out of work. It is chiefly in winter that these operations are most required, and if you took the period say, instead of eighty days, at thirty days, you might put it at about 1,000 children, roughly, who would have their necessities supplied.

6379. (*Dr. Tatham.*) You say that every elementary school should possess a kitchen equipped with ordinary cottage ovens and utensils, or such as are suitable for a cottage. You would have that in every case?—Yes; I think it is of vital importance that all girls should be taught to cook.

6380. Even in school hours, as part of the system?—Yes; I should make it part of their regular course of domestic economy and hygiene. I think it should be a prolonged practical course in the various subjects.

6381. Even if she did it at the expense of some of the book work?—Certainly.

6382. She also should be taught sewing, mending, and washing?—Yes.

6383. And how to clean house?—Yes, and generally the methods of cleaning, the selection of foods, so much of dietetics as is necessary to select the proper diet, the selection of clothes, their price and properties, for instance as regards wools and flannelettes, how to choose flannelettes, and in fact the choice of clothing, and what it does.

6384. (*Chairman.*) Everything to make her a good housewife, in fact?—Yes. I may say that I think it is very important also that boys should be taught kindred subjects.

6385. (*Dr. Tatham.*) Subjects such as joinery, and how how to make shelves?—Yes, and how to make boxes, cages for storing food, and to make chairs, and mend things about the house.

6386. So as to make them useful husbands?—Yes, and take a pride and interest in their homes, and give them a variety of occupation, so as to give man and woman mutual interests in the homes, and make them more likely to assist each other about the house, instead of the man going out to a public-house and finding his amusement there.

6387. With regard to intemperance, would you like instruction of the boys and girls with regard to the evils of intemperance?—Yes, I think that is the direction in which we have most to hope from. I think that should be made part of the hygiene course at school. I throw this out with a certain amount of diffidence, but think that alcohol might be much more heavily taxed. I think we might derive a very much increased sum from taxing alcohol.

6388. Would you differentiate between the different kinds of alcohol? Would you tax whisky and brandy more heavily than the working-man's glass of beer?—No, I should not; I should tax alcohol simply.

6389. (*Mr. Struthers.*) There is a very heavy tax on alcohol at present; do you think if you put on a heavier tax the consumption would keep up?—I do not think it would quite. I regret to say that I do not think it would go down very much, but you would get your money. Of course I know this is a view which does not commend itself either to those against interference with the sale of alcohol or to the opposite party, but it certainly does seem to me feasible to levy a larger sum of money and to utilise that for food purposes.

6390. (*Colonel Onslow.*) Would you make any difference between beer and spirits?—No.

6391. (*Dr. Tatham.*) With regard to the housing question in your experience—I am glad to hear what you have to say with regard to the improvement of schemes of houses—can they be carried out in towns or not on any adequate scale?—They cost a good deal of money, especially in Manchester, where ground is very expensive.

6392. (*Chairman.*) But are they not remunerative in the long run; is it not a productive expenditure?—Yes. Then, of course, you have to carry these schemes through the Council, and if their view is that the expenditure is not remunerative, there is a great difficulty in carrying the schemes. A certain amount of improvement schemes in the centre of the city are needed. I think it is desirable, as far as possible—personally that is my view—to take the people out into the country and house them there.

6393. (*Dr. Tatham.*) And provide cheap transit?—And provide cheap transit. I think the money can be utilised in that way just as well as the other. The difficulty is, of course, that the people will not go out, even if you do make their transit cheap, and you would have to exercise a considerable amount of pressure and influence before you would get them to go into the country. But it is much easier to provide cheaper houses in the country, where land is cheap, than in the centre of the town, where land is so very expensive. Besides you get entirely new conditions; you get a certain amount of fresh air and sunshine which cannot be provided in the centre of our large towns.

6394. You think that inasmuch as a certain proportion of casual labourers and people of that class must live in the centre of the town, provision should be made outside the zone?—Yes, I think so, and that such provision should be outside the zone, which you have to construct yourselves as well as you can. I think it should be outside the probable business area within, say, a period of thirty years—outside the area which business is likely to invade with warehouses and so forth in that time.

6395. You are familiar with the extent to which the philanthropic people of Manchester are endeavouring to deal with the matter, and that the difficulties are increased considerably by the fact that outside the municipality of Manchester there are districts which have been run up under local boards without the slightest regard to sanitation. Do you think that it is now, as it was some years ago, a difficulty with the Manchester Corporation in extending their boundaries, that they have to deal with bad property of this kind, with regard to the construction of which the Corporation, as such, has had no voice?—Yes, of course it is a difficulty, but I think it is not desirable to say too much upon the subject, because there are very considerable areas of Manchester itself which are insanitary. Those insanitary areas, I mean, are not confined to the districts which you are talking of. It is only likely that if you have in previous times created insanitary areas yourself, these small places outside will have created insanitary areas. Of course, it is a difficulty—it is just an addition to the greater difficulty.

6396. But, having regard to the existence of that difficulty, do you not think that something might be done in the way of providing uniform building bye-laws, so that it should not be possible for jerry-builders to erect property outside the municipal boundaries of the kind I speak of?—Yes, I think it is desirable to have a uniform system of building bye-laws; I think it is very desirable.

6397. You think that would be one way of diminishing the difficulties?—Yes, I think it would. It would not overcome all difficulties, but I think it is very desirable.

6398. As regards overcrowding, you think that the statutory provisions and those made under bye-laws relating to houses let in lodgings should be strenuously but judiciously carried out?—Yes, I think you must allow a certain amount of latitude in these matters. It is quite obvious that if you have a large family crowded into one room—say, the man has an ailing wife and she is not able to look after a house—under those circumstances he will go to a house let in lodgings and take one apartment in it, and they will all crowd into one room, and perhaps the children there are from the age of twelve downwards and are not able to make any money. Under those circumstances you cannot deal with over-crowding; you must wait till the children are a little older and are beginning to earn.

6399. (*Chairman.*) Do not the children suffer?—Yes.

6400. Do they get any sleep?—They suffer, but what can you do?

6401. But do they get any sleep? Sleep is as useful to a child as fresh air and food, is it not?—It is likely that they would sleep as much in one room if a larger house were occupied. The conditions are really very complicated,

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These people have sunk, let us say; they have not been able to get enough food, and they have come down, and they have pawned their articles of furniture one after another; they have no option except to go into an apartment like that; they have not the means to occupy a house; landlords will not let the house to them; they cannot get one from the Corporation, as a condition of the Corporation houses is that the people shall have furniture to put into them. These people have no option except to go into these rooms; they cannot help themselves. This has been very forcibly impressed upon me by the fact that with a view of getting a clear idea for this Committee, I have had an investigation made by the sanitary inspectors of three limited districts, and I have made an analysis of the conditions attaching to these three districts.

6402. (*Dr. Tatham.*) Will you put them in?—Yes. (*Document handed to the Chairman.*)

6403. We will print this, if you have no objection?—Very well. The districts are very limited, and are the very poorest that could be found.

6404. With regard to legislation, I have here a report from Dr. Chalmers, of Glasgow, on the death-rate in one of the tenement houses?—I have seen it.

6405. "In a pamphlet on the tenement house legislation in New York, prepared for the Commission of 1900, by Mr. Lawrence Veiller, its Secretary, I find the present law stated in the following terms:—'The owner of a tenement house was further required to thoroughly cleanse all the rooms and halls, stairs, floors and windows, as well as the doors, walls, ceilings, privies, cesspools, and drains of the house as often as the Board of Health might require.' Further, that 'whenever there should be more than eight families living in any tenement house in which the owner himself did not reside, there should be a janitor or housekeeper, or other responsible person living in the house, and having charge of the same, and it was left to the discretion of the Board of Health to decide when such janitor or housekeeper should be required.'" Do you think that is a practicable suggestion?—It may be. It contemplates a state of things which does not exist in Manchester at all. It is no use having proposals for a condition of things which we have not to deal with.

6406. The conditions do no exist in Manchester?—No, we have not eight families in one house.

6407. (*Chairman.*) Have you not any big tenements in Manchester?—Yes, there is one block of tenements which has a janitor in charge, but that is a large block of tenements. Then there are two blocks of tenements under the Corporation who have got a caretaker—a skilled man, in charge of them, who keeps a set of books. But the state of things contemplated here does not exist with us at all.

6408. (*Dr. Tatham.*) I know I am speaking to an authority, a Lancashire authority at any rate, on the subject of phthisis and pulmonary tuberculosis. Speaking generally, is pulmonary tuberculosis on the decrease or increase in Manchester?—On the whole it is on the decrease, but there has been a slight increase during the last two or three years.

6409. Generally the death-rate from pulmonary consumption at all ages has increased in the last few years?—Yes.

6410. Can you account for that?—Not exactly, but I think there is a gradual shifting of the population, so that more people are living at the more advanced ages at which they are more subject to phthisis. I think that may account for the slight increase that has taken place.

6411. You know that is the very reverse of what has taken place in the country generally. In the last twenty years the decrease of the death rate from phthisis and pulmonary tuberculosis has been enormous?—So it has been in Manchester. There has been a very great decrease. If I might consult my annual report which I have here, I can turn to a few facts.

6412. It has decreased from 1,920 to 1,570 per million within the last twenty years in England and Wales—that is amongst males, and amongst females it is still greater—1,735 to 1,110. You are aware that that is the case?—Yes.

6413. In Manchester you say that is not so?—I do not say that. In recent years I say there is a tendency to go back.

6414. That is to say there has been an increase instead of a decrease?—In the last few years a slight increase, but not more than might be ascribed to the fact that there has been a gradual relative increase of people living at the more advanced ages at which phthisis exacts a higher mortality.

6415. Is it not at the higher ages principally that the increase has occurred in recent years?—I have not got the figures out. No doubt it is.

6416. I daresay you will give the Committee the benefit of those figures?—I have not, of course, got the figures upon that point prepared, but since 1881 there has been a diminution in the Manchester death rate from phthisis from 2·42 in the years 1881 to 1885 down to 2·04 in the years 1896 to 1900.

6417. And since then?—Since then there has been the very slightest increase; it is extremely slight. The death-rate went lower than 2·04 and now there is just a slight increase. In 1903, however, the death rate has again gone down to 1·85, which is lower than for any previous year.

6418–21. You have not calculated the mortality from phthisis at age groups; you could calculate them for the information of this Committee?—Perfectly.

6422. With regard to the question of the registration of still-births, have you any information as to whether that should be made part of the law of the land or not?—Yes, I think it is very desirable.

6423. What period of uterine gestation should you put as the limit of the operation of such a law?—I have not thought of that. I should say six months or something like that.

6424. With regard to the mortality amongst illegitimate children in Manchester, is that very much greater than amongst legitimate children?—Oh, yes, more than double I think. It is somewhere about double. I have the figures.

6425. Perhaps you will favour the Committee with them?—Yes.

6426. Referring for the moment to the subject of milk supply, do you think that in the case of the poorer classes of Manchester infant children do really get any substantial amount of milk?—Certainly.

6427. They do?—Yes.

6428. I am very glad to hear it, because it was not so at one time?—I think it is the exception when they do not get milk. I must say they very often get condensed milk instead of fresh milk.

6429. Do you approve of that?—Yes, under certain circumstances. I think it is necessary. I have, on occasion, used that with my own children instead of fresh milk. I think that if they use the first Swiss unsweetened condensed milk, or equivalent unsweetened condensed milk, it very often makes an excellent substitute for fresh milk, but I am afraid they do not make a good choice; they use milks which have to be too much diluted or separated condensed milks, so that the child does not get sufficient nourishment. That is the danger from the use of these condensed milks. Properly guided I do not think it is so great an evil. I think they get a large quantity of milk which is probably not very fresh. It is difficult to say exactly how far that is so. The milk in Manchester is extremely well protected as far as the Sale of Food and Drugs Act is concerned. The difficulty is as to its bacteriological character—how fresh it is.

6430. My reason for asking you the question is that we have had a good deal of evidence here to the effect that the poorer children practically get very little, if any, milk at all; that all sorts of things, anything that comes to hand, is used for the food of infants rather than milk, simply from ignorance, I suppose?—Yes; in a small proportion of instances they use patent foods, but patent foods are more expensive than milk, so that really the impulse is towards the use of milk than to the use of patent foods. On the other hand the parents give the infant bits of bread, bread boiled in milk and foods of that kind. Unsuitable foods are very often given, no doubt, but they are not given apart from milk.

6431. With regard to the diseases of young children under five years of age, is tuberculosis increasing or decreasing amongst them?—It is decreasing.

6432. Would you detail to the Committee the system you have in Manchester of inquiring into the deaths of infants and young children, and probably of all persons who die in Manchester, the card system. We have had some interesting evdence from Dr. Chalmers, of Glasgow, this morning. Will you detail to the Committee the system you have in Manchester; is that somewhat similar? —Yes. The health visitors are furnished with cards in the case of death, giving a number of particulars in reference to the house, also in the case of young children as to the character of their vaccination and giving a number of particulars with regard to the kind of house which they inhabit and the constitution of the family, and so on, and these cards are filled up.

6433. Will you send the Committee a copy of these cards when you send the corrected proof?—Yes, I shall be pleased to do so.

6434-5. (*Chairman.*) With regard to the point that Dr. Tatham put to you about the legislation in New York, you said it was not applicable to the condition of things in Manchester, but I think you missed the point which is the principal one, which is throwing the responsibility upon the owner of a house to cleanse the "rooms, halls, stairs, floors, and windows, as well as the doors, walls, ceilings, privies, cesspools, and drains of the house." That is the point of the legislation, to make the owner responsible for seeing that the tenements are clean in all those particulars?—Yes.

6436-9. Surely it would be of benefit, would it not, to devolve some of the responsibility as to the conditions of the tenements upon the owner and not upon the occupier. —Yes. Of course, for sanitary defects generally the landlord is at present responsible, and has to do some things in connection with the condition of cleanliness also. If we find that a house is not in a clean condition we give notice to put it so, and the house is washed over with a disinfectant and thoroughly cleansed.

6440. Do you make the landlord do that?—He has to pay. He has to do all repairs, to repair the house, and do everything. As a matter of fact, in our system of dealing with phthisis whenever a house is at all dirty, and a case of phthisis is reported to us we have the power to enforce it, but we ask the landlord if he has any objection to our carrying out this process of cleansing. Practically they all agree.

6441. Is he charged now?—The cleansing is not charged now; it is done at the expense of the Corporation, but he has to do all the subsequent putting right: he has to repaper the walls and beautify the house, and put it right again for the tenants.

6442. Do you believe any alteration in the system of rating would assist to transfer people from the central districts to the outskirts—I mean in regard to the substitution of sites for buildings as the basis of assessment?—I am afraid I do not quite understand.

6443. The present basis of our assessment system is the value of buildings?—Yes.

6444. Well, it has been suggested by Mr. Charles Booth among others, and also in the Report of the Local Taxation Commission by a section of the Commissioners, that if sites were made the basis of rating instead of buildings it would compel manufacturers to clear out of the central districts in towns where the rates are very high. That would lead to a large clearance of the population into the outer areas?—Then—you are going to use up your outskirts in factories instead of houses?

6445. Where the population is not so dense?—That is one of the greatest evils in our big towns. Take a district like Ancoats, where these factories loom over the houses and deprive them of light, and so on. I see no advantage in that. You have, at present, an immense movement of the population out into the country, even of the comparatively poor people at present. The process of building is going on and, unquestionably, this is one of the great influences for good. If you are going to take your factories out, to plant them in the midst of the houses and cast their shadows over them, I do not see where the advantage comes in. I think it would be much better to facilitate the present movement than to set up a movement of that description. I do not quite see the advantage of that.

6446. The advantage, surely, is to tend to bring the population out of the centre where the conditions are most unfavourable to health, to more open areas on the outskirts?—The people are living out themselves.

6447. That is the question; is it so?—Certainly, there is an immense movement outwards. Every person who can afford it at all is going out. It is only the poorest people who cannot.

6448. And what you are doing is producing an aggravated condition right in the heart of the town, and making the evil almost irremediable?—Those are not the people who would be available; you would get the better class, such as you have at Port Sunlight. That is, of course, an ideal state of things, but there are no very poor people there. All these people who are employed in that concern are fairly well off. It is not the poor people who work there.

6449. We have had the evidence that a lot of manufacturers in Manchester are disinclined to put into use such means as they might for the consumption of smoke, and the diminution of the smoke nuisance, owing to the fact that the areas upon which their factories stood were so restricted that they could not do what was required?—As far as I know—and I believe I am speaking the truth—the Public Health Act, so far as it deals with the consumption of smoke from factories, is carried out very thoroughly in Manchester.

6450. You think it is?—I do.

6451. You are prepared to say that—we have had the direct opposite said?—Yes, very thoroughly. I do not administer it, so that it is not a personal matter with me.

6452. Whom is it administered by?—By the Sanitary Committee with a superintendent.

6453. You are not concerned with it yourself?—No.

6454. But you are prepared to say that as a medical officer of health?—Yes, and from my own observation. In fact, it is pushed as far as possible with that class of works which is less amenable to the direct operation of the Public Health Act.

6455. How is it the atmosphere of Manchester is said to be so polluted?—It is polluted, but very much less polluted than it was.

6456. You think so?—Undoubtedly. One must remember there are other districts, for instance, Salford, and I am not prepared to speak of Salford; but as regards the administration of the Act in Manchester, or for the other surrounding districts, there is no doubt, whatever, the Act is well administered.

6457. Do you think the administration of Salford in these respects does not compare favourably with Manchester?—I cannot express an opinion, I do not know. I have no accurate knowledge on that subject, but speaking for Manchester, I know that the Act is very thoroughly carried out. In fact, it was a matter of observation and pride with Mr. Carpenter, who is the chief inspector of the Alkali Acts, that the atmosphere of Manchester had so improved, as was made evident by the improvement of the plants. What I should like to say is, that the biggest evil in connection with smoke is from the cottages. In the investigations which are carried out by Professor Cohen and Dr. Bailey in Manchester into the condition of the atmosphere in various parts of Manchester, they showed that the smoke from the cottages had more to do with it than the smoke from the factory chimneys.

6458. There is no method of dealing with household smoke at present?—No, not at present, but that requires dealing with if anything does.

6459. (*Colonel Onslow.*) Do you consider the sanitary laws at present are sufficiently strong to counteract the difficulties. You say here that in the centre of the city there are so many lodging-houses and those are insanitary, being old and with defective conveniences. Is the law sufficiently strong to deal with that?—Yes, that is a matter of housing.

6460. You consider that the laws are being carried out as far as possible?—It is not always possible to say that. I believe the sanitary committee are very much in earnest in trying to find the means to improve the housing of the people.

6461. The sanitary inspector, I take it, is an official of the corporation?—Yes.

6462. Appointed by the corporation?—Yes.

Dr. Niven.

6463. Do you think it is possible, that being the case, for sanitary inspectors not to always report as they might —I do not mean necessarily with regard to Manchester or any other particular town or village ?—In regard to that class of house the possibility does not exist, because I have in my possession a complete account of the most minute details for lodging-houses in Manchester.

6464. I do not mean Manchester alone ?—Of course it is always possible, you cannot deny such a possibility.

6465. Would it not be far better that they should not be officials of the corporation or of the county council; they ought to be Government inspectors ?—I am afraid that I do not understand.

6466. They are now under the corporation or under the county council or under the borough council or something like that ?—They are under the corporation.

6467. Human nature is human nature and is it not possible that these men may be influenced. There may be a member of the corporation on the Board who is owner of some of these dirty insanitary houses, may there not ? —Yes.

6468. An inspector may report and he may be told to hold his tongue; is not that possible under the existing state of things ?—I think not, at least it is not very easy.

6469. You think they are above that ?—No, it is no use looking to these ideal conditions; but I do not think a sanitary inspector would find it to his advantage not to report.

6470. He may report. I do not mean Manchester, but generally ?—It is conceivable of course.

6471. Would it not be better if these inspectors were appointed by the Government. They should not be dependent upon the local authority. A man should not be afraid of losing his appointment ?—What you are proposing is a revolution; it means taking the local administration out of local hands.

6472. Only in one respect ?—It is rather sweeping.

6473. You do not agree with it ?—No, I do not, broadly speaking. I quite see the object of it, and I think it is a good one; but I do not think that would do; I think it is too big.

6474. You think it is a forcible course ?—Certainly; there is no condition of life but what some influence might be brought to bear.

6475. You say the death rate is less especially amongst infants now; that is a proof of the general improvement of society, but does not that mean that medical science has so improved and the sanitation and everything is so improved that the weakly ones who would thirty years ago have died now survive and only swell the ranks of the defective or degenerated physique ?—That is a little inconsistent with the results of the last decennium which show a general improvement at all ages.

6476. But do you think the death rate shows that entirely ?—I say in my proof that the correspondence must not be pressed too minutely, and probably there is a greater improvement in the death rate than the corresponding improvement in the physique, but that the improvement in the death rate is so great that you must assume an improvement in the physique though not quite corresponding to the magnitude of the improvement in the other. But this improvement in the death rate occurred most markedly at the period when the general conditions of prosperity as regards wages and the cheapening of food were advancing most rapidly, that is to say, they indicated a general condition of well-being amongst the people and were probably dependent largely upon better food and better clothing, although I do not deny that better housing has also in recent years had a good deal to do with it. It is very general over the country; the improvement extends to rural counties.

6477. By allowing these weakly infants under less favourable circumstances to exist, surely that must cause a larger percentage ?—I do not admit it is the weaklings that remain. I should dispute that altogether.

6478. You think it has entirely improved ?—You want to know what the weakling is. I am informed by Mr. Dewsnup as the result of his observations—and my own observations also inform me—that there are very many fewer children going about with bent legs, and rickets and such conditions than there were twenty years ago, and that seems to imply that there is not merely an improvement as regards the death rate, but also with regard to the physical condition, although it is only right to say that that improvement is not universal. But it is the opinion also of Mr. Wyatt who had examined those photographs. But every school teacher is not of that opinion. I do not know that I am at liberty to go into details, but on the whole my opinion is—there is an improvement in the physical condition of the children.

6479. I suppose Manchester and its locality are perhaps more than any part of England susceptible to trade conditions—and are better off when trade is good ?—Yes, that is so no doubt. There is a good deal of fluctuation.

6480. For instance you are having a bad time now. There are a good many poor children born of poor parents now, who would have a worse chance than under more favourable circumstances of trade ?—It is certainly a remarkable thing that the greatest improvement in children in 1895 occurred in the quinquennium following that in which the greatest improvement occurred in the young parents, so that it does appear as if the physique of the parents did influence the physique of the infant to some extent. I am inclined to think there is something in that, that a wave of distress of increased poverty will have some effect upon the young children. I think, however, that that might be to some extent counteracted by proper measures.

6481. Do you think probably from your experience of dealing with people that the factory class would object very strongly to being measured and weighed and so on ? —I believe they would; of course I may be mistaken.

6482. I agree with you from what I know of men, even in the Services ?—Yes, it is the general impression.

6483. I suppose it is the idea of interference with their liberty ?—Yes.

6484. Some idea that they may be forced—I do not say into conscription exactly, but into some sort of service for the State ?—Yes. May I be allowed just to press rather the point that I have raised that all school children should be fed. There is, no doubt, a very wretched condition among the poorest part of our population, and probably any improvement must be slow, but in proportion as we are prosperous the people from whom the Army will be recruited must be more and more largely the very poorest class, so that it is with special reference to the difficulties which have arisen in connection with conscription that I venture to urge this necessity of taking in hand the feeding. I think feeding is a matter of very much greater importance than physical exercise, although I do not wish to say that that is unimportant. I think the sufficient feeding of children is by far the most important thing to attend to, and that that is specially important in connection with the Army. I think there is no doubt that when trade is good you will have to rely for the Army upon this very poor class, and that in order to get good soldiers you must rear good children, you must see that children are adequately fed.

6485. (*Mr. Struthers.*) With reference to that point that Colonel Onslow was asking you, without going the length of taking the sanitary administration, etc., out of the hands of the local authority, might it not be possible for the central authority to have some power of veto on the local authority dismissing officers in certain circumstances, that is to say, that the central authority might have a certain amount of control over the action of the local authority ? In Scotland, for example, I understand medical officers of counties may not be dismissed without the consent of the Local Government Board. Might not such an arrangement in England be desirable ?

6486. (*Dr. Tatham.*) That is the case in London, too.

6487. (*Mr. Struthers.*) But not through the rest of England ?

6488. (*Dr. Tatham.*) No.

6489. (*Chairman.*) Unless the Local Government Board pays part of the salary. In that case they have a voice.

6490. (*Witness.*) It is impossible altogether at a moment's notice to put one's own conditions aside, but I think there are many instances in which that would be desirable. That question does not affect me.

6491. (*Mr. Struthers.*) You can quite understand that neither Colonel Onslow nor myself have been thinking of

the large towns, but we know there are many minor villages where this question in one form or another becomes very critical from time to time?—Yes.

6492. You think it is desirable that the public officer should not be unduly under the influence of his department?—Yes, I think it is desirable.

6493. (*Colonel Onslow.*) What I am thinking of more than towns is the country districts?—Yes, I think it is desirable in the country districts.

6494. (*Mr. Struthers.*) Do you happen to know about the district immediately surrounding Manchester, whether the county authority has rules for the erection of buildings?—Yes, there are building bye-laws in Withington, I know.

6495. I mean in the immediately surrounding districts of Manchester, which are not themselves boroughs, not Salford?—This is a district in the county which I am speaking of.

6496. And they have building bye-laws?—Yes.

6497. We rather gathered from Mr. Horsfall that they are the things he wanted?—Yes; they have them at Withington.

6498. You lay special stress on the feeding of school children as one of the most important things to be done?—Yes, I think that is absolutely vital to the future of physical improvement.

6499. And towards that being properly done you would have the teachers instructed in the training colleges, I presume, in such a way that they would be able to understand the obvious defects of children's physique, and whether a child was suffering from innutrition?—Yes, I lay stress upon practical instruction by medical experts.

6500. Hitherto there has been a certain amount of instruction in the training colleges, but it has been not practical—it has been on physiology and so on. What you have in view is practical instruction?—Yes, I think that is by far the more important.

6501. Showing them how to pick out children who are not properly fed, who have defective eyesight, and so on?—Yes, and to teach them what are the indications of deficiency in food. Of course, it is not easy, and they will not usually know of themselves how to distinguish.

6502. Assuming that they have been so instructed and can pick out certain children who are in their opinion underfed, I presume their opinion will have to be confirmed—you would not take them as the absolute authority?—In the first instance, but not in proceeding to strong measures.

6503. You would not take their statement that the child was ill-fed to be absolute—you would have further investigation by medical men that that was so?—Not for practical general purposes.

6504. You would not?—No, you could not; the thing is too big; the medical officer to the education authority would have nothing else to do. There would be a very large number.

6505. But there would be a considerable number of medical officers required?—There is only one.

6506. My suggestion is that that number should be increased?—It will increase slowly. You have to consider also how far you are to multiply medical officers. You will not pay them a large salary, and you have to consider what is the amount of work they will do, and whether the thing is worked efficiently. It can work in this way—because the teacher is always there, and with comparatively little effort he can do a good deal; whereas, if you multiply the medical officers with little pay I do not think you will get it done.

6507. But we do not want medical officers in substitution for the teacher. What I thought was that there must be a fair number of cases where the teacher says that a child is ill-fed, and so far as his knowledge goes it is so; but he would like to have his opinion confirmed by somebody who knows more about these things than he does; do not you think that such cases should be referred to a medical officer?—There should be a medical officer to whom they could be referred if need be. I think it is absolutely necessary, but I should not make the reference very frequent, I think, not in a large place at any rate.

6508. Then there was a point I do not quite understand in your suggested procedure. The teacher has found out a child who is not properly fed and has reported him to the director of the educational organisation?—Yes. *Dr. Niven.*

6509. And then you say the director would call upon the teacher to say at what sum per day the family could be fed. Would it not be better for the director himself to find that out?—It might be done by clerks in the office. It is quite conceivable, but they would have to undergo a certain training. It would not be a bad thing for the teacher who was engaged in teaching dietetics to determine that himself. I think it would be rather a good thing.

6510. Was your object in proposing this part of your arrangement to keep the teacher's mind bent upon this subject?—Yes, the subject of diet.

6511. I rather thought that might be so.—Then is there any sound well tested scientific basis for the construction of dietaries at the present day?—Of course it is largely experimental.

6512. You know that what is called domestic economy has been taught in schools for a generation, but that the text-books on which that domestic economy has been taught, dealing, of course, with dietaries, with food values, have changed every four or five years on important points. For instance, the books of not more than five or six years ago spoke of what they called flesh-forming foods and heat-giving foods?—Yes.

6513. Now, I understand that is a distinction which has been absolutely given up; it is no longer held to be a scientific one?—It was more a loose way of talking than a distinction. It could never have been unknown to anyone that flesh-forming foods were also heat producers if they chose to think about it. It was simply a rough way of talking.

6514. That was a serious matter. If you put down such rough things in a text-book for schools, children immediately take it as an absolute fact?—That indicates an absence of precision of statement rather than a change in knowledge, does it not? At least it strikes me so.

6515. You think it might not be misleading?—It is misleading, but it is rather, I think, that we have gained in precision of statement than that our knowledge has become more precise. I do not think there has been any change in the scientific attitude towards these things.

6516. I thought there was considerable debate of recent years of what exactly was the function of various foods—carbonaceous foods, fats and albuminous foods—what they did in the body?—Yes, certainly, but there is this broad distinction that proteids are capable of repairing waste, and of building up the body, which the other foods are not, except in so far as the salts are concerned, and that all foods are capable of being burnt to produce so many calories of heat or energy as the case may be.

6517. Generally, you think there is a sufficient basis of scientific knowledge for the construction of workable dietaries?—Absolutely. The only difference in opinion consists simply in how much is necessary. The dietaries have been constructed by seeing what amount and proportions of proteids, fats, and carbo-hydrates are used by individuals on a freely chosen diet. From that has been determined experimentally the amount of these constituents in the diet. It has been largely a matter of experiment.

6518. In this country?—Yes, by Playfair, and also by Atwater.

6519. I thought Dr. Atwater was an American?—Yes, he is an American.

6520. Is he connected with this Bureau of Agriculture which has been conducting experiments lately?—Yes, I believe so.

6521. These experiments are rather of a novel kind, they have not been done before?—The newer methods of determination have not been adopted by Atwater, so far as I know. Atwater's experiments are on the same level as the previous English determinations.

6522. What I was thinking of is a series of experiments in which the men are kept in a cage?—Yes.

6523. And fed on certain foods, and do a certain amount of work, and everything is measured?—That is not the way in which Dr. Atwater's results have been arrived

Dr. Niven.

at. I do not think the knowledge arrived at in that way is of sufficient amount to give us much guidance at present.

6524. You spoke of a series of dietaries which you have with you: have you constructed those yourself?—Yes.

6525. Could you put them in for the information of the Committee?—Yes. (*The document was handed to the Chairman.*) I may say that this composition of foods is simply taken from Hutchinson's book, and that the prices are those obtained from inquiry of the various persons in the poorest districts of Manchester, so that the information there practically shows what the people can afford.

6526. You spoke of the importance of girls at school being put through a prolonged compulsory course of domestic economy and hygiene: that, of course, is an admirable course which you have here. At what age do you propose they should enter upon this work?—The education authority of Manchester by a bye-law have fixed the age of fourteen at which children are to leave school, except under certain conditions. If we may take that to be the general age at which they are to leave school, then I should say that the age of between thirteen and fourteen would be the best time at which to teach them in the schools.

6527. Perhaps you will be interested to know that the children in Scotland must remain in school till fourteen and that in the Code of last year we have arranged that girls shall spend that last year, from thirteen to fourteen—provided they have reached a moderate level of general education—in such a course as you propose here?—I was not aware of it.

6528. You would combine that course with a certain amount of literary instruction, to a certain extent, even after thirteen; you would encourage them to read, for instance?—I should not put much stress upon that; I do not think it is of much moment except under guidance. They read trashy stories, and so on.

6529. Those girls have had a complete year of this kind of training, from thirteen to fourteen; they go to shops and factories, and they do not start housekeeping till eighteen, twenty, or twenty-two years of age. Do you not think that the knowledge they acquire at school is likely to have pretty well evaporated in that time?—Not if it has been long and thorough enough, but it will diminish in intensity, and in value, no doubt. I think it is very desirable that continuation classes should be provided for girls who are willing to continue their education.

6530. It is very desirable that this education you speak of in the day schools should be reinforced at a later age by some further instruction of the same kind?—Certainly; and, as a matter of fact, that is done to no slight extent. I do not wish to exaggerate the amount, but continuation classes are amply provided in Manchester, and only limited by the extent to which young people are willing to take advantage of them.

6531. Do married women, for example, attend domestic economy and housekeeping classes?—I have not the figures. I know the attendance, although not small, is not so large as might be wished.

Mr. Fosbroke.

Mr. G. H. Fosbroke, D.P.H., Cantab, called; and Examined.

6532. (*Chairman.*) You have been Medical Officer of Health to the Worcestershire County Council for the past fourteen years, and also Medical Officer of Health of a number of small urban and rural districts in Worcestershire for the past thirty-one years?—Yes.

6533. You have very considerable knowledge of the conditions of rural life?—Yes. I have devoted my whole time to sanitary work.

6534. Entirely in Worcestershire?—In the Midlands, Worcester, Warwick, and Gloucester.

6535. Have you formed any general opinion upon the question with which we are commissioned to deal, as to whether there is physical deterioration and, if so, whether it is growing in intensity?—I have confined my evidence entirely to my experience of the rural districts, I think, decidedly.

6536. You think there are evidences of physical degeneration?—Undoubtedly.

6537. Generally, or limited to a particular class?—I think it is more particularly limited to the agricultural labourer, and as I have said in my proof, to the agricultural labourer of what I call the clay districts as distinguished from the market gardening centres where such deterioration in my experience does not exist.

6538. Do you mean the conditions of occupation or climate, or what are better?—The facilities are greater for obtaining better wages in market gardening centres, and, consequently, the more robust types do not leave the districts in the way they do in the others.

6539. Whereas, in the other parts they get depleted by the exodus of the best types into the town?—Yes. To give you a practical proof of that, I may say that thirty years ago, it was the commonest thing for a labourer to carry two and a quarter cwt. of corn up a ladder; now you very seldom see it. Farmers tell me the same.

6540. They are an enfeebled lot?—Yes, they are.

6541. I suppose there are conditions affecting them which are improved: They are probably better housed, and get better wages, and, therefore, better food?—Undoubtedly, they are better housed and better fed.

6542. And yet that does not counteract this tendency to weakness which you describe?—No, such is my experience.

6543. Have you any other facts to illustrate your belief besides this question of the power of men to carry heavy weights?—Generally the farmers say that the men are of a weaker type altogether. The more robust men go into the towns.

6544. Has your population been diminishing?—Yes, in the rural districts except in the market gardening centres.

6545. Do the vital statistics bear out this presumption.—In the rural districts the vital statistics are very meagre. They are generally confined to birth rates and death rates, and that kind of thing. You do not get the details which you do in the urban populations, but we find decreasing birth rates and death rates.

6546. The population is diminishing?—Yes.

6547. Is that remarkably so in Worcestershire?—No, it varies very much in different parts. In some districts, of course, it is increasing enormously, and in rural Worcestershire in the market gardening centres it has increased—at Evesham.

6548. Are there any specific diseases on the increase in the county?—I do not think so.

6549. Specific diseases which are menacing to human life and vitality?—I think not. I have said so in my proof.

6550. You think there is less drunkenness?—I do amongst the agricultural labourers.

6551. This falling off in physique is solely due, in your opinion, to the fact that the strongest types move out of the country and leave the poorer types to propagate the species?—That is my view, yes.

6552. You do not know of any records of an anthropometrical character which bear out your opinion, which have been taken in the county?—I do not, unfortunately. There is a point on the other side. I was talking some time ago to an experienced medical officer of a post office at Worcester, which is a large centre. He was quite under the impression that there was deterioration, but on going into the whole of his records we found that that was not so, when we took the average heights and weights and chest measurements, and so on.

6553. Do you not think the impressions you have of a sinister kind might be corrected by exact observation?—I think it is desirable to have exact observation, but I do not see how it is practicable to obtain it.

6554. You would agree that anthropometric records are the supreme criteria of physical deterioration or the reverse?—Yes, I say in my proof that I can only give you my impressions.

6555. Do the police facts, such as you have been able to elicit, confirm what you say?—The policemen seem to keep up their standard; but it is a popular force with the agricultural labourer.

Mr. Fosbroke.

6556. You speak in your *précis* of districts where heavy clay predominates?—Yes.

6557. Do the labourers get flat-footed?—Not specially, but it is not uncommon.

6558. It is very common?—Yes, lias clay is very common in Worcestershire.

6559. Would you say what you believe to be the general causes of deterioration?—Yes. In my opinion such deterioration is in a great measure due to lack of regular employment, good wages and good houses, which induce the most robust and vigorous young labourers either to seek employments in towns or to emigrate; furthermore, the opportunities for evening amusements are much greater in towns. That I find is getting a material point with the labourer.

6560. Amusement?—Yes, he seeks amusement.

6561. But in many country districts there are facilities for amusements even in villages to a much larger extent than there used to be?—Yes, not to the extent there ought to be. Greater facilities for reading-rooms, cricket and football, are desirable.

6562. You agree with Lord Salisbury that a village circus would be more use than a parish council?—I am afraid I do not see much for a Parish Council to do.

6563. In market gardening districts you think there are counteracting tendencies to the deterioration which you meet with elsewhere?—Yes; I do. A man finds he has every opportunity of progressing in life—that he is likely to improve his position by staying there.

6564. Do you think there is any way of retarding the tendency of the agricultural labourer to go into the towns besides providing him with amusement?—Of course, that is quite a minor point; I feel very strongly that the provision of the land is what they require.

6565. Have you much experience?—Yes; in the first place I should call your attention to what has been done in Worcestershire—probably you may know of the small holdings there. The County Council purchased 147 acres of land and resold it to the men; they not only resold it, but offered them facilities for building houses, which have been attended with great success.

6566. Did they advance the money?—They advanced four-fifths.

6567. What size were the holdings?—They vary from two to about eight acres. That is the experience under this Act. But the great point, which is so to speak the main work there, is the liberal interpretation which the County Council made of the Act and gave them loans for building houses.

6568. Have they made any other experiments, or is this the only one?—That is the only complete experience so far as the County Council are concerned, although I believe extension is contemplated; but in the district in which I have lived the greater part of my life, and in which I own land, thirty years ago poverty was common in the winter; it was systematic as the winter came round. These men agitated for land and I opposed it in those days, but they got it.

6569. In the form of allotments?—Yes. It is very good land. But of course all land is not suitable for such a purpose. They got the land, and the result has been that now in the winter they never get pauperised, except quite the old people. They used to come round in organised gangs begging, but now such a thing is unheard of.

6570. You really think that that tends to arrest the exodus into the towns?—I am firmly convinced it is so.

6571. They are interested in the cultivation of the soil?—I could point to many men who were agricultural labourers at one time, who now own two or three horses and carts and are prosperous.

6572. And quite content with country life?—Yes, in that parish these men have started a Co-operative Society and have a number of stores about the district, and this society provides money to build houses on loan, and they have already built twenty.

6573. (*Mr. Lindsell.*) What parish is that?—Bidford.

6574. Is that near Evesham?—Yes, but it is just over the Worcestershire border in Warwickshire; these houses have been properly built from the savings of the agricultural labourer and the Society is entirely administered by them.

6575. (*Chairman.*) Are the County Council undertaking similar enterprises to this which has been so successful?—They had under consideration the question of adopting it in another part of the county, but it was found it was too remote and the population was too small. It was such a decaying locality that it had really gone too far for them to do anything.

6576. I suppose your evidence is that more might be done in that direction, not only in Worcestershire, but elsewhere?—I think so; I think much more use might be made of the Act than is made.

6577. Now with regard to the housing in the rural districts I suppose the cottages of considerable estates are very much improved are they not?—On some estates very much.

6578. Generally so?—There are some where it is not so.

6579. Is there any difficulty in getting cottages in Worcestershire?—In some places they are scarce.

6580. Are the rents extravagant?—No.

6581. What about the cottages belonging to small owners?—Many of the older cottages are in a bad state—they are very often mortgaged.

6582. Does the rural sanitary authority exercise its powers to bring them up to some minimum standard of soundness and proper sanitary condition?—Yes, a good deal has been done in that way.

6583. You could not say there was any marked neglect?—No, I would not like to say that, but the difficulty is this that many houses which are really unfit for habitation, if you were to try to bring them up to a proper standard you would close them and there would be nothing else to take their place.

6584. That is your difficulty?—Yes.

6585. Would you attempt to bring pressure on the landlord?—Yes, I could name one district where a whole series of houses have been closed because the landlord would not do anything, and that is part of a large estate.

6586. (*Colonel Onslow.*) The landlords would not do anything?—No, the houses were not worth it.

6587. (*Chairman.*) How have they been provided for?—They wandered away. It is in that district that the County Council considered the advisability of applying the same method as in the other case.

6588. Is there a scarcity of labour for the ordinary purposes of agriculture?—In some instances; but I believe not to the extent there was a year or two back. Agricultural methods have changed.

6589. I should have thought landlords would have been wise enough to have kept the labourers there?—I think many cannot afford to do so; how the home of the rural labourer can be generally improved I candidly admit I do not know, as it is quite impossible to provide cottages at rents which the men can pay, if the investments involved are to be remunerative. I should like to mention that I do not think that deterioration is confined to males alone; I have noticed it is extremely common among the females, the anæmic domestic servant is extremely common.

6590. Is that due to bad diet?—I can hardly explain why it is.

6591. You will admit they are better fed probably because they have better wages?—Yes, but an anæmic servant is more than common.

6592. Is that due to the vice of tea-drinking?—They do drink tea, but I find domestic servants are fond of vinegar and pickles.

6593. Vinegar is very anæmic in its tendencies is it not?—In my opinion, yes.

6594. Do you think that any very great ignorance prevails among the rural classes as to the best forms of diet?—Oh yes, extreme ignorance.

6595. Do you think as much is done to remedy that ignorance in the schools for the sake of the young generation as might be?—I hold very strongly that teaching of elementary hygiene is of vital importance.

6596. And household management in its widest sense?—Yes, cookery for instance.

6597. Everything to make a girl a good housewife?—Yes.

Mr. Fosbroke.

6598. I observe you hold that among the conditions connected with elementary education that are unfavourable to health is sending children so young to school?—That is my view.

6599. Will you tell us what you have to say about that, because I think that is very important?—I think no child under five years of age in a rural district—as quite distinct from an urban district—should be sent to school.

6600. At present they are not compelled to go to school, but you would not allow them to do so?—I would not allow them.

6601. That would relax the pressure of building in rural districts which would be a good thing?—That is the suggestion I have made to the Chairman of our County Council. Why enlarge your buildings for little children who, in my opinion, would be better at home.

6602. And especially in the rural districts it is not like a town where infant classes are large and special attention can be paid to them, and where there are exceptional conditions favourable to their attendance; in the country districts the children between three and five are fewer in number and probably very much neglected, but they do go to school?—Yes.

6603. (*Mr. Lindsell.*) Do you find they go much in rural districts under the age of five?—Yes, the mothers are only too glad to get them out of the way in order that they may do work.

6604. That is not only in towns, but in the rural districts?—Yes.

6605. They cannot send them any distance?—They send them as much as two miles and it is surprising how these little children, whether it is rain or fine, come dragging along at the same pace.

6606. (*Chairman.*) You think that they would be much better occupied running about in the open air?—Yes, running wild; and I have duly considered the argument against such a proposal to the effect that infants would be less orderly if they did not go to school before five years of age; that is my opinion, and I have taken the advice of a large number of country practitioners in the last few months.

6607. You think their brains would not suffer?—I do not think so.

6608. It would also have the direct effect of keeping mothers at home and compelling them to attend to their domestic duties?—Yes. In teaching of children, particular attention should be given to feeding and cooking. It is such a common practice for the elder brothers and sisters to look after the little ones. The only thing that surprises me is that so many survive.

6609. That is one of the reasons why you would pay special attention to cookery and household management in regard to elder girls, because they pass into their homes almost at once and apply what they have learned?—Yes, I strongly hold that, but it should be suitable.

6610. Do you think the present curriculum formulated by the Board of Education does not make it as practical as it should be?—I think there is not sufficient discrimination for the rural districts.

6611. You think it is above the heads of the children?—Often.

6612. The appliances used and the methods followed are too foreign to their own experience, and are therefore not of much value?—That is so, and they are being trained to a sphere in life which does not keep them in the country.

6613. The conditions under which they are taught cookery in the school should approximate as near as possible to the conditions which obtain in their own houses?—Yes, the Worcestershire County Council have five whole-time health missioners working with the greatest success amongst the poor.

6614. What are their duties?—They go from house to house and school the parents in regard to feeding, clothing, and the rearing of children.

6615-16. Like the Manchester Health Society?—Yes. We have had them in Worcestershire entirely paid by the county council for more than six years—lady health missioners we call them.

6617. Do they pay special attention to those households where there are very young children?—Yes, in fact, in one instance, as probably Dr. Tatham may remember, we have returns of births, but we could only succeed in getting these in one district; but we do hear of the births in many other ways. Their instructions are really to get hold of the mother as soon as she begins to have children.

6618. And to explain to her the principles of better management, and proper nutrition of a child of that age and all the rest of it?—Yes, we find great success, more particularly amongst young mothers.

6619. They respond?—Yes, and even the ratepayers in the district do not object to the cost involved.

6620. They see the utility of it?—Yes, and they do not begrudge the money. I have never heard anyone begrudge it.

6621. Is the staff sufficient for the purposes of the county?—No, it is insufficient for all parts. We started with one, and we have now got five; they are paid 35s. and £2 a week.

6622. Do the children of the poor suffer in Worcestershire, suffer a difficulty in getting milk?—Yes; not so much in the market gardening centres, because men keep cows, but in the typical agricultural village you very often could not get milk.

6623. What substitute is there; do the mothers suckle their children for the first five or six months?—Yes, and some of them much longer.

6624. How do children get fed if the mothers do not suckle them?—The most general answer if you ask them is: "They lives as we does."

6625. That must be very destructive to them?—Yes, very.

6626-7. Is infant mortality high in Worcestershire?—In some parts very high, but in the rural districts, no. I have all the details.

6628. Is it higher than the average of England and Wales?—Some parts are very high. In some districts it amounts to nearly 200 per thousand—180. Oldbury and Redditch are bad, and the Black Country. And it is in those districts that we have the health missioners at work.

6629. I should like you to put in those figures?—I will let you have the report which I made seven years ago, which led up to the whole question, which strongly recommended health missioners. I have the figures here, but they are all given in the report.

6630. If you will let us have the report we shall be glad?—I will do so. Before we leave the question of health missioners I should like to say that, when they first began their work, they had to use the greatest possible tact, but now we find the mothers send for them.

6631. They value their advice?—Apparently, yes.

6632. Do they give advice upon children's teeth, among other things?—It is the younger children—they see them at the teething age.

6633. How is attention called to children's teeth? I suppose school teachers do not pay much attention to it?—That is a point I mentioned in my evidence. I think children's teeth are very much neglected in after life.

6634. Do you think some system of medical inspection of schools would be a useful thing?—I do.

6635. Where children are defective in any particular, the school teacher's duty should be to call the attention of some medical officer to the circumstances, with a view to its being reported to the parents?—We have an open-air sanatorium for the poorer classes in Worcestershire, and we found it was absolutely necessary to appoint a dentist, as one of the first things, to make examinations. The patients we see there are the labouring class.

6636. Do you think that is a defect which is growing in intensity?—Yes.

6637. To what do you attribute that—diet?—Partly, I think.

6638. And want of cleanliness?—Yes. I think the tooth brush is unknown in a labourer's house.

6639. (*Mr. Struthers.*) But it never was known?—No.

6640. Why should it be worse now?—I do not say it is.

6641. (*Chairman.*) You can use other things besides a tooth brush—the stick of a lucifer match is said to be just

as good as a tooth brush ?—I do not think they do use anything.

6642. Is juvenile smoking common ?—It is extremely common in the country districts. I have mentioned also that I deprecate cigarette smoking very strongly.

6643. (*Colonel Onslow.*) It is mostly cigarettes, I suppose ?—Yes.

6644. (*Chairman.*) You would go so far as to prohibit the sale of cigarettes to boys under a certain age ?—Under sixteen.

6645. Do you believe any ill effects follow from cigarettes beng sold in sweet shops, which children frequent ?—I think the habit is so modern that one has not realised what the ill-effects are.

6646. It is said that many sweet-shops hold a licence for selling cigarettes, and the children go there to buy sweets, and buy cigarettes instead, very often ?—I heard of an instance only yesterday where that was done.

6647. We are told that sweets are just as deleterious as cigarettes very often ?—Yes.

6648. Have you any knowledge of that ? Something was written to the paper about it a few days ago, that in many of these sweet shops nine-tenths of the sweets are not made of sugar, but of glucose or other destructive compounds ?—I have no knowledge of that. There is another question which I have suggested, namely, that I think there should be much more physical training in the schools, such as drill, hockey, skipping, and other physical exercises.

6649. I believe there is an effort being made to systematise that, but when children leave school is anything done for young lads to keep them physically up to the mark, or is it supposed that their ordinary avocations will do that ?—In some of the urban centres you get the lads to do it, in Worcester for instance. I believe the "Lads Brigade" is very popular there, and that they are doing good work.

6650. These brigades rest upon the basis of physical instruction, do they not ?—Yes; but in the rural districts there is nothing of the kind. For that reason I think there should be every facility for football clubs and cricket clubs, and so on, even in the country districts.

6651. It would not be difficult in the country districts to provide that ?—It is not, but the difficulty is that the boys cannot always get their things together.

6652. I should have thought that the richer members of the community would be always willing to help them to that extent ?—Football is much more common than it used to be.

6653. It is much less expensive of course ?—Not necessarily. But it is more common than it used to be, and I think it should be developed. Will you allow me to add that I think practical agricultural subjects should be taught in schools, such, for instance, as pruning for the elder boys.

6654. The processes of horticulture and also of agriculture ?—Yes.

6655. Do you think that would interest boys in rural life ?—Yes. When a young agricultural labourer goes into the fields he knows nothing about pruning, or grafting, or pig keeping, poultry keeping, thatching, &c., and often never tries to learn.

6656. All matters of that sort would help to arrest the influx of people into the towns ?—Yes, I think it would.

6657. (*Colonel Onslow.*) It would be more useful than some of the articles in the code now ?—Yes. I do not wish to say anything against education, but I think it should be made useful and practical, as well as suitable for local requirements.

6658. Whom would you call upon to instruct them, the ordinary country schoolmaster could not do it ?—I do not see why suitable teachers should not be told off to go into certain districts, say once or twice a week to each school.

6659. (*Chairman.*) Itinerant teachers ?—Yes.

6660. The county council being the authority could supply those ?—Yes.

6661. (*Colonel Onslow.*) There are local demonstrators now who go round ?—Yes.

6662. Is that more for the older people ?—Yes, and even then one finds great ignorance on the part of those for whose benefit such instruction is intended: they are prejudiced.

6663. You mention here consumption in the rural districts does not seem to have decreased in the last few years ?—Consumption in Worcestershire is low, and for thirty years it decreased a great deal, practically on parallel lines with the rest of the country. Worcestershire started to decrease at the point where other counties have now got to. But latterly in the rural districts, if you take ten years, I have not found the rates to have changed very much. I have the figures if you wish to have them.

6664. The deterioration you find in the country people is really due to the best men going off into the towns ?—That is my opinion.

6665. For instance, if three strong men go away, and leave three physically weak men, naturally that must affect the whole of the country. Does that affect the next generation ?—I think so.

6666. Although a man may be physically not able to lift a sack of corn on his back, he may be otherwise a healthy man ?—He may be.

6667. Why should not he produce healthy children ?—They are not of the same stamp. I enquired of a large London contractor who is making a railway in the district, and he tells me his experience. I have received a letter from him since I came into this room saying that his navvies, especially where drawn from the agricultural labouring class, are nothing like as good as they used to be. I can read you what he says: "This class of man as a whole is very much inferior to-day to what it was twenty-five or less years ago." Then he goes on to say: "Of course, these remarks do not apply to all navvies, as we are glad to say a good number are self-respecting and decent fellows, and not much behind their predecessors, but where this class is recruited from the poorer agricultural labouring class we think our remarks are justified." That is from a large Westminster firm building a railway from Honeybourne.

6668. It is a common experience is it not ? I have heard it said that farmers generally say men are not so strong as they used to be ?—Yes, but is it equally commonly said that "no man is as good as his father" ? One often hears that.

6669. Do young housewives neglect their house-duty in your part of the country ?—Many of them do, because there are facilities for their working out of doors.

6670. Apart from working out of doors ?—They seem to be ignorant. Unless they happen to have been cooks in domestic service they do not know anything about cooking.

6671. Do not the old mothers instruct them ?—They are equally or rather more ignorant.

6672. Very much is put down to education nowadays, as upsetting the young women—they will not attend to home duties because they want to go into shops or something like that, but that is not the whole fact ?—No. That is the tendency.

6673. That cannot be the whole fact if the old women are as bad as the young ones ?—The tendency of the young women of course is to go either to the factory or to the shop from the country districts. With regard to domestic servants there is the greatest difficulty in getting them. You do not often now see the old-fashioned, robust, red-faced dairy servant.

6674. That is so everywhere, is it not ?—Yes.

6675. One heard of the old women of one's younger days—you probably can go back a greater number of years than I—that they were better housewives than now, and kept their house clean ?—Yes, I was thinking more particularly of cooking.

6676. Why should they not instruct their daughters in the same way ?—All their early days the daughters are at school.

6677. You think it is partly due to education ?—Yes, I think so.

Mr. Fosbroke.

6678. (*Colonel Fox.*) You say that good wages and good houses and amusements in the towns attract the rural population there?—Yes.

6679–80. Do you not think that education has really been the primary cause of all this, suiting them, as it does, to be clerks; they get employment more readily and better wages in the town?—Yes, and not only that, but there is often lack of full-time employment for the labourer in many farm districts; if they stayed there there would not be complete occupation for them.

6681. You say that the aim of the teachers should be to have the healthiest instead of the most forward children and that would be a move towards physical improvement; do you think that if they could reduce the amount of mental education and have daily physical training a better child would be produced both mentally and physically?—I do think so.

6682. Their brains would be more active and consequently they could concentrate their thoughts on their work better than if you give them so many subjects which tends to prevent concentration?—Unquestionably that is so.

6683. I think you deal with the question of cookery in schools?—Yes.

6684. Have you ever considered whether it would be better to keep girls later in the schools, up to the age of fifteen, in order that they may be better prepared for household duties when they are married?—Possibly.

6685. To keep the girls longer at school so that they might be taught the duties of a housewife as regards keeping house, diet, and also how to cook all simple food: are you in favour of that?—I do not know that I am in favour of their being kept at school very much longer, but I think they might have evening continuation classes.

6686. (*Colonel Onslow.*) That would be difficult in country districts, would it not?—I do not think so. The old night school was very well attended.

6687. (*Dr. Tatham.*) With regard to domestic servants you speak in your evidence of their being affected very frequently with anæmia of a certain type?—Yes.

6688. Do you notice that tuberculosis, phthisis, is very prevalent amongst them and increasingly so?—I have no evidence to that effect.

6689. Is it your general impression?—I cannot say.

6690. It is difficult to get facts?—Very difficult. Rural statistics as you know are very difficult to obtain.

6691. We have had evidence here from a lady evidently very well informed who told us that she thought that the young housewives at the present day of the labouring classes have a tendency to become very lazy in their housewifely duties—they very much prefer to get off to the towns, if they are near a town at all, to the theatre and music hall, and that their conduct at home is not what the conduct of their mothers was some thirty years ago: is that in accordance with your experience?—No, the facilities for getting to places of amusement are not great in Worcestershire.

6692. You think the temptation makes the thief?—I think so.

6693. You think it would be a libel on the young wives of the working classes of the present day to say that they were more lazy than their mothers were?—I do not know about that. I think they might be much more industrious than many of them are.

6694. They are less inclined to work you think?—Yes, I think they are unless they can earn something in the fields as many of them do.

6695. There is a craze for getting money somehow, to spend it on dress I suppose?—Yes.

6696. (*Chairman.*) Is there much employment of women in Worcestershire?—Yes.

6697. Young women?—Yes, women of all ages.

6698. (*Mr. Struthers.*) What wages do they get per day?—They are often paid piece work. Some of them will get as much as 2s. or 2s. 6d. a day or more. It entirely depends on the kind of fruit they are picking and the abundance of the crop.

6699. (*Dr. Tatham.*) You expressed the opinion just now that young children residing in rural districts ought not to be sent to school until they are at least five years of age?—Yes.

6700. Do you know whether or not it is frequently the case that young children are sent to school half starved?—I do not think that there is very much of that in the rural districts.

6701. Not so much in the rural districts?—I do not think so. I have asked many schoolmasters, and though one understands it is very common in some urban districts, I think it does not obtain to a very large extent in rural districts—not in rural Worcestershire.

6702. (*Mr. Lindsell.*) You were speaking about milk. I suppose milk in the rural districts is scarce and hard to obtain?—In some places.

6703. In the market gardening districts, I suppose many of them have a cow?—If they can get grass land, a few of them have.

6704. And you think milk is fairly supplied there?—I think it is better there.

6705. Do you know of any establishment in Worcestershire where they endeavour to supply sterilised milk; do you know anything of Far Forest?—I have heard of it. I believe it is managed by a clergyman with great success. I only heard of it just about a fortnight ago, and I have not been able to go there. He is a gentleman who is newly come into the district but I hear him very highly spoken of.

6706. I wanted to hear of its success and so on, but you have not seen it?—No. The clerk of the peace was over there a few days ago and he tells me it is a great success.

6707. Is it mainly sent into the towns?—I believe it is mainly sent to Kidderminster and Dudley.

6708. With regard to these points about the schools, are the county council starting cookery schools and teaching practical useful cookery at all in the rural districts?—I am afraid at present our Worcestershire arrangements have not got into thorough organisation.

6709. But there is reason to hope that they will take that line?—It was undertaken under the Technical Education Committee in many instances.

6710. Will it not be carried on under the present system?—I think at present things are not quite ship shape.

6711. And the same with regard to cottage gardening. There are powers to do all that sort of thing?—Yes.

6712. But you would like to see it continued, not merely taught in the elementary schools but carried on later in the evening continuation schools?—I certainly should.

6713. Have you considered whether compulsory attendance at evening schools is feasible in the rural districts?—I am afraid not in the present feeling. I think it would be bitterly opposed just now.

6714. You cannot make a horse drink unless you take him to the water, and if nobody attends them it is not of much use?—I think it would be if suitable teachers were provided. In many places I understand where these cookery schools have not been a success the reason is that they have too much of the lady to lecture and that the cookery has been above the heads of the agricultural labourer.

6715. That of course is for the persons who establish it to consider?—Yes, without doubt.

6716. There is a very considerable difference I understand between market garden districts and the purely agricultural?—That is my view.

6717. Unfortunately that style of cultivation is not possible except on certain favourable land ?—No; I have especially mentioned that in my proof; it is impracticable.

6718. Evesham is the great market garden centre ?—Right up the valley of the Avon. In the poorer districts much more could be done.

6719. Worcestershire is a great fruit-growing county ?—Yes.

6720. (*Chairman.*) It is a cider county, is it not ?—Yes.

6721. (*Mr. Lindsell.*) I fancy most of the cottagers in a good year in the villages can pay their rent and more out of the damsons and things in their own garden ?—Many of them do. May I be allowed to remark on one question which I heard you raise with Dr. Niven with regard to the tenure of office of sanitary inspectors ? Having had such a large experience of rural inspectors, may I suggest that if you are to get good sanitary administration and the men to do their duty fearlessly and well they must not be open to re-election every year or two; they must have security of tenure. As it is, the Inspectors now are appointed for short terms, one, two, and three years, five is the most except in two cases that I know of. The result is that they are very much under the thumb of their employers.

6722. (*Colonel Onslow.*) You find in country districts that very often the small householder is the worst landlord ?—Very often.

6723. The very small householder, the man who has very likely risen from a small shopkeeper and has amassed a little money, grinds his tenants ?—Yes, and also he tries to get on the district council.

6724. And the unfortunate sanitary inspector is under his thumb ?—To some extent. I think that security of tenure is of vital importance. Might I also allude to one other matter as regards bye-laws for building in rural districts ?

6725 (*Chairman.*) Are they not stringent enough ?—On the contrary. In Worcestershire the County Council have been trying to induce the rural authorities to adopt building bye-laws, but not with much success, because the bye-laws of the Local Government Board were at one time on the same lines for urban and rural districts. But now since the Local Government Board have issued a model series for the rural districts, which are admirable in every way, there is a greater desire on the part of the Local Authorities to put them in force.

Mr. Fosbroke.

6726. But it is optional whether they do so or not ?—Yes. I think it should not be optional.

6727. You think it should be compulsory as in towns ?—Yes, provided they are suitable.

6728-9. You admit the model ones now are suitable ?—Yes, the rural series.

6730. The enforcement should be binding upon every rural authority ?—Yes, I think so.

6731. With regard to the exercise of their duties by rural authorities do they take the steps they might do to see that the sources of milk supply are uncontaminated ?—That is a point which the Sanitary Committee of the County Council have been urging upon the District Councils, and there again since the Local Government Board have issued their bye-laws for rural districts as distinct from urban districts for dairies there is much more inclination to carry them out.

6732. Are they optional with them ?—Entirely optional, but the majority in Worcestershire have now adopted them.

6733. And given effect to them ?—Yes. I believe they do; though of course many of the dairies are not what they ought to be.

6734. Does the milk, or most of it, go into the towns ?—Yes.

6735. Is it within your knowledge that the sanitary authority in the towns make any inquiry as to whether the milk supply which they receive from the rural districts is protected by all the powers with which the rural sanitary authorities are invested for the purpose ?—I have never heard of a single instance where they have done it.

6736. Where they have made the inquiry ?—No.

6737. A great deal goes to Birmingham, I suppose ?—Yes, and even to London.

6738. And you do not believe any question is ever asked ?—Not to my knowledge.

6739. You would probably have heard of it if there were ?—I think so.

Dr. Mackenzie.

THIRTEENTH DAY.

Monday, 29th February, 1904.

PRESENT.

Mr. ALMERIC W. FITZ ROY (*in the Chair.*)

Colonel G. M. FOX.	Colonel GEORGE T. ONSLOW.
Mr. J. G. LEGGE.	Mr. JOHN STRUTHERS.
Mr. H. M. LINDSELL.	Dr J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary*).

Dr. W. LESLIE MACKENZIE, M.A., M.D., M.R.C.P.E., called; and Examined.

6740. (*Dr. Tatham.*) You are Medical Inspector to the Local Government Board for Scotland?—Yes, I am.

6741. And you have had experience which enables you to give us some information with regard to the matter under discussion?—Yes.

6742. (*Mr. Struthers.*) You start the evidence which you propose to give us by drawing a distinction between inheritable characters and environmental modifications of inherited characters. Would you just say a word or two in explanation of what you mean?—Taking the human being, you have him as he is born and as he is modified by his environment. We have to draw a distinction between the characters that can be transmitted to posterity, and others that are not transmitted to posterity. The inheritable characters, as I call them, are those that the human being would bring with him into the world at the moment of conception, and would develope, given a certain environment, in a particular direction. He will become a human being, and not a mere animal, and will have all the specific characters of the human being. But on the other hand, from the moment of conception, he has his inheritable life, and the environment produces certain modifications. These latest are not transmissible to the offspring. I make a distinction between those characters that are present n the germ at the moment of conception, which will i nanifest themselves in some degree whatever be the environment, and those characters that are imposed upon that individual by his life history.

6743. Would you say that it was an accepted doctrine that some characters are transmissible and others are not?—This is a disputed point; but the preponderance of authorities favour non-inheritance. But the acquisitions must be strictly defined within the lines I have indicated. You have congenital modifications, of course, which are not inheritable. They are imposed upon the organism.

6744. But those modifications imposed upon the ovum would not affect the next generation?—No.

6745. You do not think that there is any stage at which the environment, so to speak, modifies in any respect the inheritable characters?—One would not say that. The environment would affect the nutrition of the ovum and therefore impair its vigour, with the result that the next generation might suffer in vigour, and in that respect show arrested development; and it is quite conceivable that on account of the defects of nutrition you might have organs interfered with, so that, as the result of defective nutrition, you might have the next generation suffering.

6746. You do not agree with some people who have given us evidence that the character of the offspring does not depend in any degree upon the nutrition of the mother during the period of child-bearing—that is to say, that provided there is nothing abnormal, everybody has, so to speak, a fair start, quite irrespective of the condition of the mother, and that the average child is born healthy?—No. I could not accept that position, because I should look upon the mother as the environment of the growing ovum, and her bad nutrition will certainly interfere with the ovum. There can be no doubt whatever upon that point.

6747. It comes to this that you do not regard environment as beginning with birth, but you take a period a good deal before the birth of the child?—Yes; not from the moment of conception, but even before the moment of conception. We take that as beginning the life of a new individual.

6748. You lay considerable stress on the health of the individual child, that it greatly depends upon the state of health of the mother and the nutrition of the mother during child-bearing?—I believe so, undoubtedly.

6749. If the mother suffers from insufficient food or from exhaustion or over-work, or disease, the result is that disease is shown in the child?—That is my opinion.

6750. Then one of the two important things, the inheritable, and the environment modifications, you regard the latter as being the branch which specially requires our attention from the health point of view?—That is so.

6751. As following upon what you have said, you would, I suppose, say that we ought to direct attention to securing the proper condition of the mother?—Entirely, that is the first problem.

6752. And precautions should be taken that she should not suffer from over-work during the period of child-bearing?—Yes; before and after child-bearing.

6753. How long before, do you say, she should be prohibited from work?—That is a matter for empirical examination. In Switzerland, I believe, it is six weeks before confinement, during which they give rest and ease and I forget how many weeks after confinement.

6754. Is there any district in Scotland of which you have knowledge, where married women, during the child-bearing period are employed in work largely?—Yes. Practically I know of no place in Scotland where any special rule is made giving them a remission of labour before confinement, unless in individual works, but I do not know any of those.

6755. There is no law against married women working during child-bearing in any factory in Scotland?—I should not like to say just beforehand, without having the Act before me, because certain recent modifications have been made.

6756. Could you say whether there is any rule about married women working in a factory after child-birth?—I could not speak with any certainty.

6757. As to the extent of the labour of married women, have you any knowledge as to how far it prevails in Scotland?—In the statistical sense, I have very little information; but in Dundee, Edinburgh, Glasgow, and everywhere I go, I find in factories certainly that the predominant labour is that of females.

6758. But are they married females, or only unmarried?—They are largely married as well as unmarried.

6759. Would you say that a very large proportion are married females?—I think so, but I cannot give any figures. In Dundee, from Dr. Templeman I learn that the extent is very considerable in the factories; I have been given to understand that it prevails to a large extent

in Dundee. I do not know whether it prevails in other towns, but that there is a considerable number I am satisfied.

6760. Do you know Paisley ?—Not well.

6761. There is a large amount of female labour there, but I have understood that it is of the unmarried women ?—I do not know.

6762. But in Dundee you think that there is a large proportion of married women engaged in it ?—Yes. Would you allow me to say that this doctrine of the caring for the mother would not necessarily begin with the confinement of the married women, but there are the conditions preceding marriage, which are very important also.

6763. But we must make some starting point you know ?—You are thinking of the immediate injury to the offspring, are you not ?

6764. Yes. There has been some information obtained of recent years as to the effect of nutrition on the size and weight of the child, has there not ?—Yes.

6765. Could you give us any particulars of that ?—I do not know whether the Committee has had it before them, but if not, this research of Dr. Noël Paton on the influence of diet in pregnancy on weight of offspring would be useful.

6766. Would you kindly put that in ?—Yes.

6766A. Would you give us a word or two as to the effect of it ?—The investigations started from an impression that Dr. Noël Paton had in investigating the food of Edinburgh families of the poorer class, and the effects on the child and the mother. He concluded that the mother in two periods of life was under-nourished in early married life. For various reasons life was made very difficult. As the children grew up, the wages were less. Consequently the later children also suffered. That led him to investigate further. He found a continental investigator had gone upon the supposition that by altering the diet of the mother he was able to reduce the size of the child before birth, for example children born of rickety and deformed parents would otherwise have been still-born. He made an experiment with guinea pigs. The number of offspring of well-fed guinea pigs was not altered, but the weights of the offspring were distinctly altered. That of the under-fed mother was about 30 per cent. less than the offspring of the well-fed mother. The experiment is only a beginning, of course, and one cannot draw final conclusions from it, but it seems extensive enough to indicate one thing, that the offspring get fed from the excess of the nutrition of the mother, and are not fed at the sacrifice of the mother; by which I mean that if a mother is over-fed, then the embryo is well-fed, but if the mother is under-fed the embryo also suffers in greater proportion than the mother herself, that is to say, the first part to die or to suffer is the embryo. A popular impression is that it is the contrary. I am giving this on the authority of Dr. Noël Paton's research.

6767. But the effect of this experiment that you tell us of is in this direction at all events—that if there is not sufficient nutrition for feeding the mother and child the mother must have it, so to speak, that the tissues of the mother take it over, and that there is little left over for the child ?—That is clearly Dr. Paton's conclusion.

6768. At what stage is the weight of the offspring taken ?—In this instance, in guinea pigs it is taken at birth.

6769. Do I understand this point that the nutrition of the parent—good feeding or insufficient feeding—had no effect upon the number of offspring ?—The average number is practically the same. In the one Table it is 2·7 in the number of young, and in the other Table it is 2·5, with seven experiments in one lot and four in the other.

6770. Has this experiment been continued for a sufficient number of generations to show whether the continuance of over-feeding, for example, may not reduce the number of offspring ?—I do not know whether that is so.

6771. There is a very common opinion that the well to do classes (I am speaking of human beings now) who presumably are better nourished, have a smaller number of offspring on the average ?—Yes,

6772. But so far as these experiments go what do they prove ?—Well, physiologically that ought not to be the case. But there are so many other circumstances intervening. Perhaps you might just let me read one sentence from Dr. Noel Paton's paper: "To the physiologist, the point of chief interest seems to be the demonstration of the limitations in the extent to which the tissues of the mother can be utilised for the construction of the embryo. The nourishment of the maternal tissues seems to take precedence over the nutrition of the fœtus. Were this not the case—had the embryo the prior claim to nourishment—we should find that in badly nourished mothers each gramme would produce a greater proportionate weight of young than in well nourished mothers. This is exactly the reverse of what occurs. The mother thus appears to pass on the surplus nourishment to the fœtus, and the better the nutrition of the maternal tissues, the greater is the growth of the young in *in utero*." That is indirectly confirmed by Dr. Paton's previous food investigation. *Dr. Mackenzie.*

6773. Could you give us some illustrations of inherited deteriorations ?—A simple way perhaps would be to take the name of diseases in the official list, and name one or two of the classes that I should call inheritable—not necessarily inherited—deteriorations. I should say that probably certain tumours, or the capacity to develope certain tumours, are inheritable. That, of course, is hypothetical, because our evidence is very difficult to bring to the point, so that we cannot be dogmatic about it. Then sarcoma, a tumour of the muscles, or forms of cancer, might be inheritable in the sense that certain tissues are likely to develope, without any special regard to the environment.

6774. Have you any other broad classes of disease which you regard as inheritable deteriorations ?—Then possibly certain classes of deformities might be inheritable, but these, so far as recent research goes, the majority regard as the effects of environment. But that I should regard as one of the points where it is impossible to draw any clear lines.

6775. Would you regard insanity as in many respects inheritable ?—In the same sense as one would regard diseases of the nervous system, or the inheritance of tissues that come easily off.

6776. But supposing the person that has put off those tissues is put in favourable circumstances of living, do you think there would be that development of the special taint ?—I think there is a possibility. But then again the line is not so clearly defined that you can speak dogmatically, nor could you speak of all forms of insanity in the same way.

6777. What do you say as to drunkenness—alcoholism, would you regard that as inheritable ?—As such, that is to say, as the specific form of drunkenness called alcoholism, I should not say that it is directly inheritable, but I should say that certain unstable nervous systems are directly affected more than others, and that probably the alcoholism of the mother after and preceding conception might have an effect upon the nutrition, and possibly might poison the ovum to the extent of interfering with its development. But that is really the infection of the ovum in its environment. As a contrast to the inheritable characters, it is very striking when you go through the whole list of diseases to find the tremendous proportion that are quite definitely due to environment; for example, among the general diseases in the official list there are thirty-nine specific infectious diseases, and these are explicitly due to influences affecting the organism.

6778. So large a proportion as that ?—It is not a percentage—it is only thirty-nine out of eighty. Another general disease—Hæmophilia—that is a case, so far as our knowledge goes, where the taint is inherited. For example, the specific infections, which are all probably due to minute parasites, and the diseases due to animal parasites, 118 species, affecting the human being, and then vegetable parasites, something like thirty-nine species. Then there are the diseases due to poisons, and so on, and the diseases due to exercise and strain and overwork and under-feeding, and those due to nutrition, such as scurvy or goutiness, rickets, and anæmia and chlorosis, and several others; those are directly referable to conditions of environment.

6779. Is that goutiness attributable to food ?—Well, some are more liable to be affected by the food. Then we

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have diseases of the nervous system, sixty-one named classes, and a considerable number of these are clearly owing to environment.

6780. So that out of the whole list of diseases the greater proportion belong to acquired deteriorations?—Distinctly.

6781. And those are practically the most important from the health point of view?—Yes.

6782. There have been proposals for dealing with the other classes; that is to say, the inherited classes, by segregation of the unfit. You have heard of such proposals, have you not?—I have heard and read of many proposals.

6783. Are many of them in your opinion practical, or worthy of consideration in detail?—Apart from segregation in asylums and Poor Law hospitals and infirmaries and so on, as at present carried on, I find nothing that does not involve issues that are, to my mind, more dangerous than the remedies themselves. The proposal to lock up everybody that is defective is much too short a road to the result. Possibly a good deal could be done, but most of the proposals suggested are to my mind much too sweeping to be practicable.

6784. You do not think that any proposal for preventing in any way the reproduction of the insane would be worth considering?—Well, one would hardly say not worth considering, because at present the reproduction of the insane is considerably modified, owing to asylums, but an extension of that might be made. I do not know what.

6785. One is told of numerous cases of persons confined to asylums for a time, and then let out, and then brought back, having increased the population in the meantime?—Yes. If any way could be devised of preventing reproduction without raising serious issues and difficulties, it is certainly a very desirable thing, but I do not see any practical mode of effecting it without sacrificing too much.

6786. You would not have any objection to the putting of the lazy and idle in labour colonies, would you?—No, that is quite a practicable thing.

6787. That is rather in the category of acquired deteriorations. By proper discipline you think they could be brought out of that.

You could give us illustrations showing the effect of acquired deterioration from the examination of the children in Edinburgh. As a result of that examination I think you came to a very clear opinion that the systematic medical inspection of schools is one of the things that is most called for at the present time?—That is my opinion quite definitely.

6788. Could you give us some idea as to how you would organise such medical inspection?—I had hoped to present to the Committee a copy of a book which I have just elaborated to set this forth, but it is not quite ready. I shall send one to you afterwards.

6789. I am speaking generally of the general organisation for the moment. You would propose to have a medical officer employed by the school authority, would not you?—Certainly.

6790. Take such a town as Edinburgh, now. Several officers would be required, would they not?—Yes, but a city like Edinburgh might have a medical officer of the schools and each group of schools could be put in charge of medical men in the locality, or have special assistants of the medical officer to take a group of schools and to examine systematically the admissions to those schools. The principal practical difficulty of the system is in attempting to cover the examination of the whole of the children now in school. That is a very large order; but it would be quite a practicable thing if the school area were divided up into districts very much as parish districts are divided up, and it would be quite a practicable matter to examine all the admissions to those schools. Roughly in a school of 1,600 the admissions in any one year would be somewhere about 200 new children?—Supposing 200. The first examination for all the points that were gone through in the Royal Commission investigation with the exception of about eighteen measurements, which were not health measurements, could be quite well conducted at the rate of forty or fifty or sixty children per day. That is not a very formidable task.

6791. Your idea of the organisation is this; that each educational authority should have a medical officer who would in a large town give his whole time to that work?—Yes.

6792. That he should have under him either assistants who might take a large number of schools, giving them whole time; or that medical men who are in practice might each have charge of a group of two or three schools, it may be, working under the direction of the medical officer, and that the duty of these men would be to examine all the new admissions to the school from the health point of view?—Yes.

6793. That would be done in the autumn, when the great influx of new scholars would come in?—Yes.

6794. And then after that the children newly admitted would be comparatively few to examine. But those medical officers would continue to visit and examine the school once a fortnight?—Yes.

6795. And go to the school at the request of the headmaster to investigate any particular case?—Entirely so. In the towns, that would be satisfactory enough. The difficulties would arise when you come to the counties.

6796. What would be the relation of the medical officer of the schools to the medical officer of health for the town?—He might be made the same individual, and I think that would be in many respects a very desirable thing to do, for one reason I have already given. In the case of the Public Health Acts, the local authority for public health has direct control over the sanitation of the schools, and also direct control of the children so far as infectious disease is concerned. All the powers with reference to throats and skins are perfectly adequate.

6797. To what extent are they used—does the medical officer of the town make any inquiry as to the ventilation of the school?—Well, it is exceptional in my experience certainly, but I should not take the present practice to found upon.

6798. Some at any rate might object to your proposal, and say: Very well, if that is part of the medical officer's duty at the present moment why not employ him without making an extra salary of it?—I should not make a separate salary of it for the sanitary inspection, because that is part of his duty now.

6799. What would be the part of the examination not at present his duty?—The individual examination of ears, eyes, heart, and lungs, every disease except infectious disease. He can examine the children for the last now. It is within the Scotch law; but he could not, except with the consent of the parent and the children, examine for the non-infectious diseases.

6800. Of course you know one of the most important parts of this individual examination would be the examination of the eyes and ears, which are specialists' work?—Undoubtedly.

6801. So that your staff for a given district would have to include some specialists of that sort?—Yes.

6802. And probably a dentist?—Probably a dentist. Excuse me, I was saying that in a town that need not present any difficulty, because the eyes, ears, and teeth could be done very accurately now. An expert in the course of four hours would do perhaps thirty an hour, so that it is not a formidable thing. An expert can go through it very rapidly.

6803. But you propose to have the expert, and not trust to the medical officer of the schools together with his general assistants?—No, that is a special work over and above that. But my point is that, in order not to multiply authorities and officials, it would be advisable to have this work under the direction of the Public Health Department. I do not say that it is bound to carry out all the details.

6804. It has been suggested to me to have this medical inspection of schools under the general direction of a Board of experts who would, of course, be subject to the ultimate control of the central authority, *i.e.*, the education authority?—Clearly.

6805. The education authority ought to appoint a Board which might comprehend the Public Medical Officer of Health if he is not the school Medical Officer of Health, and probably a surgeon and dentist and a physician, who would lay down the lines on which the medical examination is to be conducted?—Yes.

6806. And who might be paid a fee. Is that a good arrangement ?—That is a sound proposal. But what one would like would be not to be dogmatic about how it was to be done in each place.

6807. Clearly that applies more readily to a town ; but in a country district it would be extremely difficult you think ?—Yes.

6808. To what extent would you make use of the teachers in looking after the health of the pupils ?—I think that the teachers could make a preliminary examination of general nutrition. They could supervise the height and weight measurements, which are very important ; make a general segregation of doubtful eyes and of deaf children as a preliminary, and scrutinise for infectious diseases as a matter of course.

6809. They could easily have such knowledge as to enable them to pick out underfed children, you think ?—I think so, easily.

6810. Do you think that some further instruction of teachers on those lines is desirable ?—Yes.

6811. There is a class going on at present for the further instruction of teachers in Edinburgh in matters of health, is there not ?—Yes.

6812. That should have a good effect ?—Yes.

6813. And do you think that such classes should be encouraged all over the kingdom generally ?—I think so.

6814. You can give us some information as to food in relation to deterioration as illustrated from Scottish poorhouses and prisons ?—I do not wish to enter into any detail before the Committee, but I should like to call their attention to two documents, and possibly the Committee may have had them before them already. The one is by Dr. Aitchison, on certain effects of diet. This research was undertaken in a Scottish poorhouse. He found that where the diet prescribed under the Scottish Board rules was rigidly followed out, the result was that in thin patients there was great excess of urine and a diminution of body weight. He experimented and found that by increasing the fat of the diet the nitrogenous waste of the muscles could be so far arrested, and by increasing the fat a very little, equilibrium was restored. The result was that a reconstructed dietary has been issued by the Local Government Board for Scotland for poorhouses.

6815. Is it the same dietary as in England ?—Not the same dietary, but very much on the same lines ; but, on the whole, the English diet is more varied, if not more generous. The point of this is to demonstrate that it is not so much the quantities of food as the proportion of the ingredients that make it up, that are important. For instance, it has been found by experiment that an increase of nitrogenous food, such as the increase of meat, would not necessarily quite preserve the weight if the fat of the body had been previously exhausted, and not supplied in the food—half the quantity of nitrogenous food, if the fat was given, was as good as double the amount of nitrogenous food if fat was not given. It is a popular idea to increase the meat, but it is really the balance of the diet that is equally important.

6816. Would you say that a dietary of pea-soup or peas in some form or other would be a good diet ?—I think so.

6817. It is highly nitrogenous, but it is deficient in fat ?—Yes : but by adding to it carbo-hydrates, and a small amount of milk, it would be all right.

6818. You distinguish between carbo-hydrates and fat ?—Clearly ; but all the same, as one of the results of this investigation, this diet was modified to the extent of adding suet pudding twice or three times a week ; and that had the effect of making a diet that was insufficient into a diet that was, on the whole, adequate.

6819. Was a record kept of the change of the persons in their weight ?—Yes, by Dr. Aitchison in the investigation. But at the present moment as a sort of check, or a probable check upon the diet as now issued by the Local Government Board, an investigation has been set going whereby the paupers—all the admissions of the six largest poor-houses in Scotland—are being systematically weighed on admission, and at four periods after admission at intervals of a month. This is a specimen of the register. (*Handing in the same.*)

6820. Perhaps you will put in Dr. Aitchison's report, and also those schedules you are showing us ?—Yes.

6821. But generally the effect of adding more fat to the diet of these paupers is to improve their condition, more than doubling the amount of nitrogenous food alone ?—Yes. *Dr. Mackenzie.*

6822. On those principles the traditional diet of the Scotch peasantry would not be a very good one, with oatmeal ?—But oatmeal and milk form a good mixture.

6823. Even from the point of view of fat ?—Yes, in sweet milk—there is a thing called skim-milk in which there is less ; but the oatmeal itself contains a good deal of fat.

6824. Has this principle as to the importance of fat in the dietary been long accepted, or is it a new view ?—It has been accepted for sixty years, but the stress has been put on the nitrogenous part, but in the last ten years the balance of the diet has been considered equally important. Formerly it was said : You should increase the proteids, but now it is recognised that the proteids and fats are equally essential.

6825. Would you say that the question of dietary for different ages and different conditions of work has been worked out on a scientific basis ?—Yes. I think a great deal has been done by Atwater in America, and there is another by Dr. Crauford Dunlop on the food requirements of varying labour. He experimented in detail, and in a formal report much more detail of the diet is given ; but in this particular print, from the Scottish Medical Journal of May, 1901, you gather the results of a particular experiment at Peterhead Convict Prison. There was a difference of about 200 calories in the construction of the diet which resulted in converting a diet complained of, where 82 per cent. of those who had it lost weight, into a diet which resulted in no complaints and in only 23 per cent. who had lost weight.

6826. That rather points to the question of suitable food being food to the liking of the user ?—On the whole, where a person is healthy that does not matter—but in cases of disease the liking has no bearing.

6827. Are there any authorities on the question of diet, on a really scientific basis. Where is that to be found ?—I shall be glad to let you have them.

6828. Well, one great cause of physical deterioration is the insufficiency or improper balance of food you say. What is the next in importance as a cause of deterioration to be guarded against from the public health point of view ; is it air ?—Air, unquestionably ; housing resulting from bad air and uncleanliness, of course, but that to a less extent.

6829. I observe in your report on the schools in Edinburgh that you consider that the schools there are well ventilated on the whole ?—Yes, on the whole.

6830. Would you say that the children are better in them than in their homes ?—Certainly.

6831. So that from that point of view there would be no objection to the children having a fairly long day at school? —Not from that standpoint.

6832. You would not advocate their being let away in the afternoon, would you ?—It just depends. In the Edinburgh schools the intervals, as I found at the four schools, of relief from labour were very numerous, so that I do not think that the question is pressing. In the country schools it is rather different ; from two or three enquiries made, I gather that the country children are distinctly longer at school, and have not so much time in the playground.

6833. But when they are out of school they are more in the open air, are they not ?—Not more, but they have purer air.

6834. But in coming and going to school, and also in having more work about the house and farm, that is bound to give them more fresh air than the children get in the towns ?—Certainly.

6835. After food and air is there any other acquired deterioration to call attention to ?—These questions of the labour of the mothers we have dealt with already. Another point that is of practical importance—but I do not see how to get at it—is the amount of sleep for the children. The present defect of housing results in preventing the children getting sufficient sleep.

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6836. That is simply another aspect of overcrowding, is it not?—Yes, and overcrowding more than in the ventilation—the noises and other things to keep the children awake.

6837. You mean the things which prevent children getting the proper proportion of sleep?—They do not really get rested and it causes irritability and nervous exhaustion.

6838. But that is the minor effect of overcrowding?—Yes.

6839. Is there any other point to draw attention to as a matter to be guarded against?—Apart from the general public health matters, which are taken for granted, and infectious diseases and the conditions of labour both in working rooms and factories, all these are overcrowding. But those are provided for, of course.

6840. Have you any statistics as to the proportion of the population of Edinburgh who live in houses of three rooms or less, and more than three rooms?—I am sorry that I have no figures. Taking the population all over, although it would be an easy enough matter to get figures, I am not able to give you that figure.

6841. I wish to know whether you think that any legislation is needed to strengthen the hands of the municipality in dealing with overcrowding?—One would not like to answer hurriedly, but I hardly think so. The present legislation for overcrowding is exceedingly drastic, and if systematically applied I have no doubt it would result in improvement.

6842. To what extent does the central Government department, such as yours, have the power of effectively dealing with a local authority which neglects its duty in this matter?—Where the neglect of duty is a specific thing having relation to specific conditions, such as overcrowding or special nuisances, the powers are complete; that is, the Local Government Board can present a petition to the Sheriff Court or the Court of Session requiring the local authority to do what it is enabled by statute to do, and the Board repeatedly does so.

6843. It is done?—Yes. Wherever it is not done it is threatened, and a threat is usually sufficient. But it has been done in a considerable number of cases. That is in specific instances of neglect. Where the neglect is of a general character and there is a total neglect of all their statutory functions, it is still open to the Board, under another section, to present a petition to the Court requiring them to carry out their duties in a general way without any specific thing. But you must justify such a drastic step. There is such a case before the Court now.

6844. Do you ever deal with a large municipality in this way, a town of 50,000 inhabitants?—Yes, in the matter of hospitals the powers have been enforced in detail.

6845. The other question is to what extent the medical officer under the local authority is the absolute servant of the local authority—has he any right of position?—Oh yes. In Scotland all medical officers of health and all sanitary inspectors hold office subject to the Local Government Board's sanction, that is, that they cannot be removed except with the sanction of the Local Government Board in Scotland. They get appointed by the local authorities, but cannot be removed from office by them.

6846. (*Dr. Tatham.*) During good behaviour or during pleasure you mean?—The clause is: "No medical officer or sanitary inspector . . . . . shall be removable from office, except by or with the sanction of the Board." No doubt it would have reference to good conduct.

6847. (*Mr. Struthers.*) Does the Local Government Board contribute to the Sanitary Officer's salary?—Yes, it gives a percentage. I cannot give the figure, but it is about one-third to one-half of their salaries where they give their whole time to the work.

6848. That of course gives the Board a *locus standi* as to dismissal of such officers?—It gives a double hold—the grant is withdrawn if the work is not efficient and also they have absolute power.

6849. (*Colonel Onslow.*) The Medical Officer of Scotland and I suppose the sanitary inspectors in the same way cannot be removed without the Local Government Board's sanction?—That is so.

6850. Does that give them sufficient power in this way that if a medical officer or sanitary inspector finds something wrong which he wishes to report he makes a report which may affect very closely in his pocket a member of the Corporation whom he serves, and it is quite possible that pressure might be brought to bear upon him by his being told of losing the appointment if he pressed this. Is that quite impossible in Scotland?—It is quite impossible in Scotland; theoretically at least. It is a man's own fault if he accepts any other position than what actually exists, namely, that he cannot be removed except by the Local Government Board.

6851. He can report on a house, for instance, that has not proper sanitary arrangements, and it does not matter to whom that belongs. His report is bound to be taken up, you think?—Yes.

6852. Without any fear that by so doing he damages somebody in pocket and will lose his appointment?—Of course, as I say, individuals differ, but that is the exact legal position.

6853. The man is really able to carry out his duty?—I think so. He cannot be dismissed by the local authority that appoints him.

6854. In your examination in Edinburgh when you examined those children on the Royal Commission on physical training how did you select the children that you examined?—Well, they were selected as nearly as conceivable by ballot.

6855. Not by personal inspection. I mean to say you did not go and out of twenty pick five?—No, in the first school that I examined I took children of all ages, from seven to eight up to fifteen. The schoolmaster took all the children of those ages in the school in the different classes, say six to nine, and he put the numbers into a hat and a pupil teacher pulled out the numbers. In the other cases, I took the odd numbers from the registers, which is practically the same.

6856. It really gave you a good guide to the general physique of the children?—I think so on the whole. The basis was perhaps a little narrow, because the children amounted only to 10 per cent. of those in the schools.

6857. Were the numbers examined sufficient to give you a good idea, do you think?—Well they were on the narrow side. I do not think you could, for example, make an inference *simpliciter* from the number of diseases found in those 600 children and say if that proportion were found in 600, therefore the same would take place in the 30,000 of Edinburgh children. I do not think that would be good reasoning. But I suggested to knock off 50 per cent. of the diseases found just to save that error. That is too big a margin to knock off, of course.

6858. In your memorandum you have, "Medical Inspection of school children—specimen schedules." Have you one of those?—Yes, I shall be pleased to give them to you. That is a specimen, which I consider practicable.

6859. This attempts to take up a very large number of points?—The first four sections are really points always already in the possession of the teacher. The remaining points look more than they really are in point of elaboration, but I have gone through it with a view of reducing them to what is essential, and I have come to the conclusion that that is the least you can ask on fresh admission.

6860. You would have it carried out on admission to the school?—Yes.

6861. And periodically afterwards to see the result on each individual?—Yes.

6862. How often?—I think that ears should be examined every year or two years, and eyes the same, and especially the latter.

6863. Your scheme goes for a general medical inspector of a district?—Yes.

6864. And under him medical officers of sections—groups of schools?—I did not complete the idea, when Mr. Struthers was examining me, for the counties. In the towns it is much less difficult to get specialists, but in the counties in the present arrangement where every parish has its School Board, it would be exceedingly difficult to federate them for that.

6865. (*Mr. Struthers.*) If you had a larger area would that do?—It would enable the man in the position of county medical officer of health, who in his case has to inspect for the whole county area to direct the inspection. The schools are small; you get 50, 100, and 200 children.

6866. (*Colonel Onslow.*) What is known as the union medical officer, the medical officer who is appointed, he is not confined to one village, he could go to a great many. Might not that be carried out ?—In Scotland we have not an officer in exactly the same position as in England ; he is the parish doctor.

6867. But the inspectors would simply look into the school occasionally, and the teachers would bring cases to their notice ?—Yes.

6868. And if they found the children, say, suffering from something radically wrong in the teeth, eyes, or ears, they would refer it to the specialist of that district or that area ?—Yes, or in the case of the county that can afford it, such as the larger counties, it would be best to give an assistant, dividing his time between the public health aspect and the individual child aspect.

6869. It would need to be special men rather than the general practitioners ?—I think so. That would give rise to the same difficulties as arise in the case of the general practitioners with reference to the public health. That is, if any one particular man would be appointed for the purpose he would be appropriating another man's patients, and that would give rise to a difficulty. That is a reason for putting it in the hands of the general public health authority. If that coincides with the larger area of the school authority it would be a simple matter.

6870. Now to came to quite another subject. With reference to the reproduction of the insane, would not the reproduction be lessened owing to the insane being placed under charge more carefully now than formerly ?—I would not say that it has lessened, but the actual management of the insane keeps it, to a certain extent, down. I cannot give you figures.

6871. General statistics show that insanity has increased enormously through the whole kingdom ?—But not necessarily from inheritable causes. It might come from outside causes ; and a large proportion of insanity may be stress of life in middle age, where there is no taint at all in the family. I have known of such cases. Although the family taint is assumed to be considerable in most cases, or rather great importance is attached to any indication in a family, there are cases clearly that become insane after the reproductive age, that is in women between forty-five and fifty—a considerable number of cases ; and in a large proportion of these cases the taint may not be inheritable. But you cannot make a general proposition to take in all forms of insane people.

6872. The reason of it might be this, might not there be a greater number of insane and wastrels now, in proportion than there was fifty years ago, from the fact that it is more usual to put them under care now ?—I think that is a contributory cause to the increase of figures, but I do not think it is the whole cause.

6873. As a boy you would see in the country villages the silly boy of the village ?—Yes.

6874. And now these boys are taken charge of in an institution ?—No doubt that is so, and that has had the effect of increasing the figures. I have not gone into the lunacy figures, but there is a substantial increase even allowing for that. On the other hand, one has to remember that the death-rates have been going steadily down for fifty years, and that a larger number survive. Then, again, on the other hand, there is no doubt there is greater refinement of diagnosis and greater care with the insane.

6875. (*Colonel Fox.*) Have you any suggestions to make about improving the food and feeding of the poorer classes ?—It is difficult to make a direct suggestion, but I think in the direction of education you can do a good deal to teach both the children themselves and the teachers in the matter of food. I think that the amount of use made of the cheaper kinds of food is not anything like what it should be. Of course the thriftless classes go in for the relatively expensive food. I think that a good deal could be done educationally, but I am not prepared with any organised suggestions for feeding.

6876. Do you think that the bad feeding of the children of the poor is due to ignorance on the part of the mothers, or due to poverty ?—It is largely due to ignorance, it is also largely due to poverty.

6877. Is not it principally due to ignorance of how to cook the food or how to select it ?—That is an element, but not quite the whole element. You will have to go into the condition of the houses in Scotland.

6878. Do you think that if girls between fourteen and fifteen were taught properly simple cooking that that would tend to improvement ?—It would tend in a good direction, but the condition of a good many of the Canongate children, and the condition of their families, were such that it did not admit of the provision of food, and even if they could get it, of the cooking. They had to rely upon what they could pick up. No doubt the improvement in cookery and the supply of cheaper foods would be of great benefit. I wish to guard myself from saying that that meets the whole case. I think that absolute poverty is in some cases such that they cannot get the food.

6879. Do you think that the milk supply could be improved ?—Yes, by action on the part of local authorities, and having better organisation, and creameries, and dairies, and so on—that is quite practicable.

6880. (*Mr. Legge.*) About this inspection of school children, do I gather that you are going to hand in something in the nature of a detailed scheme which we could print in the Appendix ?—I have here a book which I have written on the particular problem ; it is a practical book, discussing organisation, and I propose to present a copy to this Committee.

6881. Does that book give anything like a definite scheme ?—I give a definite scheme for counties and towns, and also a detailed schedule, which I can hand in.

6882. Clearing up such points, as regards ears, for instance, where you say that they ought to be examined once every year or two years—there is a considerable difference between the one year and the two years. One would like to know what was your definite suggestion as to what is enough ?—If you appoint your medical officers for schools, you will find, by first examining all admissions and keeping a record of them, that the subsequent inspections will be very much facilitated, because that schedule would remain on record. It would be a case of going over this increase, checking defects. In a few months it could be ascertained as to whether there is any alteration. In the meantime, your teacher is in touch with the medical officer, and continually observing all the year. So that it would be a simple matter to do the ears once a year. But you must make a difference with the localities.

6883. But you have no objection to our printing in the Appendix the details of your scheme ?—None whatever.

6884. Is your scheme supplemented by an estimate of the cost ?—I have given one estimate of the cost by Dr. Bruce, of Dingwall, who made a rough estimate, and he brings it to £30,000 a year. In that estimate, he includes what I should regard as strictly the work of the local authorities at present, and, consequently, that would have to be deducted. But really the only basis for an estimate is our experience on this Edinburgh investigation, and you can hardly take that as showing what the reasonable routine expense would be.

6885. Are you quite sure that children living in the country are more out of doors than town children ?—On the average, yes.

6886. My experience of the Gallowgate and streets like that in Glasgow, is that the children are out in all weathers—all night ?—Do you mean in the streets ?

6887. Not only those selling matches and newspapers in the streets, but others amusing themselves in the open air ?—That is one of the points I should have said—that they do live a great deal in the open air—but the air they get is not so good.

6888. That may be, but I never saw a child in the country out after dark, whereas I find the streets of towns crammed with them after dark ?—No doubt, that is so.

6889. (*Mr. Struthers.*) But possibly the children in the country get up earlier ?—Yes.

6890. (*Mr. Legge.*) Not so much earlier ?—Wherever they are after dark, I know the habits of a great section of the country, and there is much more fresh air for them, I know. You assume equal times ; but the air is better than in the Gallowgate in Glasgow.

6891. But there is surely an extraordinary change in the air of all towns after sundown ?—Yes.

Dr. Mackenzie.

6892. And from dark onward there is not so marked a change between the air of a town and the open country? One would not insist so much upon that.

6893. I insist that the children in the towns are more in the open air than the children in the country whatever the quality of the air is?—Even supposing that, you are exposing them to all the noises of the towns.

6894. And the fun of it too, which is not a bad thing?—But it is exhausting all the same—they are never at rest—both the adults and the children. I think it tells upon the nerves of children, for they have to go out of town. It becomes intolerable. Those who have examined children for the Fresh Air Fund know the difference in them at the end of the two weeks. There is no reason for it but the change of air; but the difference is very striking on the children.

6895. But has it occurred to you that the enjoyment of a town child of a fortnight in the country is not nearly what the enjoyment of a country child would be coming into the town?—That is perfectly true.

6896. And that would, perhaps, be a stimulus to its intellectual capacity?—Yes; but, of course, one would not assume that the intellectual capacity of the town child is higher, but that it is on a different footing.

6897. Now, in your memorandum, I note this passage. You say, "If inherited characters are to mature, therefore, the mother must remain (a) capable of maintaining her own physical equilibrium (b) capable of giving her excess of nourishment to the embryo. If she fails in (a) or (b) the embryo either dies or suffers in rate of growth, or in ultimate size." Well then, I suppose, from that we should draw the conclusion that in your opinion the child of a slum mother would be born defective in growth?—It may be so.

6898. That is to say if the mother has not been able to maintain her physical equilibrium?—Yes.

6899. And the same with the factory worker?—Yes, I think so.

6900. As bearing upon that point, we have got some curious figures which might interest you. You are aware of charities which look after mothers in the slums, one of the largest being the Royal Maternity Charity in London?—Yes.

6901. And the cases treated by that charity one would presume to afford a fairish proportion of those children who are found defective at birth?—No doubt.

6902. However, the physician of that charity has put the following question to the medical officers working for the charity in different parts of London—"What number per cent. of new born children amongst the poorest class would be capable of living a normal physical existence were it not for neglect, poverty, and ignorance, and would indicate that a good physique for coming generations might be anticipated from their condition?"—We have just had handed in the replies from eleven of those medical officers, giving what appear the results in different quarters; and they make out, on the whole, that in their districts 86 per cent. of the slum children are born in a condition which may be described as "fit to live a normal physical existence?"—I should quite believe that; and possibly even more, but my point was in this general statement, that it more affects the rate of growth and the size of the children at birth, and the start they get. Among the Canongate children, we found that the weights of the school children were very distinctly lower than the weights at corresponding ages at another school drawn from a well nourished community. Making allowance for every difference in labour and housing, we concluded that a certain amount was due to under-feeding, and of course we could draw the inference that before coming to the school the under-feeding had been going on, and probably from before birth. Probably they were under-fed at school age; and they had a bad history up to that time. It does not follow that these children do not, within their limits, develope into perfectly fit citizens, provided that they are free from defect. About getting smaller children and undergrown, it is a disputed point whether the ultimate size of those children may not come to as good a result as the better nourished, but I do not think that it is the case. Some maintain the one, and some the other. But everywhere where I have been able to get actual measurements of the children of those working men labouring, and the children themselves, working early in life, the figures are against the working child, as far as weight and height go, which indicates that their growth suffers, and that must suffer from conception onwards. I have some figures from Mr. Richet's *Dictionnaire de Physiologie*, where the difference between the children of the middle classes and the working children of the working classes amounts to a difference of 3·9 centimeters at the age of six and a half—that is the difference for girls; and about 2·4 for boys. So that I think we have fair ground for maintaining that deficient nutrition of the mother affects the child at birth, and a deficient nutrition after birth affects the growth of the child up to school age, and of course after. I do not say, of course, that you have not very good citizens being made out of these children, providing they are not rickety or deformed.

6903. (*Mr. Struthers.*) But that distinction in height and weight might be recovered after the age of twelve with proper feeding, might it not?—Yes, and certainly with the children of the working classes, we found that even where height and weight are not as great as in the other classes, yet in the matter of grasping, the older children of Canongate grasped quite as well as the Bruntsfield School children.

6904. That is the point: are the statistics of height and weight so terribly important as showing the efficiency of the classes of the population?—It is not the final statement. But I argue that question in detail in a special chapter of my book.

6905. For instance, you have the long, thin, lathy man and the short, stout, sturdy man?—Yes.

6906. Is not the latter type more efficient for practical work?—Undoubtedly.

6907. Then the well-to-do Bruntsfield boy, as compared with the Canongate boy, is it not probably the case that the children of the Bruntsfield School bulk heavier, that is, that they are fosier—softer?—One might say that *à priori*. But I did not find that on examination. I thought them well knit and well put together.

6908. (*Mr. Legge.*) I think you indicated your opinion just now that local authorities have, in your opinion, sufficent power to deal with the question of over-crowding?—I think so on the whole. Of course there is a branch in which the larger local authorities are moving which, I think, is a sound enough direction, that is, doing what Glasgow did and ticketing a certain house for a given cubic space. But as a fact the powers are sufficient, I think, and very considerable.

6909. Could you state whether in Scotch law they can go for the owner direct?—I do not think so.

6910. Do you think that would be a good thing?—Yes, in certain classes of property it might be an improvement.

6911. To bring the responsibility to bear upon the owner?—Yes. And a great difficulty is in dealing with the farmed-out houses. That is a difficulty and the law might be improved.

6912. Then as to the question of taxation of site values?—I do not think I have expressed any opinion upon that.

6913. You are not prepared to express an opinion on that as a policy, are you?—I do not think, although it is important, that it has the importance usually assigned to it. I do not think that in the larger places it would make much difference to the housing. One reason why local authorities have supported that movement is because it improves the range of the subjects for taxation and makes the raising of rates an easier matter, but I do not think that it is a major factor; although it is a factor, I do not think it is a major factor in the question.

6914. It seems the general opinion in this country, both in England and Scotland, that all those matters of the health of the community are best left in the hands of the local authority, that we do not want to centralise administration. If the authorities know that the conditions in their town are thoroughly bad they will, in most cases, take action, but the difficulty is for them to realise that the condition in their town is thoroughly bad, as compared with the results that can be got in other towns. Can you think of any means by which one can bring to the knowledge of any particular locality that the state of things is worse than in similar localities in the country?—Well, it is a little difficult just to answer that question directly.

But at the present moment in the counties of Scotland the appointment of medical officers and sanitary inspectors has in the last ten years resulted in an enormous amount of improvement in the counties, including the farmhouses and villages, and colliery villages and so on. One of the reasons for that improvement has been that the Local Government Board require them to give an annual report, where before no such report existed. Within the last few years all local authorities have to give an annual report of all work done during the year. Those reports are scrutinised in detail by the Local Government Board; they are all compared among one another, and correspondence is started from them bringing to the knowledge of the local authority anything of an urgent kind, or anything demanding further inquiry, and it is reported on by the sanitary authority. The result is that a very great number of points are brought systematically before the attention of the local authorities. The development of that will continue steadily to go on as the administration of the Acts grows older. A great many of the things now done in the small towns in Scotland are directly the result of this annual report by the sanitary organisation. I am speaking entirely of Scotland.

6915. We have had brought before us by more than one Witness a suggestion of some importance, namely, that there should be a central Government Bureau of statistics to collect from all parts of the country, and from all classes of the population, anthropometrical figures and facts, utilising perhaps teachers, certifying surgeons, the Factory Department, and so forth. The Central Bureau would co-ordinate the work, would publish the facts, and circulate them. Would you approve of that?—Yes, I think that is quite a sound idea, and I think that it is essential that some Central Department should have charge of anthropometrical statistics.

6916. You think that there is great importance to be attached to anthropometry?—In anthropometry I should include height, weight, and girths: you would have to specify the measurements.

6917. I mean superficial measurements—no lung testing or that sort of thing, which requires a man of physiological and medical training?—At the present moment I do not consider that that condition of things is of much administrative value, but I can anticipate, in the course of years, results of administrative value to the community, and it is worth serious consideration.

6918. (*Mr. Struthers.*) I have just one or two questions to ask about your report to the Royal Commission on Physical Training in Scotland. That report has excited much interest and has been frequently referred to in public speeches and discussions, and I am not so sure that some of the inferences drawn from it are quite justified. On page 24 there are some general remarks. These remarks are not yours, so that you are not in any way responsible for what is said there?—That is so. I have no responsibility.

6919. The main point is the comparison between Edinburgh and Aberdeen as regards health. That is no part of the scheme of your report—the direct comparison?—Oh, no.

6920. The Commission's Report says a comparison made between the two towns is on all points greatly to the advantage of Aberdeen?—Yes.

6921. But that would of course depend to a very large extent on how the sample of children was taken?—Yes.

6922. Now the children came in each town from the bulk of the population?—Yes.

6923. On page 78 comparing that with Dr. Hay's first table on page 102, you find this state of things: that of the samples taken in Edinburgh 35·32 per cent. lived in two-roomed houses: 45 per cent. in very small, *i.e.*, in one or two-roomed houses, 25 per cent. in houses of more than three rooms. The corresponding figures for Aberdeen are 30·5, 29·5, and 40·1, that is to say, as far as the sample of children goes a much larger proportion live in one or two-roomed houses in Edinburgh, 45 per cent. as against 30 per cent. Those living in three-roomed houses are approximately the same?—Yes.

6924. As against 25 per cent. in Edinburgh in houses of more than three rooms, 40·1 per cent. Aberdeen?—Yes.

6925. But on page 101 of the report Dr. Hay compares the sample with the population as a whole?—Yes.

6926. He says of the whole population of Aberdeen 39 per cent. are in houses of less than three rooms, 30 per cent., which corresponds with our figure in both, in houses of three rooms, and 31 per cent. in houses of more than three rooms?—Yes.

6926A. That is to say that the sample of children examined in Aberdeen was distinctly better than the population, because it contained a smaller number of children drawn from one and two-roomed houses, and a greater number of children drawn from houses of more than three rooms, of the corresponding population?—That is the legitimate inference to be drawn.

6927. And that the Aberdeen sample was on the whole too good a sample of the population?—I think one is bound to take that view, not only for this reason, but for another reason. In Edinburgh there are approximately 30,000 School Board children. In Aberdeen approximately there are 25,000 School Board children. Yet the difference in population is as two to one, Edinburgh being rather more than twice the population of Aberdeen. The meaning of that is, that in Aberdeen there is a much larger proportion of School Board children than there is in Edinburgh and therefore it includes a bigger lot from the better classes; a larger number of the better classes would be drawn from the Aberdeen School Board children than there would be in Edinburgh.

6928. There are many facts that all tend in that direction, that the sample taken in Aberdeen is a better sample of the population of Aberdeen than the sample taken of Edinburgh as a whole?—I think so. One has to remember that in Aberdeen there is not a big population of slum children.

6929. Would not a larger proportion of the population of Aberdeen live in three-roomed houses and not so many in houses of less than three rooms?—There would be a greater proportion.

6930. Perhaps you could get the figures from the census tables showing the distribution of the population of Edinburgh according to size of house, just as Dr. Hay has done for Aberdeen?—I think I could get them.

6931. It would be interesting to see how the sample of children taken in Edinburgh corresponds as regards the character of the houses with the population on the whole?—I can do that.

6932. On that comparison depends really whether the two sets of children are proper samples of the children as a whole?—Yes.

6933. In the case of Aberdeen it is not so, and the presumption is it may not be so in the case of Edinburgh?—Yes. I think one would have to say, taking both towns, that you cannot properly take 600 children in either town as enough to justify propositions applicable to 30,000. It is too narrow a basis for a statistical argument. But there are many points that are not statistical.

6934. Then in the report it says (paragraph 116, page 24): "The ratio of health in both cities harmonises with these facts. Thus there are among all the children examined in Aberdeen 0·5 per cent. in apparent poor health, while in Edinburgh there are 19·17 per cent." Does not that suggest some rather different standard. Is that a wholly objective difference?—I think if the tables are compared minutely it will probably be found that my standard differs to a great extent from Dr. Hay's in the matter of minor diseases.

6935. Would not you say on the face of it, considering the class of facts we are dealing with, which is very much judging of appearance, such a disproportion as 0·5 as against 19·17 is most certainly due to some difference of standard, whatever the facts may be?—There may be a certain amount of difference. It is a difference that must arise out of several things. It is either a different kind of population that we are handling or there is something which is not easily explainable on the face of it.

6936. Then the next paragraph 117: "The same tale is told by the statistics regarding the condition of nutrition of the children. Aberdeen shows 9 per cent. of its children badly nourished, while Edinburgh shows 29·83 per cent."?—Yes.

6937. Surely that is not correctly stated, because these figures in the case of Edinburgh refer not to the proportion of children badly nourished but to the proportion of what are called "thin," who may be perfectly well nourished.

Dr. Mackenzie.

Now look at the figures—which table have you got?—Table III for personal appearance and cleanliness, that is page 81 in the Edinburgh report, and that corresponds with Table III of Aberdeen, page 104.

6938. Well those figures are taken from that table, are not they?—I think so. There is a further table given by Dr. Hay at the end of page 118 where figures are further worked out, but the substantial figures are the Table III.

6939. The figures are 9 per cent. for Aberdeen, and 29 per cent. for Edinburgh?—Yes.

6940. But those figures in the case of Edinburgh refer to percentage of "thin" children and not to those badly nourished?—To both, quite so.

6941. But you yourself say that the figures cover the unfed and thin from excessive exercise?—Quite, I found it necessary in going through that to say that there were children thin, not badly nourished. But I tried to check that, as I indicate in the report by correlating the healthy appearance, and getting the percentages of those that lacked health.

6942. You think that those figures given do not represent the comparative numbers of children who are badly nourished?—They are not exhaustive.

6943. But of children who are thin?—There is that element of the well-nourished thin child and the undernourished thin child. But that is to be made out by other considerations than mere figures. I am not sure that that healthy thinness amounts to much of a percentage, especially given the conditions of life.

6944. In London Street it did make a considerable difference, as is shown by the fitness for exercises?—Yes, there was a very good distinction between a very good and bad lot, and it was correlated with the bad houses.

6945. Does not it come to this, that the samples from Edinburgh and Aberdeen did not justify a comparison between the two towns?—I accept that. I do not think the figures are sufficient.

6946. And that certain things like the thinness of children and their mental alertness and complexion are highly subjective matters in which it is very difficult to say that the same standard applies?—Quite so.

6947. And any conclusions to be drawn from them might be fallacious?—Yes. In order to reduce the error I personally did that part of the examination for all the 600.

6948. Now, to a very important point: Do you think the sample of children taken at Edinburgh really represents even the general condition of health in Edinburgh?—That again, I do not have figures for.

6949. But on the face of it, would not you say that the schools you took that from do not touch a considerable portion of the population of Edinburgh which attends school, such as Heriot's, the Merchant Company, and the High School, and so on?—They were Edinburgh School Board children, and I confined myself to them.

6950. Look at page 86 for a moment. There is a comparison of weight and height of the four schools you examined?—Yes.

6951. At different ages from six to fourteen. How many children would be in each age group at that rate?—Twenty-five.

6952. Well now that is rather a small number to compare the height or weight of one school with another, is it not?—Yes, and for individual ages it would be less than twenty-five, because we have to divide 600 children, 150 out of each school, and dividing these children into groups of twenty-five, it would leave only eight or nine children of each individual age.

6953. Supposing I went down to North Canongate School and picked out eight children of ten years of age and got an average height, and you came to-morrow and took eight children of ten years of age and examined them, might not those figures differ?—They might differ from North Canongate compared with any other school.

6954. I am speaking of abstract statistics now?—Yes.

6955. Take eight children of ten years of age at a time out of twelve hundred?—You could not have average heights.

6956. But the difference between the two samples might amount to a couple of inches perhaps?—Between two groups of ten at that age?

6957. Or whatever the number was. You take eight?—Yes.

6958. If you examined eight children of ten years of age to-day and I examined the same number to-morrow, is it not possible that the difference might amount to a matter of a couple of inches?—That is possible, but I should not like to apply an abstract argument to the concrete case of Canongate for a special reason; if you compare the table of deviations (Table Va., 84), we find that while there was an occasional tall person in Canongate you had the majority undersized, whilst in the others you will find an occasional undersized one, still you have a bigger proportion the other way.

6959. But still I want to be quite clear about this point, that the difference between two samples of eight drawn from the same school might be as great as between similar samples drawn from two different schools (if both were large)?—Yes, and it is too small to take 600.

6960. Apart from your special knowledge of Canongate the comparison between the children of different ages in the two schools is therefore placed on a different footing?—Yes, as a mere matter of height and weight. There were other facts to interpret my heights and weights by. Of course I qualify that point in the report.

6961. You are going into a further examination of North Canongate?—I have not begun yet.

6962. It would be very interesting to know how your figures for the whole school correspond with the samples?—That is one of the reasons for extending the examination.

6963. (*Dr. Tatham.*) In Scotland, I think I am right in saying, that the poor law and the public health authorities are the local government board. There is no division as in England, between the public health and the poor law?—The central authority is the local government board for both, but the local authority for public health is entirely different from the poor law authority, but in the central authority one department covers both.

6964. Not as it is in England?—I do not know how that is.

6965. There are two sections?—They are both sections of the local government board.

6966. Quite so, but the two organisations are superintended by two separate authorities. Do you know that?—From other information I infer it, as suggested, but it is different in Scotland.

6967. My reason for asking that question was this:—You said that within the last few years the county medical officers of health of Scotland presented to your board an annual report, which report was of great value as regards the improvement in public health?—Yes.

6968. And you also said that the report was carefully considered by the board?—Yes.

6969. Since these reports emanate from medical men, are they examined by medical men?—I examine them in the first instance personally myself, and when anything special arises the medical member of the Board, Dr. Russell, and the Board as a whole deals with them.

6970. Now as to the general condition of the children. According to your experience, do town-bred children compare well or ill with the country-bred children, speaking generally?—Given the corresponding classes, I think, the country-bred children have the advantage.

6971-2. Manifestly?—I think so. But, on the other hand, the conditions are so very unlike that I hesitated to make that statement, except in the most general way, because the life of a town, and the life of a town-dweller are generally so exacting that the country child has no excuse for not being better. The town child of equal strength may not look so well or so strong a child as the well nourished country child, because the town life in reference to the complex environment is more against the town child, but, I think, on the question of nutrition the advantage is with the country child.

6973. Is it a question of feeding?—I think so, partly. The country child has, on the whole, more access, in a great many parts of the country certainly, to milk, and eggs, and cheese, than the town child.

6974. It is the milk which constitutes the advantage. There is a larger proportion of the milk given to the country child, I mean cow's milk, not condensed milk?—

Dr. Mackenzie.

It is difficult to get the exact truth, it varies in the better class artizans. In Leith, as medical officer, I found that was so, that the milk counted for a great deal; the mere fact that there were so many milk shops and dairies indicated that. There was a great amount of milk consumed, and it was mainly for the children; but in the very low classes, I do not know about the milk. I have no definite information upon it.

6975. We have had it stated here that in England, at any rate amongst the poorer class, milk enters into the diet of poor children to a very small extent indeed?—I think that is probable, but I cannot give information as regards Scotland.

6976. You say that in the country districts of Scotland the children do get a good deal of milk?—Yes, on the whole. My experience is mainly from the Northern Highland counties and Galloway. In Galloway, which is essentially a milk-producing county, the two counties are dairy—400 dairies in one, and 300 to the other—and 70,000 of population. The complaint sometimes made there among the cottar population is that, although they have their creameries near to them, they find it difficult to get good milk. But this was not widespread—they get a fair supply of milk.

6977. Is it true that in Scotland children are sent to school half starved?—I do not know what the proportion is, but we can speak of the Canongate. A large proportion of the children there are certainly half starved. How far that can be said generally, I do not know.

6978. And no organisation exists in Scotland to rectify that?—There are spontaneous charities, of course, in Edinburgh, and elsewhere, but there is no co-ordination of charities.

6979. As a medical man, would you say that to subject a half-starved child to the ordinary routine of the school would be the height of cruelty?—Yes.

6980. Do you think that the educational result of such a thing would be very poor?—I agree entirely.

6981. And in the case of schools for girls is there any provision in Scotland for teaching young girls of thirteen or fourteen years of age cookery or the ordinary management of a house, washing and mending clothes, and so on?—The schools certainly do a considerable amount of that. For example, this Canongate school and the other schools that I examined, have their cookery departments, and they were attended by a considerable proportion; and that was taken as part of the routine teaching of the school.

6982. Then the cookery classes would take the place of the ordinary bookwork of a school?—I do not know how they were dovetailed into the time-table. I did not go into that at all, but they seemed to take a considerable proportion of the pupils.

6983. You would be of opinion that it would be desirable for young girls approaching womanhood that they should be taught these things so as to fit them for the care of any children that they might have, or for the benefit of their husbands?—I entirely agree.

6984. It would be very necessary that that should be done, even at the expense more or less of general education?—I agree entirely. I think that it is of more social value.

Mrs. Leslie Mackenzie, called; and Examined.

Mrs. Mackenzie.

6985. (*Chairman.*) Will you kindly state the experience qualifying you to give evidence before this Committee?—I served my full time as a pupil teacher in a large village school, and I served two years training in a Church of Scotland Training College in Aberdeen. I was assistant in a country public school for three years, and I was visiting mistress in North Lodge Industrial School, Aberdeen, for two years, and then I was infants' mistress in one of the large board schools in Aberdeen for five years.

6986. And you continued your interest in the same subjects during your married life?—During my married life I have been keenly interested in all school and other social questions. I am now honorary secretary of the Industrial Law Committee in Edinburgh, which is a branch of the London Industrial Law Committee of which Mrs. Tennant is the chairman, and I am corresponding honorary secretary for the Industrial Section of the National Union of Women Workers, which is a social working organisation, and member of Executive of Edinburgh Social Union.

6987–8. You assisted Dr. Mackenzie in his medical inspection of 600 school children in Edinburgh in 1903?—I went with him to all the schools and did more or less the organising of the children in the sections, and did all the writing, and examined along with him for the skin and clothes and cleanliness and the condition of the heads and so on; and we together saw each child individually.

6989. Since then you have continued similar investigations?—There is, I consider, a very important investigation begun now in Edinburgh, as the result of this physical training report. The conditions were so that there is no use talking about the condition of the children until you know what the condition of their home is, and a very influential committee has been instituted in Edinburgh, and an investigation is going on in the actual homes of the children. We got the names and addresses of all the children in the North Canongate School, and had those divisions sectioned off in which the attendance officers and investigators are going round to the home of every child who is in school attendance now, and taking down a very full account of the home.

6990. Do the parents encourage you in this sort of thing?—A few object. The better parents are inclined to resent, and the others are more or less wondering what is going to be the result. But we get a good deal of information. But at this point, I do not know that this should be made public. It is a private investigation. Their feeling is that if legislation is to take place upon any educational matter just now, it is very largely working in ignorance of whether it is to be free food or free clothing.

6991–2. When will this investigation be completed?—In some months, I think.

6993. (*Mr. Struthers.*) Who have organised this?—The members of Committee are Miss Haldane, Miss Flora Stevenson, Mr. Cowan (late master of the Merchant Company), Mr. Hector Munro Ferguson, Baillie Gibson, of the Town Council, Colonel McHardy, Dr. Leslie McKenzie, and Sir John Batty Tuke, and Mrs. Kerr, who is the secretary of the Edinburgh Social Union, is the secretary. I am on the executive of the Social Union, and assist in scrutinising the schedules.

6994. You are making an examination of the homes from which the children in the Canongate school come?—Yes, and those in attendance now.

6995. If the parents refuse to admit you it would be rather a good home?—I do not think that there is any actual refusal, but sometimes it is much more difficult to get information.

6996. You wish to make a comparison of the three grades of school children, such as children in the public school in an isolated country district?—Yes.

6997. And children in a large board school in Aberdeen?—Yes.

6998. And children in a city industrial school?—Yes.

6999. What is generally the difference?—That the children of the same age in these three conditions, namely, country public school children, city board school children, and city industrial school children varied, to a large degree, in their physical development there is no doubt. It did not need height and weight measurements to show that. The average Standard I. country child in physical bulk is more like the Standard II. or Standard III. town school child. Of course it must be remembered that in the country, where children may have to walk two or three miles to and from school, they are not often sent very young, few come to school before six or seven years of age; but whatever the cause, my impression remains that the country school showed no such little mites as the city board school.

Mrs. Mackenzie.

7000. On the whole you think there is better physique in the country school?—Bigger bulk.

7001-2. But not so alert as the children in town?—Well, if I may go on; I say this impression was well verified during the medical inspection of one of the Edinburgh schools. My husband asked that the nine- to ten year old girls be sent to him, and when they came into the room I said, "The teacher has made a mistake here; she has sent the infants," but when we looked at their sheets, they were right enough—girls between nine and ten years of age. That was my impression. I do not think there is any doubt that the purely country bred child has at all ages a larger total physical development than the town bred child.

7003. Now to come back to that point, the children in the town schools, though smaller in bulk, are perhaps more alert, are they not?—Yes, and smarter, and they get more readily out of a difficulty, but on the whole my feeling was that they were not so physically strong as those children in the country.

7004. But still for the ordinary work of life they might be as efficient?—Yes, they might be.

7005. Your husband spoke of the bad feeding of these Canongate children. Is that committee feeding the destitute children in Edinburgh?—Yes.

7006. It is now in operation in the Canongate at present?—Yes. I made inquiry. In the Canongate school 475 children are fed now and 276 children are clothed and some have shoes given to them.

7007. That has been going on for twenty-five years?—Yes.

7008. The statement in the report is that it has been going on for twenty-five years?—Yes.

7009. And I gather that every child found to be in need of food or clothes has his case inquired into by the committee. In view of that, how is it that so many children in the Canongate are still unfed?—Well, the headmaster of the Milton Street school said that he quite thought the three or four months of the free meals was the only time that these children had a satisfying meal, that is one meal a day.

7010. Why is it that those dinners are only given in the winter?—Simply from the tradition that it is during the unemployed time of the year, when the soup kitchens begin.

7011. There is slightly more need for it in the winter, but a meal in the summer is just as important as in the winter?—In the homes, it may be easier without fire and without clothing in the summer, but the conditions remain from year to year of the perfect inadequacy of home feeding and home conditions generally.

7012. Does this committee discover all the children insufficiently fed?—Not all the children, but the most of the perfectly underfed children; because it is largely through the attendance officers and teachers that the free-dinner tickets are given.

7013. With only a little extension of the operations of this Society no children would go to school unfed?—Yes, they would get food. But my point is why begin at that end when the man is earning from 25s. to 40s. per week?

7014. That is another matter. You have something to say about the effect of organised nurture, that is made possible in an industrial school?—That I saw from what I know of the Girls' Industrial school in Aberdeen. There the children are taken from the lowest slums and the condition of the homes that they came from was often extremely bad, and in a very short time with regular feeding and cleaning and clothing and exercise and sleep, they picked up wonderfully in their condition.

7015. From that you would infer that these underfed Canongate children if properly fed might recover at any time you got hold of them?—I am convinced that if all our slum-born infants were taken out into the country and brought up there in a rational manner, free from the overcrowding in dirty dens, free from the neglect and carelessness of mothers—who from Saturday to well-nigh Thursday of every week are more or less drunk—the saving of infant life would be great.

7016. Is it possible to take all these Canongate children?—Well, all the evils that can be conjured up against the boarded-out system of bringing up children, or against State or Parish homes are as nothing compared to the criminal method of letting infants die in what is called "home" in the slums I have visited. I became more and more convinced of what could be done for the very poorest and most mismanaged and most helpless children by cleaning, feeding, warming and sleep, from what I saw in North Lodge Industrial school. These poor little wretched neglected children were sent in and after even a few weeks of the ordinary daily routine of bathing, feeding, exercise in the open air and sleep, they picked up in a wonderful way and begun to put on flesh and grow frolicsome and could laugh. I remember a case of a very young child being sent in, and so terrible was its state of dirt and vermin that it had to be kept apart from the others for a week or two until its body and head were cleaned. During the process it practically slept the whole time; it became very sick, its whole body came out in boils, but it rapidly recovered and grew and put on flesh and became one of the nicest and brightest of the infant room.

7017. It comes to this, that if you could put all the children of Canongate under industrial school conditions we might look for a considerable improvement?—I have said so. My point is that if the same could be done for the masses of underfed, illclad, badly washed, and sleepless children of our overcrowded city slums we have made a great step towards the prevention of deterioration in the individual—and that being so, deterioration of the race becomes a very secondary question.

7018. What you have said covers the supplementary part of your memorandum as to housing and training. But you have something to say about the physical training. What is said in the report?—Well, it was well seen in the North Lodge Industrial School what was the effect of physical training there along with the regular routine sufficient food and nourishment; there the condition of the girls was very markedly improved after the physical training was established, and they became so expert that they took the Challenge Shield until they had to be disqualified, that is they were not allowed to compete with the board school children.

7019. In your opinion, given sufficient nourishment the children benefit by a good deal of exercise and even almost violent exercise?—Not violent.

7020. Did not they have violent exercise if they went in for the Challenge Shield?—I would not say "violent."

7021. Did not they use parallel bars?—No; dumb bells, bar bells, Indian clubs, and rings, but not parallel bars.

7022. Did you pay any attention to the physical drill in the Canongate schools?—Just seeing what was done.

7023. Did you form any opinion about it?—It seemed very cruel to let the little things go on with physical exercises when one knew they were not sufficiently fed.

7024. Did the children seem to think that it was cruel?—No, I do not think so.

7025. Because I find in the report that the children of the North Canongate School when they were let out into the playground they were bright and lively and rushing about, and there were no symptoms of being played out by the exercise. Then there is another point, the time appropriated for exercise in all these schools did not come to more than half an hour a week, and the excess of exercise is purely voluntary when they had cricket and football outside the school—one cannot prevent that?—No.

7026. Half an hour such as they get in the Edinburgh schools could do harm to no one but exceptional children?—Only to exceptional children. But there is no consideration of exceptional children in a section. There is no classification for drill.

7027. Do not the teachers take those out?—There is very little of that; just a class being out at a time.

7028. If we had medical inspection that would be remedied?—Yes.

7029. You have possibly remedies as to improved classification, what does that mean?—Well, I think that the physical condition of children presented for school

life can be ascertained only of course by medical inspection, and when the inspection reveals specially bad cases these might be handed to Boards or Charity Organisation for special inquiry into possible causes for such a condition. That would be organising on a larger scale what the limited Social Investigation going on in Edinburgh is now doing, and then to get at the facts of the home life. Someone might be authorised by the educational authorities to inquire into the economic conditions of parents on a large scale, and on lines similar to the small one now in operation in Edinburgh. If it can be ascertained that a parent is making 20s., or 25s., or 40s. a week there is no reason for his sending his children to school underfed, and the local rates paying for them.

7030. But the child must be fed ?—The child must be fed.

7031. Who is going to feed it ?—My point is that we ought to be able to arrest the wages of parents.

7032. (*Chairman.*) To recover from the parents ?—Yes.

7033. (*Mr. Struthers.*) You must feed the child in the first place though ?—I agree. But recovery of the money ought not to be impossible. We find that the parents are earning something from 25s. to 45s. per week, and they have only a table or chair in the house, and the children are without any food.

7034. What is your general impression about the children ? Do the children come to the school badly fed because the parents cannot buy food, or is it because of the waste ?—It is partly both. There is not food to give them sometimes. If there is any money the women are not sober or capable of cooking anything. There is no condition for ordinary cleaning, and the children are turned out dirty. And even those are an improvement upon what is left at home. I went round with the attendance officer one day, looking after the ordinary absentee children, and the children left at home, those of them under age for school, were in a worse condition than the ones sent out.

7035. (*Chairman.*) Is that inhumanity typical of the Edinburgh parent ?—I cannot tell. But it is the case with the parents of those north Canongate children.

7036. (*Mr. Struthers.*) Those were parents that might provide food ?—Yes. Whatever the method is of spending the money, they do not spend it on the children's clothes or food, they do not spend it on housing—they rent one or two rooms—and 76 per cent. of the Canongate people live in one or two rooms—and pay perhaps 2s. 6d. or 2s. 9d. for one room, 4s. 6d. for two rooms, even some of them live in furnished houses, and in those cases they sometimes pay 7s. 7d. per week.

7037. (*Chairman.*) With regard to the state of these homes, is it due to overcrowding; are these one-roomed and two-roomed tenements overcrowded ?—They have seven, eight, and nine children sometimes besides the father and mother.

7038. Has the City Council of Edinburgh taken no action with regard to the diminution of these evils ?—Individual cases do not come within their purview until some one complains.

7039. Do you mean that they are not informed of the facts ?—No, they may not be.

7040. Do not they take any steps to inform themselves of such abuses ?—I do not know.

7041. Supposing on the 1st May next the City Council of Edinburgh were to notify that from that date a one-roomed tenement was to contain no more than two inhabitants, and two-roomed tenements no more than four inhabitants, and if they were it would be deemed a nuisance and treated as such ?—The people would be turned on the streets.

7042. What would happen ?—I could not say.

7043. Would there be any means of dealing with such a situation; are there any areas that have not been developed in the neighbourhood of Edinburgh ?—These people will not leave the Canongate.

7044. If the Town Council took that action they would be obliged to go ?—Probably.

7045. They would have no choice ?—No, but first the houses would have to become condemned dwellings.

7046. The local authority has the power of treating such overcrowding as is dangerous to health as a nuisance ?—Yes.

7047. In the last resort if houses were closed which were inhabited under such conditions the people would have to go ?—Yes.

7048. I presume in the outskirts of Edinburgh there are houses springing up where they could be provided for, or where they could in a short time find abodes ?—That raises the question of turning them out into the street first, because these people who have been born in this place will not go away.

7049. It would be a good thing to send them away ?—Probably.

7050. Would not you say certainly ?—Certainly if they could be.

7051. The machinery is at hand ?—Yes.

7052. And they would have to take the consequences ?—Yes.

7053. They are certainly in the wrong place where they are, and it would not matter where they went ?—No.

7054. (*Mr. Legge.*) I should like to ask whether you are acquainted with the Day Industrial School as well as with the ordinary Industrial School ?—Yes, there is one on Castle Hill.

7055. There, as at North Lodge School, of which you have had actual experience, you are aware that one essential feature of the curriculum is that the children are only occupied at book-work, paper-work, and slate-work for three hours in the day ?—Yes.

7056. And a shorter period than in the ordinary Day School ?—Yes.

7057. The other hours being taken up with industrial training: do you think that is an advantage ?—It is an advantage, but it depends on what the children have to be at. I think for that class of children it is a distinct advantage that the reading, writing, and arithmetic should be fairly well done, and that there is some industrial training afterwards. It looks as if that is the real point, where the working woman's condition breaks down, that they have no home training; their time is spent in doing education which is not suitable to them.

7058. Your experience is mainly with girls ?—Yes.

7059. You are clear that for girls of the working classes that sort of curriculum would be the sort of thing required ?—Yes.

7060. Do you see any reason why the curriculum of the ordinary day school should not be amended in certain districts in that regard ?—No, I thought that more of the industrial work might be done in these purely industrial schools for girls—that is, more like domestic economy and house training and cooking, laundry work, and that kind of thing in schools.

7061. Would you go so far as to approve a system under which girls attending an ordinary day school were after a certain age, say thirteen, allowed to attend school only half time and be licensed out by the school authorities to help their mothers for the rest of the time, the condition of the licence being that the home was decently kept ?—Something like that might be done if their mothers were any good in their training, which I doubt.

7062. But what a hopeless position we are in if we are positively encouraging the keeping of children in an ordinary day school, because it is better for them to be kept out of their homes. Did you notice, with regard to the industrial children of whom you had experience, that they were mentally behind the ordinary outside children after a few months ?—Yes. Their purely book knowledge is distinctly below the ordinary Board School children.

7063. They are a bit more thick ?—Altogether. I considered their purely book acquirements were very much behind the child of the same age in a Board School, but their hand capacity, like sewing, knitting, and hand work, were distinctly in advance. The sewing and knitting in that special industrial school was particularly good.

Mrs. Mackenzie.

7064. Did you find that when they once made a start in bookwork their progress was slower than that of an ordinary child?—I think so. The results seem to me to be so. It appeared that they were only doing three things, reading, writing, arithmetic, and some little geography, and with this limited curriculum their progress was less than at a Board School where there was a greater number of subjects tackled.

7065. Do you think their progress was slow because the hours they gave to them were shorter?—No, I think there were many causes, probably they were late in starting, and their reading, and school work was altogether deficient.

7066. Having had actual experience of elementary schools, you will probably agree that there is all the difference in the world between the child who has, and who has not been through a well-organised infant department?—Yes.

7067. None of the North Lodge children have ever been through an infant department?—No, until they come into the infant department of that school.

7068. (*Dr. Tatham.*) I think I understood you just now to say that the drink question was really at the bottom of the greater portion of the misery, especially as regards the neglect of children?—I think that if the drink question were removed, three-fourths of the difficulty and the poverty and degradation altogether, would go along with it. I have no hesitation in saying that.

Mr. W. H. Dolamore, L.R.C.P., M.R.C.S., L.D.S. Eng., called; and Examined.

Mr. Dolamore.

7069. (*Chairman.*) You are Honorary Secretary of the British Dental Association?—Yes.

7070. And you come here on their behalf to give representative evidence?—Yes.

7071. Have you formed an opinion as to whether the condition of the teeth is worse now than formerly?—Personally, I have no doubt it is, but it is extremely difficult to give actual proof.

7072. Give us what proof there is.—If we are to make any comparison it must be a comparison between the condition of teeth at periods separated by wide intervals of time. If we go back to quite ancient times we find, undoubtedly, that the teeth were very much better than they are to-day. Thus, in ancient British skulls, not only is the arrangement good, the jaws well developed, and the teeth placed in a normal arch, but caries, if present, is of slight extent, indeed, mere specs. Some statements as regards the presence of caries in the teeth of old skulls are open to misconception, because no note is made of the extent of the caries nor of the general arrangement of the teeth. It is not fair, when a mere trace of caries exists and the teeth are normally arranged, to speak of carious teeth being found in these very old skulls without specifying its limited extent. Caries of some extent may be found in the teeth of highly civilised ancient races, as the Romans, but these are not primitive types, rather, very highly civilised persons paying, perhaps, more attention to the pleasures of the table than even we do to-day.

7073. You think that bad teeth are really a condition of high civilisation?—Probably, we had better say, of feeding.

7074. Of the feeding which accompanies high civilisation?—Yes. There was a difficulty in getting skulls of any intermediate period, and the only ones with which we were acquainted were those which are in the museum of University College, London, which were taken from a plague pit. The teeth are distinctly worse in arrangement and in the extent of the caries than was the case in the ancient British skulls; but, on the other hand, they are rather better than what we look upon as the condition of to-day.

7075. Did a comparison between these skulls at different periods lead you to the conclusion that the character of the jaw is undergoing a change?—Yes, that is so. The jaws were not as perfect as those of the ancient British.

7076. Do you agree that a progressive contraction of the jaw is going on?—If you mean an inherited tendency it is very difficult to be specific on the point.

7077. Professor Cunningham, whose name probably you know as one of the leading anatomists, who was formerly in Dublin, and is now in the Chair of Anatomy at the University of Edinburgh, gave evidence here, and he said, "It would likewise appear that in the white races of Europe the jaws are undergoing a slow process of shortening. The stunted character of the wisdom or backmost teeth, the small amount of space allotted to them, their variability, their late appearance, and indeed their frequent failure to appear at all, would bespeak this change in the jaws. Through this jaw shortening the teeth are reduced in size, more crowded together, and therefore more liable to disease. Indirectly this may tend to favour the early degeneration of the teeth, which is so marked a feature of the present age, but I take it that the real cause of this degeneration is the striking change which has taken place in the character of the food." Would you subscribe to that?—Yes, except this; it may well be that if a number of children were taken quite early and fed properly on coarse food, reproducing the conditions which exist in a less civilised state, it is quite possible those jaws might grow.

7078. In the course of generations?—Even in the individual. The jaw is undoubtedly akin to a muscular process, and the more you use it the more it will grow, and it is noteworthy in that connection that I do not think the first molar is generally smaller now than in an ancient British skull, yet the wisdom tooth is, and the wisdom tooth, as one has to remember, is not budded off until about the third year of extra-uterine life, therefore it is in a plastic condition, and if the jaw grows, one could assume that the wisdom tooth would grow, having room to develope. That is if you could feed the child so that the jaw would grow, we can assume the wisdom tooth would develop properly. One cannot, of course, speak dogmatically; you cannot rule out that there is an inherited influence—there probably is—but it is quite conceivable it might be ameliorated.

7079. To state the causes in general terms, why do you consider that the condition of the teeth is worse. Is it solely due to dietary?—No, not wholly. Undoubtedly, many sickly children survive who in previous times would have died, and there is also the effect of improper feeding quite in early infancy, so that though the teeth may start to be properly formed, yet they do not succeed in getting properly calcified; in other words, when they are cut they are imperfect, having pits and fissures on their grinding surfaces, and if they are imperfect when they are cut they never recover.

7080. And therefore they are much more prone to caries?—They are much more prone to caries. If you take a primitive condition of society, it is perfectly obvious that most sickly children would die off. For instance, take as an extreme instance, the children that Darwin met with in Patagonia, where he noted that the newly born child was carried about naked by its mother and the rain froze on it as it fell, it is perfectly obvious that every sickly child would be killed off and, therefore, only those vigorous would survive.

7081. I suppose that dirt, which you note as one of the causes of caries, was as common years ago as it is now; people did not clean their teeth more?—They cleaned them naturally.

7082. By the character of the food?—By the character of the food. I remember a northern farmer who, when he was told that he should get a tooth-brush for his boy, retorted that he had never used a tooth-brush himself, he always cleaned his teeth on a pound of steak, and that is true. If you get a perfect set of teeth, perfectly arranged and perfectly formed from the beginning and eat hard food, then mechanical aids to cleanliness are scarcely necessary.

7083. But such perfect dentition is rare, and was so at any period?—I do not think so. If you take those early British skulls, I think they were mostly perfect.

7084. If you go back to that time, but I am speaking of the last 100 years?—I do not think we can prove it is

worse than it was a 100 years ago, but that is a flea-bite in the space of time.

7085. Touching the question of degeneration or physical debility which we have to deal with, it is a matter rather of comparison between now and the last 50 or 100 years?—I should say undoubtedly in the last 100 years the conditions under which many town children are brought up has very materially deteriorated, and, therefore, *a priori* the children are brought up in the less proper way and they will have less proper teeth. The general tissues of the body may recover, so that the average life may be better than it was 100 years ago, but that does not affect the teeth.

7086. We have been told that the teeth in young children in Lancashire is perhaps worse than it is in any other part of Great Britain. I think it is noted in the Inspector General of Recruiting's Returns that there are many more recruits turned back there for want of good dentition, should you say that that would be in any degree the result of the chemical constituents in the air, owing to the noxious vapours discharged into it?—I should doubt it.

7087. That has been suggested. You do not think there is much in that?—I should doubt it. Possibly it is due to occupation, and it is also said that some water in Lancashire is very soft, in which case, in all probability, the teeth would not receive their proper share of lime salts.

7088. We have been told that as a matter of fact caries is just as often found in teeth with their proper elements of lime, as in teeth which are defective in lime?—Yes?

7089–90. You could not say it is the case, that a decayed tooth has necessarily less lime in it than a sound one?—An elaborate series of chemical investigations were undertaken by Black, and he showed that as far as analyses went there was not much difference between what we call a soft tooth and what we call a hard tooth. His investigations only concerned the dentine, they did not concern the enamel. And then again this union of lime salts with an albuminous body is a very intricate one, which I do not think is fully explained; it may be that you have a proper proportion of chemical constituents without being in the proper form. Because we, as dentists, have no doubt—I am myself convinced—that with regard to one tooth we say it is a hard tooth, and very unlikely to decay, and we see that it does not, and, with regard to the next one, we see it is a soft tooth and it does decay, and when it does it decays rapidly. So that although Black's experiments were exact, as far as they went, they are not satisfying to us.

7091. They are not applicable to the problem you have to solve?—They do not convince us that they express the whole truth.

7092. That is the case with so many scientific processes when tried by the test of facts. Then we have seen and heard a good deal attributed to what has been termed saccharomania, or debauch of sweet stuffs. Do you think the tendency among children of the lower classes to spend whatever pennies they get in sweets has much to say to it?—I think it may. Undoubtedly this fact has been noticed, that when children go for a long period to schools where sweets are forbidden teeth do not decay as much as when they stay at home and sweets are allowed.

7093. That is rather in the upper class?—Yes. It would apply to the lower class too, but, of course, it is rather a minor agency; it is not the fact of spending a short time a day eating as much sweets as can be consumed; it is the fact of continually having a sweet in the mouth that does the harm.

7094. Assuming the evil to be considerable and extensive, and due to the causes which you indicate, have you considered the remedies to be adopted?—Really, the remedy consists in appointing dentists.

7095. A supervision by a qualified dentist of the children in school?—The point is this. I tried to point out that a tooth once formed will not alter of its own accord. If you have a little hole that hole will grow big as certain as fate. If you can fill it there is an end of it; and as long as the filling lasts, which, if properly done it should, that tooth does not decay at that particular spot; another point is that if, as we admit, the majority of children have crowded mouths, and if you can relieve that crowding, reproducing as far as possible the perfect arrangement which we have in ancient times, then again there will be little or no decay. A tooth, for instance, out of its series is not cleaned even with mechanical aids, as a brush, unless you are careful. *Mr. Dolamore.*

7096. There should be judicious removal early in life?—Yes, judicious removals, and regulation of misplaced teeth, and then attention to children at school is a benefit to them not only at the time, but throughout their life. You may, by judicious treatment, give children a set of teeth which will last.

7097. You think between the ages of seven and twelve the problem of dentition for a whole lifetime may be satisfactorily solved?—I do not mean they will not decay, but you start the teeth fairly. I should have pointed out as regards the causes that much is put down to the condition of bread.

7098. When you say you would encourage the use of harder food stuffs do you mean whole-meal bread?—It means hard-baked bread. Of course, in a primitive condition the child has tough meat and so on; that is cleansing, but, nowadays, it is presumed that the child shall have all its food mashed; it is fed on pulps, and it is not allowed to use its teeth even if it would. It is alleged that flour which has been prepared by the use of rollers produces far more acid in the mouth than does stone ground flour.

7099. Would you subject every child when it goes to school to examination by a dentist, or would you give teachers certain general indications as to the cases to refer to a dentist?—No, every child must be seen by a dentist; the opinion of others is of doubtful value. That is probably the reason why the recruiting statistics vary from year to year; they depend on the individual who investigates.

7100. Have you considered what additional expense would be thrown upon school authorities by a general adoption of this scheme?—I do not think it would be very large, comparatively speaking—not as large, for instance, as teaching the piano and so on, or many extras. The child would be much better with a good set of teeth than with many so-called extra accomplishments.

7101. No doubt, there might be a readjustment of the expenditure of schools?—In all Poor Law schools the matter is enforced by the Home Office.

7102. (*Mr. Legge.*) By the Local Government Board, and in most of our schools, too?—The pauper child is better off than the one in the public elementary schools in this matter. On the training ship "Exmouth" they have been repaid by the greater number of boys they have been able to enter into the navy which is a very good illustration of the practical benefit of these dental appointments.

7103. (*Chairman.*) Do any employers of labour make any investigation?—Only in the match factories.

7104. Is that because the processes of those manufactures are injurious to teeth?—Because workers with phosphorous with carious teeth are predisposed to phosphorous necrosis I was informed the other day that in Bryant & May's factory—I do not give this as an absolute fact, but I believe it to be so—that there have been fewer men absent on sick leave since they had dentists appointed. I have been struck with the large amount of sick leave owing to dental causes among nurses at hospitals.

7105. They break down?—Yes; they have bad teeth and swollen faces, and are in bed for three or four days, whereas a little attention for half an hour would have prevented it.

7106. A great saving, and a more than commensurate saving for the original outlay, could have been effected?—Undoubtedly, if you take simply those soldiers sent out to South Africa, I do not know what it costs to send a soldier out there and bring him back again, but if you put it at £10, that means £30,000, because it is admitted that

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three thousand were sent out, and had to be sent back because of illness, etc., due to defective teeth.

7107. Are not any part of the medical staff of the Army professional dentists?—They have a few now, but they have not had hitherto.

7108. They have ignored it?—That is so.

7109. (*Colonel Fox.*) They recommended tooth brushes and introduced them into the Army, and it is found they use them for polishing their brass buttons?—I have no doubt they do. If you do not teach a child from quite young to clean its teeth, it is not likely to appreciate the benefits when it grows older. If you bring the child up in the habit it is a different matter.

7110. There are other means besides tooth brushes for cleaning teeth?—There are hard food stuffs, but it would be difficult to change the whole dietary of the nation.

7111. The teeth can be rubbed without the use of a tooth brush?—It is no use; you only polish the surface. The important thing is to clean the inaccessible places.

7112. The tooth pick will do that?—They could use tooth picks, of course, but it would take longer than ever.

7113. We have heard the stick of a used match described as a very efficient thing.—Quite so. Chinamen use a stick with its end frayed out.

7114. (*Colonel Onslow.*) And the Arabs and Aborigines generally?—I am told that the negroes on the west coast sit and polish their teeth when they have nothing else to do.

7115. (*Chairman.*) They have a very large amount of leisure?—Still the tooth brush is the quickest way.

7116. You think something might be done in school to bring children to the knowledge of the importance of keeping their teeth clean?—Undoubtedly, and I think myself it would repay to have a dentist attached to every elementary school.

7117. That every local educational authority should employ a dentist at any rate to exercise a general supervision over the children attending the elementary schools within the area of its administration?—Yes, every child should be inspected once in six months.

7118. As frequently as that?—I should say so. Once a year is the minimum, but I do not see any difficulty; it is not a very long matter to inspect them.

7119. But if it is to be done twice a year it means double the cost?—I do not know that that need be so because if you pay a man to attend in the elementary schools he is paid for the day, and he may as well fill up his day.

7120. Would you not be making larger demands on his time?—It might be, but if you are going to do the thing at all you must do it thoroughly. The additional expense is comparatively small.

7121. But there are a great many people who are very much afraid of additional expense, and unless you can show that you can get a maximum advantage for a minimum expenditure it is very difficult to get even the most excellent suggestion adopted?—If those people who objected came down to the London hospital and saw the condition of the teeth of the poor children brought there they would certainly think the money would not be badly expended.

7122. People do not have these object lessons, unfortunately. We have to put recommendations in a form which will not frighten people on the score of cost if there is to be any prospect of their being carried out?—Yes.

7123. Now on the general question, can you say that dental caries is a sign of general physical deterioration?—I do not think so. It is rather a reminiscence of a bad time in youth.

7124. It may be, and I dare say very often is, associated with bad physical conditions?—Yes, undoubtedly.

7125. But you are not prepared to say that, taken by itself, the increase in the amount of dental caries which is generally admitted at the present day, is one of the signs of physical deterioration?—No.

7126. A local condition?—Yes, at the time. Undoubtedly it tells the story of something lacking during childhood, from which the person recovered.

7127. It is stated in this memorandum, in regard to the examination of two schools in Edinburgh: "It was found that the ratio of defective permanent teeth per 100 children was 158·2 in the school for the children of well-to-do working people, and 273·9 in that for the children of a better class, professional men and merchants." That is obviously destructive of the theory that it should be necessarily regarded as a sign of physical deterioration?—Unless you look upon it that the well-to-do classes are deteriorating.

7128. Everybody seems to think they are not?—It is undoubtedly the better-class schools, in my experience, where the teeth are the worse—the higher the class the worse the teeth.

7129. That is inconsistent with any theory connecting dental caries with physical deterioration?—I agree, except that, of course, taken as individuals it is not certain that the individuals in high-class schools are better as animals than those in the poorer schools.

7130. All the evidence we have heard in this room would lead us to suppose that the question of physical deterioration and progressive physical deterioration is one affecting the lower stratum of society, and not the higher?—I think the reason is this, that the children in better-class schools, if anything, have still softer food than those in the poorer schools.

7131. And probably eat as many sweets?—Probably more. Many of them do not get the attention paid to their teeth which they ought to do, and which one would expect they would get.

7132. As to the evil consequences of poor dentition, there can be no question?—None.

7133. I mean the further effects?—It is a very serious matter, and is receiving increased attention. Certainly, in my experience, the number of patients which are now referred on account of general conditions associated with teeth is increasing.

7134. What is that in consequence of?—A dirty mouth. When the mouth is cleaned and made healthy, quite apart from providing them with artificial substitutes, many of them recover.

7135. It is merely a foul condition of the mouth?—Yes; they suffer from sapremia.

7136. (*Colonel Fox.*) Do you mean the saliva affects them?—No, I mean that carious teeth mean really cultivations of micro-organisms.

7137. (*Dr. Tatham.*) A decayed tooth is a septic focus?—Yes. And if you multiply that by thirty-two you will get an idea of the amount of filth which people swallow who have dirty teeth.

7138. (*Chairman.*) It is destructive to health and to digestion and so on, and produces all sorts of gastric disturbances?—Yes. That is probably why the soldiers were sent home, many of them, quite apart from not being able to take their food.

7139. It debilitated them generally?—Yes.

7140-2. Do you think that among domestic servants the evil is great?—That is well known. The condition of their teeth is simply appalling, not merely in towns but in the country they get soft foods.

7143. (*Dr. Tatham.*) The decay of teeth is not exclusively a matter of the poor class; it pervades society generally?—Yes.

7144. Has smoking anything to do with it?—No, I think provided smoking does not destroy the digestion

and irritate the mucous membrane it is beneficial as far as the teeth are concerned. When you see a person's teeth stained with tobacco they do not decay in the same ratio. Nicotine is of course an antiseptic.

7145. With regard to the injurious effect of sugar one has heard that the several coloured races, although they take a good deal of sugar and live very largely on sugar, have remarkably good teeth; is not that rather against the theory that the consumption of sugar deteriorates the teeth?—I think in the first place that the teeth start better, and in the second place no one alleges—at least we do not allege—that the sugar taken in and swallowed and washed out of the mouth does any harm. It is when it remains that it does harm. It is undoubtedly the fact that the sugar formed by the action of the ptyalin on the starch elements of food is far more potent than the sugar taken in as food. In other words, starch and flour are worse than sugar.

7146. (*Mr. Lindsell.*) With regard to this idea of having all the schools inspected dentally, would you make it a compulsory thing in all schools receiving State aid?—If you do not make it compulsory I am afraid you would not find many children would submit.

7147. The question of expense would come in when you deal with the Public Elementary Schools of the country?—Yes.

7148. There you see in the first place the parents would very probably object unless they were obliged?—I do not think they would if it were fairly put to them, at least after a time. I think knowledge of the value of teeth is spreading, and if parents saw the school authorities attach so much importance to it they would begin to think it an important matter themselves. My experience is that parents are very willing to take an opinion—poor people probably more than the better class.

7149. It would necessarily be done by an expert?—It is only playing at a thing to have it done by an amateur.

7150. There have been suggestions that the teacher should be asked to do all sorts of things with regard to children?—They could do but little in regard to teeth.

7151. It was suggested that the testing of the eye sight could be done without an expert?—In regard to teeth the teacher would not see the cavity of decay until an advanced stage had been reached. To be of benefit it must be done by an expert.

7152. The teacher would know the signs of irregular dentition?—They could see that the teeth were clean. It would be an advantage if they would pay the same attention to the teeth as to the fingers. They will send a child out to wash his inky fingers, and they might tell them how dirty their teeth were.

7153. Would you have a dentist attached to every large local education authority as one of their permanent officers?—Most certainly I would, and I believe, from the point of view of the nation, it would be a capital investment.

7154. Take a town of the size of Manchester, could one dental officer tackle all the elementary schools?—No, I do not think he could—certainly not; I should say about 900 children. There are 800 children in the Central London School at Hanwell, and to it a dentist goes down once a week, the expense being about £100 per annum. That is a fair guide.

7155. Should you intend the officers to operate in cases where they found the teeth defective?—It is no use if they do not.

7156. They might tell the children to tell their parents that they must be sent to the dental hospital?—The hospital could not undertake it; it would be impossible.

7157. You would have an operating room at the school, and every child would not be merely reported, but he would be attended to?—Yes. For instance, with regard to the little children who come to the London Hospital, they often have no father or mother—where are they to get money or help to get their teeth attended to? Or, perhaps, their father is out of work, and they are absolutely poverty-stricken, and yet the child suffers because it cannot get help. Only to tell them to get their teeth attended to would be simply a waste of time. *Mr. Dolamore.*

7158. I meant that they should go to institutions where the attention could be given free, but not by the examining officer?—Unless the public help dental hospitals far more than they do it cannot be done there.

7159. The actual operating would have to be part of the work of the officer?—Yes, certainly.

7160. Would not that entail a very heavy expense on the rates; would it not be almost likely to deter municipal or county authorities from doing it?—You already do it in the case of Poor Law schools, and the charge has not proved excessive.

7161. Of course, they are very small and few in number comparatively?—They are.

7162. That is done by the Union Officer of Health, is it not?—No; they have a salaried official—a dentist—appointed. I am glad to say that there is a notice issued by the Home Office that the person appointed shall be a qualified dentist; and that is the whole gist of the matter. It is no use offering these children amateurs, to do any good.

7163. It would be a much larger job to examine the teeth of the whole population than those children?—It would do far more good

7164. It might come to a very large public charge?—Supposing it cost a school of 1,000 children £200 a year—that is putting it at the outside—I do not see myself that that is so very heavy.

7165. The ratepayers are rather timid persons, especially in some counties, where there is great alarm already at the education rate; and if we are to have dentists and medical officers, and so on, very likely the ratepayer will rise; that is the only obstacle?—Those who can afford to pay might be made to pay. Of course, that is a big question.

7166. You do not know of any cases where it has been tried by school authorities?—You mean the Poor Law?

7167. No, the education authorities?—No, I do not. I do not think it has been done. Some good might be done—it would only be tinkering at it—by instructing the children in cleanliness. It would be a beginning and better than nothing.

7168. That one could do in the ordinary course of instruction. But it is the question of getting an actual examining officer, which is the crux of the whole thing. You think it would be well worth a national expenditure?—I am quite convinced that they could not spend money in a better direction.

7169. A child might pay if its parents could afford it for the actual operation?—If it could afford it, certainly. But my point is that you must not shut out the quite poor children who really need help by the fact of demanding their pence. That would nullify the good of the whole thing.

7170. You think free tuition ought to include free dentistry?—If it is desired to do anything to check the prevalence of caries that is the only solution of the difficulty.

7171. (*Colonel Fox.*) How do you account for the disappearance of enamel—the wasting away of the enamel entirely?—I do not think it is common.

7172. How do you account for it?—Supposing it did occur?

7173. Yes?—I should say in all probability you would have to find some acid. Occupation may have something to do with it. I am told that with the girls at pickle and jam manufacturers that happens very frequently. I am told the fumes of the acids coming out of the tubs appear to act on the teeth, causing them to dissolve.

7174. I have known of several cases of people who have lost the enamel of teeth without them decaying, and that tends to show it is from the saliva—some acidity in the saliva?—In the case of better class people they probably brush it away—there is such a thing as excessive brushing.

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7175. (*Colonel Onslow.*) I think you have already said that bad teeth are not peculiar to any one district in England?—No.

7176. That is borne out by repeated experience?—Yes.

7177. You find the same thing all over the country?—Yes.

7178. It is intensified in some places by the nature of the employment?—Yes; but both as regards the influence of employment and locality, statistics are needed.

7179. The Northampton shoemakers are very bad, are they not?—I do not know about that. But I know in the Lancashire districts they are really very bad.

7180. And also in the country districts?—Yes.

7181. In Northampton the shoemakers are always holding some nails between their teeth, are they not?—That causes only a trade mark—a peculiarity—a notch is worn by the nail.

7182. It is due to employment sometimes?—People like millers and jam-makers and pastry cooks are undoubtedly affected by those employments. Millers' teeth are very bad, and so are pastry-cooks'.

Mrs. W. B. Worthington, called; and Examined.

Mrs. Worthington.

7183. (*Chairman.*) You are prominently connected with the Manchester Ladies' Public Health Society?—Yes.

7184. Are you the president of that society?—No, I have sometimes temporarily taken the duties.

7185. You have been familiar with its operation for some years?—Yes, for fourteen years.

7186. Will you kindly describe generally what its operations are?—Manchester may be taken as having a business centre and then a band of cottage property, and then the suburbs. The cottage property where the working people are is roughly divided into districts. Each of these has a Lady-superintendent and a Health-visitor. The Health-visitor lives in the district, and spends her time in the work. We work in conjunction with the corporation, with the medical officer who pays part of the salaries of the visitors.

7187. The visitors are really municipal officers?—Not altogether; it is a joint control.

7188. The municipality pays part of their salary and the rest is defrayed by voluntary means?—They pay half the visitors on the understanding that they receive assistance from all of them. It is merely for convenience that they are paid in that way.

7189. The medical officer has the first call upon their time?—Yes.

7190. And the rest of their time is at the disposal of the Ladies' Public Health Society?—Yes, but it is not in any way divided; there is no separation; it is all in one line.

7191. Does that system work well?—Yes.

7192. Is not there sometimes a collision of allegiance?—So little that it can be left out of mind.

7193. The sphere of these ladies work is restricted to this cottage property—those parts of Manchester inhabitated by the poorest?—Yes, and the respectable labouring class.

7194. Is there any standard of wages or house rent which determines the class of houses to be visited?—No, practically the districts contain very few houses which are not of the class which is wanted.

7195. You go down to the lowest?—Yes.

7196. Are your investigations limited to the houses where there are young children?—No; all the houses in the district.

7197. And therefore they are still less limited to the houses which have babies?—They are not limited to those.

7198. It is a general agency?—It is the houses where there are babies which have received special attention of late.

7199. With a view to informing mothers as to the best methods of bringing up young children?—Yes.

7200. Will you explain how the system works?—The Health-visitor practically arranges her work and what she has to do for the medical officer. If she had to visit several hours for him in a certain part of the district she would do the rest of her work in that district.

7201. That is her municipal work?—Yes, she goes from house to house and does anything she can find to do. She may find a house without a mother and put the children into the way of doing something. She also reports all sorts of sanitary defects in the houses.

7202. Does she report to the health society or the municipality?—To both. The forms go to the medical officer first and then they are sent on to us, after he has extracted the information he wants.

7203. Does the Ladies' Health Society think it part of their duty to bring insanitary conditions to the knowledge of the municipality?—Continually.

7204. Does it report cases of overcrowding?—Yes, and of stopped drains and so on, and structural defects.

7205 Any conditions which are prejudicial to health?—Yes..

7206. Whether of a temporary or permanent type?—Yes, but that is rather provided for in the form used. (*Document handed to the Chairman*).

7207. Can you explain what action the municipality takes upon the receipt of information of this kind?—They generally send an inspector at once.

7208. You mean that the result of the operations of the society is that any evil which is noted is put right?—It is put right before very long.

7209. How about cases of overcrowding?—They are very difficult to discover.

7210. I suppose there is a great deal of overcrowding in Manchester?—Yes, but not to the same extent as in other places.

7211. There has been more improvement in Manchester than in some other towns of smaller size. Do you think it would be practicable in the course of, say, a year or two for any local authority to declare that after a given date one-roomed tenements with more than two occupants, or two-roomed tenements with more than four should be deemed a nuisance and closed?—I should not think that would come within a year or two.

7212. Do not you think it is a goal at which we ought to aim?—Certainly.

7213. Why should it not come within a given period—You cannot do it very quickly. You have to displace the population, and there must be a place to go to.

7214. If you notify that, after a certain time, the local authority would deem cases of that sort nuisances under the Public Health Act, and be prepared to deal with them, do not you think it would have some effect for preparing the public mind for what was to come?—Yes.

7215. And assist development when the time did come?—Yes.

7216. Is not there some deadness of appreciation of the evil owing to the way in which it is ignored?—I do not think there is any deadness of appreciation in Manchester. For instance in the particular district in which Mrs. Bostock works, South Ancoats.

7217. That is the worst district, is it not?—No, not nearly.

7218. We have heard it described as such here?—Perhaps that is Ancoats as a whole, but parts are worse than South Ancoats, but that is quite bad enough. Fourteen years ago there were over 300 back-to-back houses, the majority of which had not ordinary sanitary conveniences; many had no tap or anything of the kind. There are now about twenty of those left.

7219. There are plenty of houses with no separate water supply?—Not many, not more than twenty.

7220. In this district, you mean, not in the whole of Manchester?—No, in this district. That is the one we know most in detail, and it is quite a representative one.

7221. Will you explain the processes by which knowledge of domestic duties generally, hygiene and sanitary information, is given to the people?—The chief part of the work is done by Mrs. Bostock in her house to house visitations. My own part is chiefly collecting such of the women as we can for mothers' meetings, which we find an extremely useful organisation. We use these very much to prepare public opinion.

7222. Do the women who attend meetings of that description act as propagandists among their associates in the areas in which they live?—Some do certainly.

7223. Do you think it has the effect of popularising notions of a higher standard of domesticity, and so on?—Yes, without doubt.

7224. You have observed that from your own experience?—Yes; we do not look for great results, but we continually see small results in places we know of.

7225. The way is prepared for the systematic visitation that the visitors make, I suppose?—Yes, that has happened rather incidentally, of course, I began talking on the question of consumption years ago, before there was any systematic consumption work, and that helped to prepare the neighbourhood for that work, and it made it easier for Mrs. Bostock to do it. She had very little difficulty in getting admitted into the homes because a notion was spread abroad of what it meant.

7226. Has it had any important effect as yet on the young children of Manchester?—That is rather difficult to say, because of course the infant death rate has been decidedly lower the last two summers, owing to cool weather.

7227. The mothers accept with gladness, as a rule, the advice which is given them?—The young ones almost invariably.

7228. Do they apply it?—Yes.

7229. Systematically?—Yes.

7230. Are the opportunities for proper feeding, if the parents wish to give it, sufficient in Manchester: is the milk supply brought within reach of the poorest class?—It is always an expensive thing.

7231. There is no attempt, as I understand, towards municipal distribution of supply?—No.

7232. (*Mr. Legge.*) There has been in other big towns in Lancashire?—Not in Manchester.

7233. It might be done very easily. Have your society considered the subject?—It might, but we are rather inclined to insist on the individual instruction of women.

7234. Have your efforts had the result of making more mothers suckle their children?—I do not think so, because they do that when they can.

7235. You think they do?—Except those that go out to work.

7236. Of course that stands in the way of a great many doing it?—A good deal of influence has been brought to bear upon them to adopt regular hours and not be quite so miscellaneous in their feeding operations.

7237. You think they have now some settled notion of what is the best type of food to give the children?—Yes.

7238. Have you any syllabus of your instruction?—Yes.

7239. I observe you are of opinion that a great deal of the physical degeneracy which is noticeable in Manchester is due to causes which have spent themselves?—Yes, but their effects remain.

7240. But it may be hoped that the next generation will be freer?—I think there is quite room for hope. They are certainly getting a little better housed, and I think a little better fed by degrees.

7241. Owing, largely, to the advice tendered by the agents of your society?—Partly to that, and partly to food being cheaper.

7242. I think, as a matter of fact, increased poverty is not the cause of worse feeding now as compared with thirty or forty years ago. I suppose that wages are better all through?—Oh yes, and things are so much cheaper, and they can get more varied food.

7243. In both ways they are very much better off?—Yes, they have to learn a great deal in the way of cooking and also in the way of expenditure. They spend very foolishly.

7244. That is due to the lack of proper instruction at school, as far as young mothers are concerned?—Yes.

7245. I do not know whether you have any intimacy as to the process of teaching at cookery schools?—Yes.

7246. You would probably agree that that might be made much more practical than it is?—Some are very practical indeed.

7247. We have heard a good deal of evidence as to a great many schools not being so—I mean the conditions of the homes of the poor are not reproduced with sufficient accuracy to make the knowledge gained in the school of much use when it comes to be applied in the child's own home?—I think that may be carried too far, because you do not want to teach a girl to be satisfied with too little.

7248. There must be a difference in degree, but similar in kind?—Yes.

7249. Otherwise the knowledge is no use, because there is no means by which it can be applied?—I think there are extremely practical cooking lessons given.

7250. I daresay there are in Manchester, but we have been told here by a great many witnesses that there is a great lack of proper adjustment of means to an end in that way?—It certainly began in that way, but I think things are gradually righting themselves as time goes on.

7251. We are approximating to a better standard of achievement?—Yes.

7252. (*Dr. Tatham.*) I should like to ask you a few questions with regard to the increase in the operations of your society. How many members of your association have you now?—We have twenty-three districts and most have only one lady over them, but some have two or three. I think there are about thirty ladies altogether.

7253. That is a considerable increase over the number there were ten years ago?—Yes.

7254. I think you said you have twenty-three districts?—That includes Salford. There are sixteen in Manchester.

7255. They work together in connection with the Manchester and Salford Sanitary Association?—The connection is only nominal.

7256. But the two are connected working on similar lines, are they not?—It is quite a separate thing.

7257. It has become a separate thing now?—Yes, the only connection I think is that they print part of our report in theirs.

7258. Would it be correct to state that the operations of the society extend as far as they can to all the back spots of Manchester and Salford?—That is the aim.

7259. What proportion do you think of the insanitary property of Manchester and Salford is now under the care of your society?—In Manchester we cover most of the ground I think. Of course it is gradually spreading. But what spreads beyond is generally a little better than what is inside. I think if we had the power of setting up another health visitor we should rather prefer to subdivide some of the districts we have, rather than take in a new one, although there are two or three parts where we should be glad to have a new one. The most pressing parts are covered. But that is not so in Salford; there are several points there that ought to be covered.

7260. Which are still unprovided for?—Yes.

7261. But in Manchester you think you have covered most of the worst districts?—Yes, the worst parts.

7262. Are the Manchester Corporation paying for a larger number of visitors now than they did ten years ago?—Yes, they pay half now.

7263. For half of the district?—Half of the sixteen.

7264. They pay their entire salaries?—Yes, but they do a great deal of work for Dr. Niven.

7265. What sum per week do they receive?—Only 16s., I am sorry to say. We are now making an effort to raise it.

7266. Has the society any hope of being able to increase that very modest allowance?—Yes, we hope to do it before long; we are extremely impecunious, but we mean to do it.

Mrs. Worthington.

7267. (*Dr. Tatham.*) I am sure there is enough public spirit in the Corporation to assist you.

7268. (*Mr. Struthers.*) That is the whole pay?—Yes.

7269. (*Dr. Tatham.*) Is it your experience that the visits of the district visitors are becoming more and more appreciated as time goes on?—Yes.

7270. And, of course, that encourages the society to extend its operations?—Yes.

7271. The one thing needful, I suppose, is the pecuniary means?—Yes, we could do much more if we could subdivide the districts so as to get more house to house visitation.

7272. (*Chairman.*) What income have you, may I ask.

7273. (*Dr. Tatham.*) It is a variable quantity?—Yes, from subscriptions. We need eleven times 16s., plus the printing expenses, exactly. We have no other expenses, but we generally have a deficiency to make up at the end of the year.

7274. Speaking generally what is your general impression as regards the condition of school children in thos districts you speak of: is it really visibly improving as compared with thirteen or fourteen years ago?—I think so, decidedly.

7275. That is patent to almost any one going in?—I think so.

7276. Have you any reason to think that that is largely due to the operation of your society?—I think it has something to do with it. I think it is one of many factors.

7277. And I think one of the most important. Do you think that such neglect as you observed amongst the poorer classes of mothers, neglect of their children, is due to poverty, or is it because of ignorance?—I think the vast mass is due to a sort of sloppiness of mind produced by ignorance—they do everything badly.

7278. General incompetence?—Yes, physically and mentally. They do not know how to do anything properly.

7279. They do not know how to cook food for their children or their husbands?—No.

7280. Or to keep their house in order?—No.

7281. That implies, I take it, very imperfect education by their mothers?—Yes.

7282. I am afraid it is so now, as it was many years ago when I knew Manchester, that drink is at the bottom of much of the misery and distress in those poorer districts?—Yes, certainly, but the ignorance is in a great measure the cause of the drink, of course.

7283. With regard to the operations of the Salvation Army, do you know anything about their work in Manchester?—Nothing at all.

7284. (*Mr. Legge.*) When you say that the health visitors visit all houses where there are infants, to give health and instruction to the mothers, are we to take that literally?—Literally.

7285. All mothers? Where do you draw the line as to the class of mothers; you would not invade a respectable dwelling-house?—There are not many of the better class houses in the districts.

7286. You only take certain districts which you schedule for yourselves?—The health visitors receive the names of the infants from the medical officer, and it is rather unfortunate that they do not get them until they are registered, so that they do not get them always at the very start. If they know of the infant themselves they can go from the beginning, but the lists are sent by the medical officer when they are registered.

7287. The lists of certain districts?—In the districts in which they work.

7288. And then they visit every single one?—Yes.

7289. Do they pay periodical visits after the first?—Yes.

7290. Can you give us the statistics in tabular form, showing the actual number of births and visits rendered in particular districts in Manchester?—I am afraid I have not them.

7291. Could you get them and send them to us?—Certainly.

7292. We have heard so much of attempts to attack these sort of problems, which merely touch the fringe of things, that it would be rather interesting if we could get hold of one which covers the ground and find out what the extent of that ground is?—Yes, there would be no difficulty about getting the figures.

7293. What sort of people do you get for this 16s. a week?—It is getting increasingly hard to get the right kind.

7294. What sort do you get—people who have some other money as well, I suppose?—No, in many cases not, in most cases not. The mere fact that they know what it means to live on 16s. a week gives them a very great power.

7295. Most are not those who are interested in the work, and who are fairly independent in their own circumstances?—No; we have some with other sources of income, with husbands or sons.

7296. (*Chairman.*) It is not from benevolence that they take it up?—No, we have none as amateurs, and the majority depend entirely upon themselves.

7297. (*Mr. Legge.*) What qualifications do they possess?—Practically they learn their work in the doing of it.

7298. You say they are well instructed in the technique of infant feeding, are they probationers for a time?—They are generally taught by those who have been doing the work for a long time. And then periodically we get lectures or lessons on the subject. At the end of last year they were all put through a very thorough course of infant feeding, in great detail.

7299. Who gave the course?—Mrs. Crosbie, from London, who has taken a great interest in it.

7300. Who arranged the course?—The medical officer. Sometimes we arrange the courses ourselves. The great difficulty about the infants is that very many are not caught until they are registered.

7301. (*Chairman.*) What lapse of time does that amount to—three or four weeks?—It may be as much as six weeks.

7302. (*Colonel Onslow.*) It is registration of birth not medical attendance?—The medical officer gets the figures from the registrar.

7303. (*Chairman.*) Do not the mothers knowing the value of the organisation give information themselves?—A great many of them are known beforehand but not all.

7304. (*Mr. Legge.*) Has it ever been seriously considered between your society and the medical officer of health whether these intimations could not be expedited?—No.

7305. Where does the medical officer of health get the information from?—The registrar.

7306. Has not it been considered whether the registrar could not send you duplicate notices at the same time as he does to the medical officer of health?—There is practically no delay there.

7307. You mean the delay arises between the registrar and the parents?—Yes, the parents delay in registering a birth. There are six weeks in which to register. Of course most of them are very dilatory, and put it off as long as they can.

7308. Supposing any registered practitioner or registered midwife had to give notice, that he or she had been called in, would not that help matters?—Yes, it might.

7309. (*Chairman.*) Now you have a better class of midwives under the Midwife's Act, it might become possible.

7310. (*Mr. Legge.*) It might be made an essential part of the person's duty to notify?—Yes.

7311. (*Chairman.*) That could be easily done in Manchester, where a sanitary authority gives the certificate to the midwife in the district; they could make it a part of their duty to report every birth to the Health Society, because they could impose such conditions within reason as they like on the midwives to whom they give certificates?—Yes.

7312. (*Mr. Lindsell.*) Do I understand that the care and nurture of infants is the special work of your society above all others?—It was only one of many originally, but the medical officer has been taking such an extreme interest in that of late that the work for him has taken rather that form.

7313. You have rather concentrated your energy on that particular branch of charitable work ?—Yes.

7314. And it appears to be your deliberate opinion that a great many of the worst causes are no longer operative in Manchester ?—Yes, and yet that sounds too optimistic. Things are bad enough, but I think the worst cases are gone. I think things are certainly better.

7315. The great evil you have now to grapple with is sheer ignorance ?—I think so. It seems to me that poverty, great as it is, does not do so much harm as the waste of the money they actually have. If families were to use the money to the best advantage it would make an enormous difference.

7316. Do you think the evil effects of drink are increasing or decreasing. If drink is caused by ignorance, it ought to be diminishing to some extent. Do you think, in your experience of so many years past, the drinking habits of the lower class have increased or diminished ?—I am afraid I do not see any difference.

7317. You think it is about the same ?—Yes.

7318. Have you noticed any increase in drinking on the part of women ?—I should not say it is on the increase.

7319. You do not think there is an increase of drinking on the part of women ?—No ; I do not think so. Mrs. Bostock's opinion will be more valuable than mine on that point.

7320. (*Colonel Onslow.*) With regard to the weekly meetings held in each district for the purpose of giving information—what class of women attend those meetings —the very lowest class ?—Not absolutely the lowest class.

7321. You do not get the slums ?—Not the very lowest class, but very poor ones.

7322. It is not the class who really require more instruction—not the most ignorant ?—We get them quite ignorant enough.

7323. They are ignorant of household duties and the care of children ?—Yes.

7324. And they do attend in good numbers ?—The average attendance at my meetings is about 100.

7325. Are they from the same body—are they from the same class of women coming over and over again ?—A good many of them have come for fourteen years—and stayed on, but a vast number change.

7326. So that the principle is really disseminated rather widely—it has spread about ?—Yes.

7327. With regard to the cooking instruction which we were mentioning. These cooking classes generally go rather above the requirements for a cottager, do they not—beyond a labouring man's wife ?—They do not all by any means.

7328. I mean are the utensils which are used such as would be used in a cottage ? We have heard of these cooking lessons being given over a gas stove. You would not find a gas stove in any labourer's cottage ?—No, but the reason of that is, of course, that you cannot get anything but gas stoves in the place where you have to give lessons.

7329. Could not lessons be given in some cottages ?—That is sometimes done.

7330. Do the ladies of the Public Health Society undergo any special instruction themselves, or are they particularly selected ?—No, they are quite voluntary.

7331. It seems so important in dealing with the very poor, or indeed with any poor, that whoever comes in contact with them should know how to deal with them, is it not ?—We should be very glad if we could get a more trained class of lady to do it. Most of those we get have to gain experience in the work.

7332. And are liable to be deficient in tact, I think ?—They are likely to be over charitable.

7333. Or, perhaps, over fussy ?—Sometimes.

7334. I suppose you are very careful in the selection of your workers ?—Yes.

7335-6. In a general system it would be necessary to be so ?—Yes.

7337. It does not do to rub up the people the wrong way ?—Yes ; it has been wonderful the little difficulty we have had ; very few of the health visitors have had any difficulty in that direction.

7338. (*Mr. Struthers.*) What you say about the teaching of cooking in schools is from your own experience ?—My knowledge of teaching in the schools is in quite a separate sphere from the health visiting work. I am on the Salford Education Committee and know something of their work.

7339. But you do know the actual conditions of cookery classes in schools ?—Yes.

7340. Have you attended frequently ?—Occasionally.

7341. I must say my impression of some of the ladies who have given us evidence on this point is that they have not seen the actual condition of the cookery classes and that, when they say cooking is carried out in a way which is not suitable for the people for whom it is given. I am very doubtful whether that is the case or not. I am glad to find that is not usually the case in your experience ?—I am always hearing of cases where the girls go home and make things.

7342. So far as you have seen it, it is generally suitable; you think ?—It is fairly suitable, but it would be of little use to give instruction in cooking such as the very poorest will do, because there *is* no cooking ; they have to set the ideal a little bit higher than that.

7343. The cookery is the kind of thing which should be given to that class of girls in a school ?—Yes, I think so.

7344. In the hope that they or their mothers will do something like it at home ?—Yes.

7345. With regard to the lessons being on a gas stove, instead of over a fire, I suppose the Corporation supplies gas very cheaply ?—Yes, but I do not think there are many gas cooking stoves in cottages.

7346. In Glasgow, I know the cooking stove is very largely used because of the very low price of gas ; and one can understand, at any rate in certain districts of the town, the cooking stove being more used than the open fire ?—They need the fire for warmth nearly all the year round. It comes very expensive if you use gas for heating purposes. It only comes cheaper by being used when it is wanted.

7347. If the price of gas is very low ?—It is not so low as that.

7348. (*Dr. Tatham.*) Coal is cheaper in Manchester ? Yes.

7349. (*Mr. Struthers.*) But even supposing they did it on an open fire, do you think the cooking is greatly affected by the fact of whether it is done in one way or the other ?—No.

7350. You boil a pot or fry a pan in very much the same way ?—Yes.

7351. And if they can boil something on a gas stove they can boil it on an open fire ?—I think so.

7352. And the dishes which they use must be the ordinary cookery dishes, and there would be the ordinary spoons and ordinary frying pan and so on ?—Yes. They use quite ordinary things, which each house ought, at any rate, to aim at possessing.

7353. What sort of things ? Do they teach them to cook mutton broth ?—Yes, and potato pies.

7354. Shepherd's pie ?—Yes, and plain puddings. I must say they do not entirely confine themselves to those ; they sometimes teach how to cook rather more elaborate things.

7355. It gives the girls an interest in cooking, now and then they give them a special dish which they fancy, but which is not necessarily very costly ?—I think so.

7356. The girls like something out of the way of the ordinary plain cooking, just for the sake of variety ?—Yes.

7357. And it is not unreasonable that they should have that from time to time ?—I do not think so.

7358-9. So long as it is not expensive ?—The materials used are generally extremely economical.

Mrs. Worthington.

7360. These are generally the kind of things which they have in the cookery classes?—Yes.

7361. As regards the general work of your society, I take it that in a given district you work from the top downwards. You begin with rather a better class in that district, which is a very poor one?—That was the class which was induced to come to the mother's meeting first, but as regards the house to house visitation, that goes on through all.

7362. I rather gathered this from one of your remarks, in which you speak about overcrowding so far as you knew it. Does that mean that the houses in which there is a likelihood of overcrowding are less visited than the others?—Overcrowding is very difficult to find out. There may be a family going out at the back when the visitor comes in at the front, and so on.

7363. Of course, the health officers of your society have no right of entry into a house?—No.

7364. They have no practical difficulty in getting it?—Very rarely.

7365. Are they refused at all?—I do not think my health-visitor has ever been refused. There have been refusals in the cases of some of the visitors, but very few.

7366. In a house where there was overcrowding, and they did not want it to be known, would not there be a chance of their refusing?—Sometimes nobody answers when you knock.

7367. But, practically, there is very little difficulty about getting admission?—That is so.

7368. How long has this society been in operation?—Something over forty years, I believe. It has only been worked in conjunction with the corporation for fourteen years, so that it has rather altered its shape.

7369. You have told us of certain things which clearly show that there is an upward tendency of the condition of people in the districts which you are dealing with, but is not there any statistical evidence of any general improvement in these districts during the fourteen years you have been connected with the corporation? Improvement, for example, in the death-rate in the district which you work in?—The infant death-rate is a little better.

7370. Not much in the fourteen years?—It is a little better.

7371. I am speaking of the particular districts which you schedule out?—Those are parts which bring the death-rate up.

7372. On the point of overcrowding, if a man and wife have three or four children, and only have money to pay for one room, what could you do?—I do not think you can do anything when they are all one family.

7373. You must allow them to live in one room?—Yes.

7374. You do not see any other way of doing it?—I am not sure that you have the right to interfere if they are all of one family.

7375. (*Chairman.*) The law makes no distinction at all?—It is much rarer to have one room in Manchester than in London. It is very unusual there.

7376. (*Mr. Struthers.*) Take the case of a man and wife, and five or six children in two rooms; that is about equally difficult, is it not? You do not call that overcrowding?—No.

7377. What would be the definition of overcrowding?—Eight in one back-to-back house, counting two of the smaller children as one—they say that is not overcrowding. I think it would be better if you asked Mrs. Bostock that.

7378. (*Chairman.*) With regard to the point which you raised, the law is, "Any part or part of a house so overcrowded as to be dangerous or injurious to the health of the inmates whether or not members of the same family" is a nuisance.

7379. (*Colonel Fox.*) You state in your *précis* that you find the main cause of physical degeneracy in Manchester is purely ignorance?—The main cause at present operative.

7380. The main cause, at the present time, of physical degeneracy in Manchester is purely ignorance—you mean as to what food is best for the children?—No, ignorance in a very wide sense.

7381. Ignorance on the part of the public?—I mean ignorance including drink, which I look upon as the result of ignorance.

7382. Do you think that drink is the cause of poverty in a great many of these cases?—Certainly.

7383. That is one of the main causes of poverty among the poor classes?—Yes.

7384. In your health visiting report I see you mention leaflets?—Yes.

7385. What are those leaflets; what do they deal with—drink?—No. There is one called "Hints to Householders," and another "Infant Feeding," and another on "Consumption," and so on.

7386. Do they read them?—They would not be the least use if simply left at the house, but Mrs. Bostock will tell you that she reads them out and draws attention to them. The mere leaving of a leaflet from house to house is absolutely useless.

7387. Then, as regards cooking, do you find a family living in one room?—We have very few of those

7388. With regard to those that have more than one room, how many rooms do they have on an average?—Two, three, and four roomed cottages.

7389. Do they have sitting-rooms in some of them?—Yes, a great many waste their best rooms.

7390. The sitting-room is not used?—That is so.

7391. Except, of course, on state occasions?—Yes.

7392. Have they facilities for cooking, or do they buy their food ready cooked outside?—That is the lazy habit.

7393. Is it not rather common?—Yes.

7394. Instead of taking the trouble to cook—or rather it is their ignorance in not knowing how to cook—they are forced to buy their food outside?—Yes.

7395. Have you had experience of seeing a girl who has left school cooking in one of those cottages or houses?—I have not seen it, but I have heard of it.

7396. (*Chairman.*) Is this ignorance aggravated by insensibility to the interests of children to any large extent?—Do you mean is it active unkindness?—

7397. Yes?—I do not think there is much active unkindness to children except under the influence of drink.

Mrs. Bostock, "Health Visitor," called; and Examined.

Mrs. Bostock.

7398. (*Chairman.*) Supposing you are summoned to the house of a woman who had just given birth to a child, absolutely devoid of any knowledge as to its proper care and attention, and nutriment, and so on, what do you do?—I teach her to the best of my ability, but I do not know that I am summoned straight away.

7399. When you are summoned?—After the baby has come?

7400. Yes?—Perhaps I would tidy up the place and teach her how to begin to feed the baby.

7401. You would make yourself responsible for the proper care of the child, in a sense?—In a sense, and I would do whatever I could.

7402. And give the mother all the information you can as to what was wanted for the diet of the child?—Yes.

7403. Do you find she readily accepts your ministrations?—Yes.

7404. With regard to these leaflets which Mrs. Worthington was describing just now, do you make her familiar with the substance of them, so far as you deem it to be useful?—Yes.

7405-6. And you think that she studies them afterwards; do you awaken sufficient interest in her mind to lead her to study them afterwards, and apply the lessons she derives from them?—Yes, we often see those people even before the baby comes.

Mrs. Bostock.

7407. Of course a woman who has had one or two babies under her care is able to apply the knowledge on the third occasion without much assistance from you ?—Yes.

7408. Do you take any steps to see that she gets milk supplied to her in proper utensils ?—We do the best we can with them with whatever they have got.

7409. You do not make any arrangements with vendors of milk to supply the milk in a form which renders your ministrations easier and more efficient ?—No, we cannot do that.

7410. Can you not ?—No. If we know a good milk shop we tell the woman to go there. That is the only thing we can do.

7411. Is it not very necessary that the milk for each meal should be in a separate utensil with a view to its being kept pure ?—No, our suggestion does not say so. It is prepared to last twenty-four hours and it must be kept in a cool place.

7412. You do not think there is any risk of contamination ?—In extreme cases it would not be wise to suggest that, because it could not be kept nice over the whole twenty-four hours.

7413. The cool place does not exist in these cottages I suppose, at any rate in hot weather ?—No.

7414. (*Dr. Tatham.*) How many years have you been working as a district visitor ?—Fourteen years.

7415. What particular district are you working in ?—South Ancoats.

7416. Is that the district that you have looked after during the whole time ?—Yes.

7417. When you go to a house do you find now that people are generally glad to see you and welcome you ?—Yes.

7418. When you began the work the Lancashire people were rather suspicious, were they not, and wanted to know what your business was when you went ?—Yes.

7419. Did you find it took some time to familiarise the people with your work and with the object of your visiting them ?—I had a system the first time. I went all through the district, visiting house to house and made myself known at every place. There were a few places where I could not get in very well, but the neighbours told each other, and then of course they were rather sorry I had not been in.

7420. The neighbours talked to one another, and told one another what your business was, and then you found them glad to see you the next time you came ?—Yes.

7421. How many houses have you got in your district ?—1,500.

7422. Do you find the houses improve very much in recent years, with regard to cleanliness ?—I do. There is a great improvement.

7423. I think you have a regular report book, have you not, in which you enter the visitations from time to time, and what you find there ?—There is not a book now, because our system of visiting is on that sheet which I handed in.

7424. You enter there the result of your visits ?—Yes.

7425. And those large sheets are sent to the sanitary authorities ?—Yes.

7426. And as a result of your reports I suppose the sanitary inspectors take up the visits ?—They do.

7427. In case any sanitary evil wants removing ?—Yes.

7428. Do you find the result of your first visit sometimes leads to the removal of a nuisance ? Do you find opposition on the part of house agents to your work ?—No, I do not find very much, but I do not know how far that goes on with the inspector, because he will come into direct contact with them.

7429. You come into direct contact with the sanitary inspector ?—The sanitary inspector will come into direct contact with the agent.

7430. You think the sanitary inspector gets into trouble occasionally with the owners of property because of his having caused them to carry out sanitary improvements ?—He might.

7431. At any rate, so far as you are concerned and your colleagues, you do not find much difficulty ?—No, we are able to get things done which would not be done otherwise.

7432. With regard to the food of children, do you find that mothers generally are anxious to know how best to feed their children ?—They are anxious.

7433. And they are much obliged to you for showing them how to do it ?—I have repeated calls at my house for one of these pamphlets. (*A copy was handed to Dr. Tatham*).

7434. You say you explain the contents of this circular to the mothers ?—Yes.

7435. And they take an intelligent interest in it ?—Yes.

7436. And you say from what you know of the mothers in your district that as a rule they are neglectful of their children ?—Not wilfully.

7437. If they are neglectful it is because of ignorance ?—Yes.

7438. Because they know no better ?—That is so.

7439. Where children are neglected and sent to school half-starved as they sometimes are, do you think that is in consequence of poverty or in consequence of the drunken habits of the parents ?—It is due to both causes, I think.

7440. Are there not a great many cases in which, though the wages are sufficient, the parents, being of dissolute habits, simply will not provide for their children ?—That is very rare.

7441. I am glad to hear that. In some cases it does exist ?—We do occasionally find a case.

7442. You think in that respect people in your district are improving distinctly ?—I do, distinctly.

7443. As far as you know, is drunkenness on the increase amongst those people ?—I do not think it is.

7444. You think not ?—No.

7445. Are the women given to drink ?—I do think there is quite as much among women as there has been.

7446. With regard to the feeding of children, do you think speaking generally that the poor children get much milk at all of any sort ?—The very poor ones do not.

7447. Practically they get nothing but what the family happens to be taking at the time ?—Yes.

7448. Tea, I suppose ?—Yes.

7449. And sometimes I suppose even more harmful things than tea ?—There is not a much more harmful thing than tea to young children.

7450. I mean sometimes they get stimulants administered to them ?—I do not think there is much of that now.

7451. You do not think they do so to any large extent ?—No, they do not. I find it is very rare now, anything of that kind.

7452. Do you think there is much use of soothing syrups, cordials, and things of that sort, amongst the poor of your district ?—Yes, I found at one time a great deal of it, but not now.

7453. That may be fairly laid to the account of the work of your association ?—If you tell them it is absolutely harmful, they quite see it.

7454. Do you know anything of the work of the Salvation Army in your district ?—Very little.

7455. They are doing some work, are they not ?—Yes.

Mrs. Bostock.

7456. Do you come in contact with them at all?—Not often.

7457. What do you think would be the principal hindrance to your work amongst the poor?—I do not find any hindrance to our work.

7458. You are quite satisfied with the means you have of working in your district, and carrying out the necessary work there?—Yes.

7459. And you have no knowledge of any districts other than your own?—No, I have not.

7460. (*Mr. Lindsell.*) You put down excessive tea drinking as very high in the scale of deleterious compounds?—Yes, for young children.

7461. I suppose good wholesome beer would be better for them?—Oh! dear no. I should think milk would be the best thing for children.

7462. Do you find the bad effects of tea go beyond young children?—I should not suggest tea at all for young children.

7463. I suppose the tea that people drink is boiled and kept until it gets very black?—As a rule it is.

7464. What do these young children get in the more ignorant families? If you went in and found a mother feeding a one year old baby, what would she be giving it?—If she gives it tea it is wrong, but they do do it—tea, and bread and butter.

7465. Bread and butter would not be so bad, but do you find them giving them the remains of their tinned food and things they have themselves?—Yes.

7466. We have had cases mentioned of quite little babies being fed on tinned lobster?—That does not come within the reach of the very poor.

7467. Do not they get a very great deal of those tinned foods compared with what they did? That does not strike you?—No.

7468. Because we have heard it said that in some districts there is a great use of tinned foods, and what the parents do not eat themselves they give to these little tiny babies?—The tinned foods do not come into the hands of the very poor—it is a luxury.

7469. What do they live on?—Soup. We tried to encourage porridge, but they would not have it; it is too much trouble.

7470. That would be an excellent thing, but then you want milk?—Not necessarily milk.

7471. Is not milk as expensive as tinned foods in the same proportion? If a man was too poor to get tinned food, would he be too poor to get much milk?—No, milk would be within their reach much better than tinned food.

7472. Do you confine your remarks to people in the extreme of poverty, or people on fair wages? What does the ordinary artisan's wife prepare for her daily meal?—Tea and bread and butter for breakfast, potatoes and herrings, perhaps, for dinner, and tea and bread and butter for tea.

7473. (*Chairman.*) Herrings are a very good food, are they not?—Yes.

7474. (*Mr. Lindsell.*) Do they have meat?—Yes.

7475. You are not much impressed with regard to tinned foods; you do not think they are used to any great extent?—No, I should think they would be very harmful indeed. If I saw it I would object to it very much.

7476. It has been given to us as a reason why a knowledge of domestic cooking has gone out among the working classes that they can get those tinned things so much cheaper than they used to, and they give them so much less trouble to cook?—I do not find so much of that, but I and other things, fried fish, for instance, and chipped potatoes, and that kind of thing. Those are to be got very cheaply, and some people fly to them. It is very wrong, of course.

7477. But they are not in themselves injurious?—Oh yes, fried fish would be injurious to young children.

7478. The small children do get fried fish?—Yes, stale bacon, stale fish; they have plenty of cheap fish in Ancoats.

7479. At a very early age?—Yes.

7480. Your efforts are mainly directed to inducing the mothers to substitute for these, things which are really good for babies?—Yes.

7481. And you think that you succeed in impressing the mothers?—Yes. They are very ready to learn, most of them.

7482. And they not only learn but put into practice what they learn?—Yes; it is ignorance on their part if they get the wrong thing. If you tell them one thing will be better for them and for the children they are most willing to take it up.

7483. (*Mr. Struthers.*) At what age do they begin to get that fried fish?—Perhaps six months. They put it into their mouths at six months old; I have seen that done.

7484. Of course the baby does not eat it, but merely plays with it?—No, they sometimes eat it.

7485. When do they begin to give babies tea?—This is the thing we object to. They begin perhaps from five to six months old. Of course we know it is wrong but they do it.

7486. It is tea very much diluted, I suppose?—It is the tea they are having at the table.

7487. At what age would you permit tea being given to children?—I object to them giving them anything but milk until the child is eight or nine months old.

7488. Would you give children of three, four and five tea?—I would not.

7489. You do not think it is desirable?—Skimmed milk would be much better.

7490. Would you allow these children fried fish and so on at four and five years of age?—No.

7491. Milk still?—Yes.

7492. Nothing else?—Oh no—soups and oatmeal porridge.

7493. You told me that they do make soup a good deal in these houses?—The very ignorant do not know how, but we show them.

7494. They do make a good deal of it?—Yes, they do.

7495. You said that they do not make so much porridge because it takes a long time to cook?—Yes.

7496. Does it not take long to cook soup?—The very ignorant do not know how—it applies to both.

7497. But of the two, when they are prepared to take some instruction, why is it that they take to the soup rather than to the porridge?—It comes in with the midday meal.

7498. By soup you mean something like mutton broth?—Yes, green pea soup.

7499. Made with stock?—Yes.

7500. In which they put in all the odds and ends that they collect during the week?—Yes.

7501. It is really economical?—Yes. We have brought a lot of those about ourselves. It is not nearly so general as we should like it to be, but it is on the increase. There has been a great prejudice against soups.

7502. The sort of thing I am describing is the *pot-au-feu* of the French peasant—it is kept on the fire practically year in and year out, and is enriched with all the odds and ends of meat they can get. What range of wages would exist in your district?—They are mostly labourers earning from 16s. to 25s. a week. Some are a little better than that—some have 30s.

7503. Would the bulk of them get £1 on the average?—About an average of £1 a week I should think.

7504. Taking labourers of £1 a week whose houses have been visited by you and so on, I suppose they send their

children to school in the morning with a good meal ?—No not a very good meal.

7505. What sort of meal do they give them ?—Tea, and bread and butter.

7506. But they do get that ?—Yes.

7507. Plenty of bread and butter ?—Yes.

7508. I mean it is not so much stinting them as not knowing what to give them ?—Yes.

7509. At 20s. a week they could afford to give them a little more ?—Yes, porridge.

7510. Without milk ?—With milk or treacle.

7511. Or syrup ?—Yes.

7512. Treacle, I think, is not much appreciated by children as a rule ?—It is golden syrup I am speaking of. That is what I call treacle.

7513. Do you think there are many children sent out in your district without this meal of tea and bread and butter ?—No, I do not find there are many who are sent out without something.

7514. It is rare ?—Very rare. If a child goes without, I think it is because the child has no appetite, and the mother does not insist.

7515. You do not have in Manchester what we have been told of in other places, children being sent out with nothing or with things like boiled turnips, and so on ?—Oh, no.

7516. Do you think the girls or those women of whom you speak, who have been to the board schools and so on, make any use of the knowledge of cooking they have acquired at the board school ?—Yes, I think they do.

7517. You think it has some influence ?—Yes.

7518. They try to cook the dishes in the home which they had been taught in the schools ?—In the very poor houses they cannot carry it into practice, because they have not the utensils.

7519. Do they cook at all in those houses ?—Yes, they do a little.

7520. What sort of utensils do they lack ?—They only have one pan when they should have two or three, and they have to make the best use of the one pan.

7521. They could use it for a good many things if they only cleaned it. The using of two or three dishes in the cooking class may be a necessary thing in order to get through a certain amount of work in the time, but they might do with the one vessel, because they could clean it in between : is not that so ?—No, the thing would not come out the same.

7522. Do you find them make some use of the knowledge of cooking which they acquire in their homes ?—Yes.

7523. Do you get the mothers interested in it ?—Yes, it is surprising to see a big girl teaching the mother how to make things, but it is done sometimes.

7524. (*Colonel Fox.*) You said you attach great importance to the leaflets which you distribute, but that you took the precaution to explain those leaflets, such as the one on "Hints to Mothers," how to feed their children, and how to look after them ?—Yes.

7525. But notwithstanding all that, you visit the mothers before they are going to have their children ?—Sometimes.

7526. You make it your business to do that so as to prepare them ?—Yes.

7527. As much as you can you visit them before they have their baby ?—Yes, as much as possible.

7528. Notwithstanding all this you find them giving them tea and bacon when you arrive there ?—Occasionally they are.

7529. That rather points to the fact that the leaflets are not of themselves useful ?—That does not apply to cooking, but what would be given to the baby.

7530. But if they give them tea, it shows the leaflet is not of very great value ?—I am speaking now of meeting a case for the first time ; perhaps. If we gave them our leaflets and told the mother what she has got to do, that is done away with at once.

7531. Do you not generally go with a leaflet before they have a baby, and explain the whole thing ?—Not always

7532. You find the leaflet is of real use ?—Yes.

7533. (*Chairman.*) One important thing is the provision of a sufficient quantity of sleep for the children : do you instil the importance of that upon the parents ?—Yes.

7534. I suppose the conditions under which they live make it somewhat difficult to secure the children having sufficient sleep ?—That is so, sometimes.

7535. Is it not frequently so ?—Arrangements can be made whereby a baby could be made comfortable.

7536. I am speaking of the younger children, where there are four or five in a single or two-roomed tenement : in that case it is difficult to secure young children getting sufficient sleep ?—Yes.

7537. You attach great importance to that in the development of the young ?—Yes.

7538. Particularly when they have come to school age and use their brains ?—Yes. The children can be put to bed early at night.

7539. But if there is a great din going on, do they sleep well ?—I think so.

7540. (*Dr. Tatham.*) Have you any more of those pamphlets. (*A document was handed to Dr. Tatham.*)

7541. (*Colonel Fox.*) Do you find that the poorer classes cook their own food, or do they buy it outside ?—With regard to the very ignorant, of course, if there is a cook-shop within an easy distance, they save themselves the trouble.

7542. It is not because they get it cheaper, but to save themselves the trouble that they buy it outside ?—Yes.

7543. (*Colonel Onslow.*) I suppose there are not always medical men to attend to the women in cases of childbirth ?—Sometimes there are.

FOURTEENTH DAY.

Wednesday, 2nd March, 1904.

PRESENT.

Mr. ALMERIC W. FITZ ROY (*in the Chair*).

Colonel G. M. FOX.	Colonel GEORGE T. ONSLOW.
Mr. J. G. LEGGE.	Mr. JOHN STRUTHERS.
Mr. H. M. LINDSELL.	Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary.*)

Miss EVES, called; and Examined.

Miss Eves.

7544. (*Chairman.*) May I ask you to explain what the Maurice Hostel is with which you are connected. I understand that it is purely a charitable organisation?—Yes, it is what is called a Settlement.

7545. Is it of a religious character?—Yes, it is religious; that is to say, we are all Church of England. We do chiefly social work.

7546. Is this day nursery for infants one of the principal branches?—Yes, that is one of our branches of work.

7547. How long has that been in existence?—About five years.

7548. I suppose it was started with a view to correct the evil of parental ignorance?—We started it for thoroughly practical reasons. We found that a great many mothers had to go out to work, and we had reason to believe that the children were badly looked after. When it was first started I really knew very little about it.

7549. Is there much factory work in the neighbourhood?—Yes. We are close to the City area, and an enormous number of women go out to work in City factories.

7550. Married women?—Yes, a very large proportion of them—nearly all. The reason, of course, is that their husbands are largely unskilled labourers. We have an enormous number of carters in the neighbourhood; Pickford is quite close to us. These men earn very low wages and they have a very weak Union, and, in consequence, women have to turn out to earn money.

7551. And that leaves the children unattended?—They send them to old women, who charge 2s. 6d. a week, and use the money chiefly for their own ends. I have had children brought to the Nursery practically, one may say, half-starved, without exaggeration.

7552. Do these women come to the children's homes?—No, they take them to their own houses and then, of course, chiefly use the money for their own living and do not feed the children sufficiently.

7553. Are not the children fed in their own houses first?—Yes, they are fed to begin with.

7554. Do they get any food in the evening?—I suppose so. I am speaking of very young children, children at the breast—children up to the age of two years.

7555. What is the average wage that the men receive?—I could not state that straight off; it is rather a large order to give the average wage for such a varied population; but I should say for unskilled labourers, the men I am specially dealing with, the average wage would be about 22s. a week.

7556. What addition to the family resources does the labour of the women provide?—Some of them would earn from 12s. to 14s. a week, but a great many of them would only earn from 6s. to 8s.

7557. You realise that no improvement can be brought about by an addition to the wages of this kind of labourer?—I do not think it is in practical politics at present.

7558. (*Colonel Fox.*) What does the woman who takes charge of the children get?—About 2s. 6d. a week. That is about the average price they pay. Some of them might get a little more and some a little less, but that is about the average.

7559. (*Chairman.*) You regard this expedient as a palliative for the evil?—Yes, I do. I think it is very wrong to let those children grow up in a bad state of health. Those that die are the most lucky, because they are dead and done for, but it is those who just manage to keep alive that are in a sad state, because they grow up handicapped for ever after.

7560. Are there any crèches in existence besides those of this character?—Yes, there are a great many run by charitable people.

7561. There are none run as a commercial investment?—No, you would lose money by it. If you look at the end of my *précis* you will see that point mentioned. I have been very careful of finance in my crèche, and I find I have been more successful than others in doing it cheaply, but yet I cannot get more than half or two-thirds of the expenditure returned. To give these children sufficient care means fairly skilled labour. Then you want a lot of milk, and milk is always a dear food.

7562. You would propose that the local authority should take the matter up?—Yes. I look at it from the educational point of view; I think we need centres of instruction for the women.

7563. That is rather a different matter, is it not; we are talking about the crèches now?—I want crèches to be educational. The present crèches are just run anyhow. They ought to be registered and supervised.

7564. You do not think that the municipal authority has power to do that now?—I do not know what their powers are. I think they have money to spend, and they have practically the power to spend money on it if they choose. I should think so.

7565. Under what particular provision of the law?—At St. Pancras they have thought about having one. I believe that they have quite the power to do it. I think it comes under the sanitary expenditure.

7566. (*Colonel Fox.*) Two-thirds of the expenses are paid for by the mothers, you say?—About two-thirds; it varies a little. This year has been a bad year, and many fathers and mothers have only paid half, because they have been so poor; but for the last four years they have paid two-thirds. That is not including rent. I must leave that out, because I use my rooms for various purposes, and I cannot separate the amount of rent to each of those purposes.

7567. (*Chairman.*) I suppose it is the high rate of infant mortality which has to a large extent called your attention to this matter?—Yes.

7568. You are sensible of the fact that there has been no diminution of that?—No, it is rising.

7569. Not all over the country? It is about the same, I think?—I think it is rising.

7570. (*Colonel Fox.*) I think you said it was rather a fortunate thing that these children do die?—I did not say

that. I said that those who die are the most fortunate of the lot, because the others who just manage to scrape through by the skin of their teeth suffer all their lives.

7571. (*Chairman.*) What do you hold to be the cause of this increased mortality?—I think it is due to the want of maternal care, owing to the mothers being obliged to go out to work; secondly, I think it is due to the fact that many of the mothers do not know how to feed them properly.

7572. It is just as well that the mothers should go out to work and that the children should be left in the hands of other people who do understand them?—I do not think we ought to look forward to that. I think we ought to look forward to the idea of educating the mother so that she will know how to mind her children and bring them up thoroughly well, as she ought to do.

7573. Will you explain how you would attempt to remove the evils which at present exist?—My present small suggestion is that existing crèches should be registered and supervised. These crèches should be used as educational centres for the girls and women of the district. I think they would be willing to learn.

7574. You refer in your précis to the attempts already made to remove this ignorance?—Those are the attempts already made which I consider insufficient.

7575. You admit that the School Board does do something to remove the ignorance?—Yes, it does.

7576. But you do not think it is adequate?—No, it is too theoretical.

7577. Do not the County Council lecturers attempt to come closer to the problem?—Yes, they do. They are very good so far as they go, but you cannot teach people about a baby unless you have the baby there.

7578. Would you have County Council babies for the purpose of experiment?—No. They only send a peripatetic lecturer who talks very grandly on the other side of the table. There are no children there, and the mothers say "Oh, yes," and go away and there is an end of it

7579. The information is divorced from practice?—Yes. I am an old science student and I worked for years in a laboratory, and I do not believe in teaching these things unless you have the things there to show.

7580. Would you explain how you think it should be done?—I do not know that I am prepared to do that altogether. I think the existing crèches should be taken over or new ones should be established to be regarded as technical schools for the training of mothers.

7581. You think that under the Technical Instruction Act it would be possible for the local authority to devote funds at their disposal to such an object?—Yes; it is a branch of domestic economy. It is very domestic and very economical.

7582. And in very close touch with the actual practice?—I think that in connection with these crèches you would often get voluntary workers like myself who have had clubs of girls, to induce their girls to go, say, once a week or twice a week to get instruction.

7583. You have girls in connection with this hostel?—Yes; I run a large girls' club.

7584. Girls between school age and adolescence?—Yes; some of my girls are about twenty-seven or twenty-eight years of age.

7585. Young women?—Yes. I do not take any girl in under twelve.

7586. Is it a club for social and recreative purposes?—Yes, and for instruction when one can get them to learn anything; but they are not very fond of learning.

7587. Do they attend fairly regularly?—Yes; one large club of girls come every day. They come during their dinner hour. I have got a very inadequate plant. If I had a sufficiently good institute I should be able to get many more girls.

7588. It is all in connection with the hostel?—Yes.

7589. Has it unlimited funds at its disposal?—No. I wish it had.

7590. Are its resources all drawn from the contributions of the benevolent?—Yes. We shall want about £2,000 to build our club house.

7591. What sort of income do you dispose of?—When I once get my plant and material my schemes run themselves very largely. My crèche pays two-thirds of the expense, and the large girls' club pays its own way. That does not include the rent.

7592. Have you any fixed income?—No; it is not fixed I am afraid. We reckon on about £500 a year coming in.

7593. You can always obtain what you want for capital expenditure?—I do not know that we can. We always have done so, so far. I cut my coat according to my cloth; I get as much cloth as I can, and then I cut my coat according to it.

7594. What capital expenditure have you from year to year?—We have been in existence about six years, and we have been going on increasing and increasing.

7595. What is the capital expenditure in those years?—I cannot tell you straight away. I think last year we spent about £500. We get about £500 and spend it.

7596. Is that the annual capital expenditure?—I should think so.

7597. And £500 income too. Could you get the assistance you require to teach the mothers?—Oh, yes; I can get that from the London County Council. I have done that before. I get their lecturers to come down and they teach. I give them the room and find the audience, and they do the teaching. That is not sufficient, because I get women who say that they know a great deal better than the lecturer. I want proper instruction and practical illustrations for the young women and girls.

7598. Before they become mothers?—Yes, older girls. I think it would be very interesting if you could have children there. They are very fond of children. But if you give them a lot of "talky-talk" without anything to show for it they do not care about it.

7599. What opinion have you formed as to the results of a scheme of policy of this kind?—I believe myself it will be a tremendous success, because I have found the mothers anxious to learn, the small number that I have had to deal with, and the girls are very fond of children and very interested in anything practical. I think if you had an attractive course of lessons and had the babies there to show them how to wash, dress and feed them, the girls would come and be interested in it.

7600. Would not the baby suffer in the process of being experimentally treated?—No, I think they would not. You see, it would be all done under supervision. The babies cannot be worse off than they are.

7601. You think a large saving of life would ensue?—Yes, I do.

7602. And you further hope that a certain number of girls might be trained in this way to act as nurses?—That is the business side of the thing. I thought I might kill two birds with one stone.

7603. That might be incidentally a very useful thing?—I am hoping to arrange that in my crèche; I am hoping to get one of the local authorities to send their girls to be trained.

7604. You regard the whole of this as technical instruction for mothers in domestic economy?—I think one must have money, I think that it might be done in connection with the domestic economy schools of our technical institutes.

7605. In that sense you will be able to municipalise the scheme of education which you have in view?—I think so, and get it done all over London.

7606. I suppose the present municipal organisation of London is more favourable to action of that sort than the old vestry?—I think perhaps it may be.

7607. Would you make the parents pay as much as they can?—Yes, I should make them pay. I think it is extremely necessary to inquire in every case as to whether there is real need for the child to be admitted to the crèche. I find myself that some of the mothers are not at all fond of leaving their children with me. I was told that I should be encouraging the mothers to go away from their homes, but I have not found that. I do not think you want a lovely crèche and let any mother pop her baby down there. Inquiries must be made, and

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it must be ascertained whether the wages of the mother are really needed as a supplement to the father's earning power. I think the ideal home is where the father earns the money and the mother spends it. This is not to be a sort of Foundling Home. I am not advocating that we should have these model nurseries and any papa's child be dumped there as long as he chooses.

7608. Do you not think that almost the whole cost might be obtained ?—No; I do not.

7609. Surely if the father is earning 22s. a week, and the mother 8s., making 30s. a week, it could be done ?—There is the rent, you see.

7610. What is the cost of the child in a crèche of this sort ?—I am afraid I could not answer that straight away.

7611. Surely from your experience you must have some notion ?—I make the parents pay 4d. and they generally pay two-thirds of the cost. I take them for five days, so they cost me 2s. 6d. a week perhaps.

7612. And they pay 1s. 8d. ?—They pay 1s. 8d.

7613. I do not see why you should not take from them as much as the old women do ?—They could not pay.

7614. If they pay the old women why should not they pay you ?—I do not know about that.

7615. That is the figure you start with. They pay these women 2s. 6d. and the children get horribly neglected. surely it would pay them better to give you the 2s. 6d. ?—Yes. I do not think I have thought sufficiently of that. I get a different class of children. I find many of my children are very poor.

7616. Have you any knowledge of the rent these parents are paying ?—I could tell you roughly. I do not think anyone could get one room in our part of the world in Hoxton for less than 5s. 6d.

7617. Are these all one-room tenements ?—Not all of them; a great many of them are. Most of them have two rooms.

7618. What size is the family ?—They vary, but most of them have four or five children and some have more.

7619. That is six or seven people in two rooms ?—Yes. Of course some of them have more children; a great many of them have eight or nine children.

7620. Surely you regard that crowding as very prejudicial to health ?—It is very bad, but what can they do ? There is not enough room.

7621. That is no reason why they should be allowed to depress the standard of living and debilitate the rising generation ?—No, there is a great deal being done; the London County Council has made great improvements in our part of the world in providing better tenements and so on, but even now that is the state of things.

7622. What do you think would be the effect supposing the London County Council or any other local authority were to announce that after a given date no single room tenement should be allowed to be occupied by more than two persons, and no two-roomed tenement by more than four, and no three-roomed tenement by more than six ?—I doubt if you could practically enforce it. You would want a large army of bailiffs to put them in the street.

7623. You would give them notice ?—I suppose they would be forced to go away somewhere, but enormous hardship would be inflicted.

7624. For the moment, but that must necessarily be the case with every great step towards the amelioration of the condition under which people live ?—I do not think we can do that with any justice unless we provide the people with some shelter. At the present time they cannot get any place to go to.

7625. No doubt the local authority who displaces them would have to provide in the first place for such as were willing to pay municipal rents, whatever they may be ?—Certainly, but some of my people could not pay municipal rents. They could not pay more than 5s. 6d.

7626. Do not the County Council provide any others ?—No, not in our part of the world. There are new ones in Clerkenwell at 5s. 6d., and I am going to see what number of rooms they let them have. I expect they let them have a good sized room and a little slip of a room, for that money. But the ground is too valuable. Nobody ought to live there who is earning 30s. a week. They ought to live at Enfield. They want a lot more trams, or balloons to carry them through the air, or something of that kind.

7627. (*Dr. Tatham.*) I understood you to say that the London County Council are doing a great and very useful work by substituting new dwellings for the poor in place of the wretched hovels in which they live ?—Certainly.

7628. Is it your experience that when such wholesome dwellings are provided they actually come to be inhabited by the people whom you would wish to inhabit them, or are they inhabited by a better class ?—I think I may say on the whole, they are inhabited by a better class in the areas I know, because the two areas I know rather well were inhabited by the lowest class of people—hawkers, receivers of stolen goods, thieves, and so on, and these people when turned out would not pay a higher rent; they scattered far and wide. We had an army of vestry employees and policemen, and skilled artisans come in and live in those delightful little dwellings.

7629. That seems to be a very common experience ?—Yes, I think so.

7630. To that extent the scheme is a failure?—Certainly, in my view. The real difficulty, I think, is to provide a tenement for the rent they can pay. I once had a long talk with Mr. Alderman Thompson, who is rather well known at Richmond in connection with the housing scheme there. He is a builder himself, I believe. He has told me that nobody has yet been able to design a tenement for working class people at 5s. 6d. with ground rents what they are. If you tax ground rents it would be different.

7631. What number of babies can you accommodate in your crèche ?—I do not believe in swarms; I am not going to have more than thirty children. My children are only from one month old to about four years old.

7632. What size is the building ?—I could not give you the dimensions of the building, but I have two large rooms, I think twenty by twelve; they are now being built, and have just the roof on; they will be ready early in the spring.

7633. They are new buildings ?—Yes. My present house is only a makeshift.

7634. For how many hours in the day do you keep the children ?—From eight in the morning to eight at night, and that is really not quite long enough. I think I shall have to make it half-past seven, because so many women have to be at their work by eight o'clock.

7635. What staff have you ?—At present I have two nurses who look after the children. They manage it pretty well. The little toddlers who are just old enough to go, I send to the infant school which is across the road. These children come to the nursery and have some milk and have a clean pinafore put on, and then they are sent away to the school, so that they are out of our way during school hours. Then they come back and have dinner, and sleep, and then go to school again, so that I clear some of my thirty children out of the way.

7636. I understand that your permanent staff consists of only two nurses ?—Yes.

7637. Is that supplemented to any extent by the young women you spoke of training ?—Not at all.

7638. You spoke of your intention in the future to train young girls about sixteen or seventeen in the nursing of children ?—Yes, I cannot do that at present, because my building is not suitable for it.

7639. You hope to do it in the future ?—Yes. I hope I shall be able to arrange that in the future. What I am hoping—though it is very much in the air at present—is that the technical institute will draft off two or three girls from their domestic economy school two or three days a week to be trained in looking after these children. It will be a small beginning.

7640. What diet do you provide for the children ?—All kinds of things.

7641. At different ages ?—Yes, milk, pudding, broth.

7642. But for very young children ?—I always give

them cow's milk unless the doctor specially orders anything else. I do not believe in patent foods, but if anything special is ordered they have whatever the doctor orders them to have.

7643. Do you think, speaking generally, that the children of the very poor have much milk ?—I am sure they do not.

7644. They practically do not have any ?—They have nasty tinned stuff. The mother buys it, and puts it on a shelf in a stuffy room, and it gets full of bacteria, and the child is fed on this stuff. I believe it is the cause of a large number of deaths.

7645. Infantile diarrhœa ?—All this reported consumption of the bowels, so common in young children, is simply due to the incursions of bacilli which their mothers have so diligently collected in this tinned milk.

7646. They substitute tinned milk for the other ?—Yes ; the other is much too dear. They cannot afford to buy cow's milk.

7647. Is the tinned milk much cheaper ?—Yes. I find I have to use tinned milk ; I have a large restaurant for young women, and I have to sell them tea and cocoa at a halfpenny for a very large cup, and I have to give them tinned milk. If I give them cow's milk I should lose. The price is 2½d. a tin.

7648. What is the price of cow's milk ?—4d. a quart.

7649. Has the metropolitan borough council or the district council done anything ?—No, they have not done anything.

7650. Not in the way of supply of milk ?—No, they have not taken up the question of infant mortality at all. They are a splendid council and do a most excellent sanitary work, and are most prompt and so on, but in this particular department they have made no move at all.

7651. They do not undertake to supply sterilised milk in any form ?—No, they do not.

7652. Nor to cheapen the milk supply ?—No, they have not done anything at all.

7653. You know, of course, that milk can be supplied in large quantities for very much less than you would have to pay for it ?—I suppose in very large quantities it could, but if you had to buy large quantities you would have the danger of your stock going bad.

7654. Assuming the County Council did it, they could supply it cheaply ?—They would have to command a regular market to get rid of it. If it could be done, I think it would be a most excellent thing, because not only my infants but my other children suffer greatly from want of proper milk. They have tea given them to drink with very little milk in it.

7655. You think, if it were possible, that the proper way to treat the case is to send the children with their mothers outside the crowded districts of London ?—I think if we could migrate the whole population it would be an advantage. The central part of London should be given over to bankers and moneymakers. The poor ought to live where land is cheaper. It is uneconomical to take land which is worth an enormous sum in order to build houses for the poor, and run the thing and make money on it. It is uneconomical to make the unskilled labourer live there.

7656. It has been represented to us that the great difficulty with any scheme of that kind is that the very poorest of the people for whom you would provide are just those who must live near their work ?—That is quite true.

7657. How would you get over that difficulty ?—We shall have to have flying machines or something to get them to and fro cheaply.

7658. (*Mr. Lindsell.*) You said just now that you sent your children into the infant school ?—Yes.

7659. At what age have you been doing that ?—They have what they call a babies' room, and they take the children at some schools from three years old. I do not like mine to go out until they are four. I think three is rather too young for them to go, and sit in a row on forms all the time.

7660. You find it a good thing to send them there ?—Yes, because I get them out of my way.

7661. You would not agree that infants are taken too early into the elementary schools, and that they ought not to be taken before five ?—I think it would be very much better if we could manage it that at a number of schools these babies should be treated like babies. I do not think that little babies of three and four years old ought to learn ; they ought to run about and wave their arms and legs. We ought to have nurseries for them and not schools.

7662. Yours is a nursery ?—Yes. There are a large number of children sometimes in my babies' rooms. In the schools where I am manager there are perhaps sixty tiny mites with one young woman to mind them. She is obliged to make them keep still or she could not manage them. It is very bad for them.

7663. But that is why so many people are strongly opposed to this attempt to take very young children into schools, because you cannot avoid that sort of thing ?—You have to choose the lesser of two evils—you must remember what these babies would have if they were at home. It means really that these children's mothers are very busy people ; they are either out at work or working for the home, and the children run into the passages and into the streets, and so on.

7664. Some people say that is rather better for them ?—I am not sure that it is not, but there are risks. I know one small boy who had both his legs cut off and another who had one leg taken off. You cannot have these little tiny mites running about with no one to look after them.

7665. On the whole you think it is better they should be in school ?—Yes, but I think it is bad. It is the best of a bad job I think.

7666. You need not send yours to the school at all ?—I send mine to the school to get rid of them.

7667. That is what the mothers do ?—I take the line of least resistance. These mothers beseech me to take their children, because they must earn money, and in my present house I have not room. I do not like all my children to live there all day ; they do not have enough cubic air space, and I send some of them to the infant school and that clears out my room for four hours a day.

7668. Is your crèche examined by any local authority ?—None of these crèches are bound to be examined. That is one of the things I wish to emphasise. We none of us ought to be allowed to do what we like. I had a friendly visit from the London County Council inspector—I think he looks after babies who are sent out to women to mind. When he came to see me he said, "I have no right here, but would you mind me looking round ?" and he looked round.

7669. Is there no public authority which can see that there is no overcrowding ?—Absolutely none. I think it is a great evil.

7670. But they could do it, surely ?—I do not think they have any power. I think they have power to inspect if the babies sleep there but not if they do not, because I had an inspector come to see me about three years ago. He said, "I want to inspect your crèche," but when I explained that the babies only came every day, and did not sleep there at night, he said "It is no concern of mine," and went away.

7671. Your idea is that a crèche on similar lines to the one you are running should be established in the industrial areas by the local authorities ?—Yes.

7672. Public crèches ?—I think we want to teach and educate the mothers. We must look forward to that.

7673. Your first proposal is that these crèches should be established ?—As educational centres.

7674. By the municipality ?—Yes.

7675. Primarily for the benefit of the children and babies, and then we come to the educational points afterwards ?—I think it might be so, but in my mind the other point comes first.

7676–80. You would simply use the babies as part of the school apparatus ?—Yes.

Miss Eves.

7681. Your main object is to have them as object lessons?—My chief aim is to form the ideal mother. I do not think that the mother ought to go on in her old way. As she is, she is very unideal. I want these crèches formed primarily to produce the ideal mother.

7682. You put the educational value of it above the philanthropic?—Yes, if you like to use the terms in that way.

7683. You rather consider the establishment of these public crèches as an educational means of improving future mothers?—Yes.

7684. Not primarily for the benefit of the little babies themselves?—I think we shall do much for the babies. If we could make all the mothers better, if we could have a little centre of light to instruct the mothers, they would tell one another; the knowledge will spread, and in time we shall have every mother know how to treat her children, and we shall not want crèches.

7685. Are they to be established as part of the educational functions of the municipality?—Yes.

7686-7. Or of the ordinary municipal functions?—No, educational. I think it ought to be a branch of the domestic economy school, just as you provide a school of plumbing. We have an enormous apparatus for teaching boys carpentering and furniture making. In Shoreditch there is a great deal of furniture making. In the same way we should teach the mother how to treat her baby. I should call it technical instruction. I should compel all the girls to have a year's training in the care of children. They nearly all marry and have children, and they ought to know how to treat them.

7688. At what age would you begin to teach the girls?—I think it would be very good for them to go two or three evenings a week at the age of fourteen.

7689. After leaving school?—After leaving school.

7690. You would not treat it as part of the elementary course?—No, because I think you want all those early years to improve their general intelligence. You do not want to begin teaching the girls rules of thumb before their minds have grown.

7691-2. They are taught household management in the elementary school?—Yes, I know.

7693. (*Chairman.*) Of a very elementary kind?—Yes. This is a special kind of thing. I think they want special training for the children.

7694. (*Mr. Lindsell.*) When is a girl old enough to get profitable knowledge? Would not you allow children of the elementary schools in?—There are a great many difficulties there. The number of the children would be very great. Your could not have fifty or sixty girls going for your babies. You will have to be content to train a few and trust that they will train the others. Light always spreads in a way. If we could get a small nucleus of sensible, well-educated mothers they would teach their daughters. I think we shall have to be content to go very slowly. We ought to begin with the more intelligent girls to go to domestic economy classes.

7695. You would not teach the elementary school girl—you would start at fourteen?—I think so.

7696. And at that age the girl, if she wishes to improve herself, can go to an evening continuation school?—Yes, but very few of them do; we must make it compulsory for them to go.

7697. You are in favour of continuing compulsory education?—Certainly; from fourteen to sixteen, in the evening schools. I would not let anybody loose until they are sixteen.

7698. It is very good for them to come into practical contact with the concerns of life, but it would not hurt those girls or boys to go two or three nights a week to continuation schools?—That is so.

7699. The girl being obliged for two years longer to continue her educational career. You would make part of this compulsory education the management of the babies?—I should.

7700. As a separate branch altogether from household management?—Yes, because, you see, domestic economy now practically ignores these poor infants. In the domestic economy classes they tell the children all about puddings, but not about children—or practically nothing. The emphasis is put in the wrong place, I think.

7701. Would you make this compulsory for all girls?—I should like to know that every girl went.

7702. But a difficulty would come in there: could you furnish sufficient in the way of babies?—I do not think it would be possible to teach the whole lot. I think if you make it compulsory you will have to adopt some modified plan

7703. You would have to select certain girls?—You might have a number of practical lessons on Saturdays, or something of that kind. It would need carefully thinking out. Most of these girls are at work in the week, but they have half day Saturday off.

7704. Do you think the girls would like their Saturday half holidays to be made compulsorily educational?—No, they would not like it, but it would not be every Saturday. A great deal of valuable instruction could be given in an intelligent way, and they might have a certain number of practical lessons on fixed days. I do not think you can deal with the whole thing at one bite; you will have to nibble at the difficulties. I do not think we should be able to teach the whole mass of the people in our elementary schools, but I think you will get a large number of girls and young women, from sixteen to twenty-seven or twenty-eight, to take an intelligent interest in it.

7705. You said the compulsory age would be fourteen to sixteen, and now you wish to continue it from sixteen to twenty-eight?—Of a voluntary kind. I think if we had these centres established we should get a much larger number of young women to attend those classes voluntarily.

7706. Should not we get rather more students than babies if you had all the girls from fourteen to sixteen?—I am afraid I have not made myself quite clear. I do not think that you can teach all the children at the elementary schools; at the same time I do think that it would be very much better than the present state of things to have the children from fourteen to sixteen and teach them infant hygiene. In addition to that we must have a voluntary system of getting young women and young mothers, women who have already got infants, to go to these model crèches and learn; and I believe they would come in large numbers. We should not get the whole population, but even if you can get a few that is a great thing.

7707. You might select some of the young girls, who announce their intention of being married, and say that they had better come and attend a course?—Yes. I think when I have my model nursery, I shall say to some of my girls, when they tell me that they are engaged—I generally hear of it—"Well, now, you had better come here and attend a course and learn about babies. You will very likely have some of your own, and you had better get information beforehand." I think they will come. I do not think the public authorities or Committees can do that work. I think it must be done by somebody who knows these girls in other relations of life. I think these girls would not go to anybody else, but I do think they would come to me.

7708. How is the expense of this instruction to be met: do you propose that a proportion of the grant earned by the continuation schools, which the girl or young woman is attending, should be paid in the way of fees to the crèche?—No, I do not. I think that girls at sixteen—I call them adults over sixteen—ought to be taught by the Technical Education Board money—the whiskey money—because that is after school age.

7709. It would not matter where the money was derived from, if it was from the educational fund of the authority. These girls would earn a grant for domestic economy, or whatever it is, which they are learning in these continuation schools, and this instruction would be part of that course?—You mean girls from fourteen to sixteen?

7710. They may be older; it is not limited to that. You are going to make it compulsory to that age?—It does not make any difference where the money comes from, but it is a very important question for the powers

to consider. I was thinking that from sixteen years onwards, they would receive the grants from the funds which are now used for technical education, which is not the same.

7711. It all goes into the same fund ?—It is not the same as the school rate.

7712. You would have it come out of the funds at the disposal of the educational authority ?—Yes. I do not think the local rate ought to be used for instructing girls from sixteen years onwards.

7713. If it is made part of higher education, technical instruction, the Act of Parliament provides that the council can raise rates for that purpose ?—That would be a special rate for that special purpose ?

7714. They raise the rate generally for secondary education ?—Yes, I see; that is my point.

7715. They have the whiskey money, and they have the grant, but it has to be supplemented by a rate; and if these crèches are run as educational centres by the educational authority, they will have to be supported out of the school fund, however that fund is made up ?—Yes.

7716. If they cost a considerable sum, it would necessarily, indirectly, increase the rate ?—Of course, you cannot have these things without paying for them, but it would pay us in the end, because we should not have all these children killed—they ought to grow up and do work for the nation. They die in their hundreds at present.

7717. Your idea is that this would form part of the educational system of the local authority ?—Yes.

7718. And they should pay for it, just as much as they pay for manual instruction ?—Yes. My justification for that is that I consider that feminine technical education is at present rather neglected. I think the education of young women in the care of an infant is strictly technical education.

7719. You think it is as important to teach her that, as to cook her husband's dinner ?—Certainly I do. She should be put on a level with her brother who has to make his living by carpentering and furniture making. He is provided with a splendid laboratory for his business, and I should provide the girls with a laboratory for the mother's business. She has a right to it. It is wicked to let these women kill their children. I have known these women to be most sorry at the death of their children, and yet they killed them from utter ignorance. You have no idea of what they give these children to eat, simply from kindness of heart.

7720. You run very closely into the other question, that of teaching future mothers the proper food to give their children, and so on ?—Yes.

7721. Is there anything of the sort attempted at present ?—It is all done in a scrappy sort of way. It wants systematising. I do it in a small way.

7722. Do you see the instruction given in the evening schools ?—I have looked through the syllabus.

7723. On hygiene and household management ?—Yes, but I have never heard the lessons. The case of infants is just inserted as a sort of by-question.

7724. You are not prepared to give a criticism of it as compared with your plan ?—My criticism, as an old science student, is that I do not believe in teaching about things unless you have the things there. I think to give these ignorant girls a lot of talk, with very often rather difficult words about bottles and nitrogen and proteids, and so on, and not to show them the child and the bottle and how to deal with the matter properly, is absurd.

7725. You think instruction in all these subjects, at present, is too theoretical, and not practical enough ?—Yes.

7726. Whether cookery or household management ?—I think the cookery is good. I think they do the cookery well; I think they have excellent arrangements.

7727. We have had it rather severely criticised; you are inclined to think it is all right ?—I am not a great cook; I do not know whether they turn out the things as they should do, but it has always seemed to me very practical. I know girls have to have saucepans, and pots and things, and they have to clean them, and they have to make things, and it seemed to me to be very practical and to the point.

7728. You think it has a great influence on their future homes ?—I think so.

7729. You would not condemn it so utterly as some people ?—No, but I am not an expert in cooking.

7730. You would cause fees to be paid ?—Yes, I should.

7731. Both by the student and by the parent who sends the baby ?—I do not mean by the student; I thought you meant the parents. I should never have anybody's child free.

7732. If you treat the child as a piece of apparatus you might have to hire it—you might have to actually pay the parents ?—These children will be much better treated as my apparatus than they are at present by their mothers.

7733. But supposing you cannot get enough material ?—You will get heaps.

7734. You might have to go to the parents and say: "What will you let me have a baby for ?"—No; then I should stop the whole thing. That would never do.

7735. (*Mr. Legge.*) I think your suggestions have been extremely valuable, but I want to plead with you for the girls under fourteen. If you want to make a start, is it not well to take advantage of the existing provisions of the existing law as to compulsory attendance ?—I think you will see I say that. If they give these classes in school it is much better than nothing.

7736. But I gathered from what you said to Mr. Lindsell that you would not let your girls of under fourteen handle your infants ?—My reason is that there is such an enormous number of them. In most day schools or board schools there are fifty or sixty children in the class. I cannot as an educationalist—I have taught, myself, for years in the high school—conceive of any possible way by which I can get fifty or sixty small girls to handle babies.

7737. Do you call the average girl of over thirteen a small girl ?—There are fifty or sixty of them—small or great does not matter.

7738. There are fifty or sixty of them; but do you suppose they would all be available ?—No, I do not; I do not think you could work it; the practical difficulties would be too great. The children of the school at twelve or thirteen must have lessons on the more or less theoretical part of their duties, but I think when they come to be sixteen you can get them into smaller classes. They will not all want teaching. Some of them have good mothers and could learn at home.

7739. It seems to me that you will get them in extremely small classes—almost a matter of individuals ?—When I had a course of lectures from the London County Council on Infant Hygiene, I think there were twenty in constant attendance.

7740. You say you want compulsion ?—Yes, in the evening continuation schools.

7741. It will take you some time to get that; in the meantime why not get such girls as desire it—whose mothers desire it—from the ordinary elementary schools to attend so many evenings a week after the age of thirteen ? I may point out that such girls are much more likely to take up your scheme later on, when they leave school, having had an initiation ?—I think it would be valuable. I should try all ways.

7742. You would not object to selected girls of thirteen ?—No; I should welcome any attempt to enlighten ignorance with girls of under thirteen or over.

7743. You speak of girls from schools going to your crèches. What do you say to your crèches going to the schools and having them actually in connection with certain schools associated with the infant department ?—I think as your girls leave school they go away in small numbers, and in any particular school there are eight or ten girls leaving at the same time; I should take those girls and carry on their education in this particular direction.

Miss Eves.

7744. Do you object to having a babies' room, which is found in many a Board School?—I mean by baby an infant from one month onwards.

7745. Why not have a baby's room supplemented by a crèche?—I think it would end in that. My view is that the infants' crèche would be much more practically and easily worked if in connection with a domestic economy school and not with a day school. I think the building and so on would be easily managed and the necessary requisites more provided.

7746. There has been a talk recently of municipal milk depots for the poorer parts of the big towns. That would be a good place to have your crèche in connection with?—Yes, very good.

7747. The two might be run together?—It would be better to put your milk depôt with your technical school; you have existing plant there—warming apparatus and pipes and things. You would not build an entirely new building, because that would cost far more.

7748. You said you do not desire very lovely crèches, fancy places, to which parents would be only too glad to send their children. But do not you think that if you handed it over to the municipality that is almost bound to result?—You have to look after these authorities of course. They like to have everything just exactly right. I think you should have some intelligent woman of practical experience to look after these things.

7749. Some say that it is the ladies, looking after cookery centres and so on, who desire to have children taught cookery such as would be found in their own private houses, and not in artisans' homes?—I do not know about that. I am afraid I do not know much about cookery, but I do not think that need be an insuperable objection. I think we could have practical people who realise that these little children come from poor homes and have to live there and that you do not want to provide them with fancy things.

7750. Could you give us any idea of the sort of practical woman you mean?—Myself.

7751. Not ladies living in the West End?—Certainly not.

7752. Not necessarily such highly educated ones as used to go on School Boards?—No; I think it is very necessary, in all these matters affecting the lives of the poor, that one should really know exactly how they live, and realise the condition of things, or else I think you do indulge in fancy expedients and fads.

7753. Would you have a selection of ladies for playing the part—would you like to enact some sort of sumptuary law?—I think we should find the right woman in every way. I think in our nurses staff, that a great many of our nurses would specialise in infant hygiene.

7754. (*Colonel Onslow.*) I imagine the most suitable person to instruct would be, say, the wife or widow of a labourer?—Not unless she was very intelligent. I think we must have somebody a little better than that. We shall have to produce a staff of teachers.

7755. Take one of that class?—I think we must aim at the sort of woman who now becomes a foster-mother for cottage homes in the workhouse—a nice, kind, practical, woman.

7756. I mean a woman of rather an upper class. In the country you would find a large number of what might be called comfortable women?—Yes.

7757. Who have got better ideas about life than the very poorest women would have; she would be more suitable than the person who had been brought up to a higher state of things, would she not?—I think so. I do not think you want a full-blown lady; I think you want a clean, sensible woman, well instructed in practical matters, superior to the working woman.

7758. Who would realise and understand exactly what class of cookery and what class of work was required in a respectable labourer's house?—I am talking about the care of children.

7759. It is exactly the same with regard to the care of children—what is required and what is possible to be done in a respectable labourer's cottage?—Yes, I think so. I want the thing to be thoroughly practical. I do not think that we want a lot of fine ladies running wild with their fads.

7760. The danger is that their ideal is too high?—Not if it is an ideal, but you have to consider the ideal for a working class home. I do not think that that ideal working class home is the same as the ideal better class home. My babies have very comfortable beds, but I have them made of sea weed; the nurses make them for them. Sea weed is put into a piece of tick and changed every week. If they were nice children they would have horsehair mattresses.

7761. You do not want a person who has got very high ideas?—I do not think we want the thing run as a fad.

7762. Have you heard that in some places, especially in Manchester, they have a society called the Ladies' Health Society?—I have heard of it. Some friends of mine belonged to it.

7763. The women visit the homes, especially when they hear of a birth, but they also do a great deal in the way of distributing pamphlets?—Yes, and teaching them practically. I think that would be admirable, but in London the working class people are very independent. I do not think that a voluntary visitor would be let in. I think these people would have to have the badge of the County Council or some public body, so that the people would know them.

7764. Is the fact of wearing a special dress like your own, for instance, like that of a Sister of Charity, a help?—I think it is a help. You must understand that I am not generalising about the whole of London, but I do not think that my Hoxton mothers would let a lady in if she said: "I hear that you have got a baby and I want to teach you about it."

7765. You must go tactfully at first and get well-known?—Yes; you see the visitor would have had an opportunity of getting to know these women in other relations. Country people are different from Londoners. I have lived in Manchester four years.

7766-7. Do you think that the country people are less independent than the Londoner?—No, but I think they are less stuck-up. If you want to see them about practical matters I think many North-countrymen would let you into their houses, but I do not think that the Hoxton ladies would; they would say: "Why should you come and teach me: my house is my castle."

7768. There would be a difficulty in London, as there was at the beginning of the Manchester Ladies Health Society?—Yes, I think so; but I do not know whether everyone would agree with me. I do not think that London people would be willing to receive such a visitor with open arms at all. I think they would get very cross and say they knew much more about their children than she did. But I think if such a visitor could be an official of the Borough Council, or even of the school authority, or of some charity which was recognised, the difficulty would be largely removed.

7769. Official visiting is better than voluntary?—I do not think they would do better work, but I think they would not get in as voluntary workers in Hoxton. I do not know how they would get on in other parts of London.

7770. (*Mr. Struthers.*) The Londoner, apparently, is more amenable to discipline than the people in the North—he submits to authority?—I think it is delightfully characteristic, and I like them for it. The Londoner will not be interfered with, and you have to go very tactfully to work; and if you were to say to one of these Hoxton mothers, even in rather a tactful way, that you had come to teach her about her children she would probably get angry.

7771. If the visitor comes with authority either from the municipality or the School Board she takes her in as an authority?—I think so.

7772. With regard to the question of teaching the girls in the elementary schools, of course they do get something at present in a theoretical way?—Yes.

7773. You think there would be great difficulties about carrying out practical instruction of that kind?—Yes;

because of the numbers of children, but I think something might be done. Even a little would be better than nothing.

7774. You know the higher class in the elementary schools, girls of thirteen or fourteen, are taken in small sections of twelve and eighteen for lessons in cookery; they are not necessarily all a class of fifty or sixty?—I know that.

7775. The class is broken up into sections of eighteen or twenty. If they can do that for cookery is there any reason why they should not do it for infants?—I think there would be more difficulties, but I think it might be done.

7776. Every elementary school has attached to it a large infant department with plenty of babies?—You call them babies; they are rather grown up babies.

7777. From three years old I understand?—The mischief I am keenly interested in and what I want to speak upon is this horrible mortality of infants under one year. Some of the children are killed and many spoiled.

7778. Is not that rather going to the other side of your work—the care of the infant; what I have been discussing has been the training of the mother, getting her early in the elementary school?—Yes. I think you want to teach the children about the tiniest babies under three. You could teach these children something; you could let them have little toddlers, and show them how to wash them, but you cannot teach them about the smaller children, and that is when the mischief is done. These children are done for between birth and the age of about one year. Many die when they are a month or two old just from pure ignorance.

7779. In the case of compulsory attendance at continuation classes of girls from fourteen to sixteen, that instruction would be given in the evening?—Yes.

7780. And that would also have to be purely technical instruction?—I hope not purely, but largely. You could not have a lot of babies at that time.

7781. You think it might be supplemented by a practical class?—Yes.

7782. What you really wish to do is to get hold of the actual mothers?—Yes. I would rather say young women. I think many of the young women that I know would come to a class if I had a good class arranged, with children.

7783. What age of young women are you thinking of?—from eighteen to twenty-three or twenty-four.

7784. Those are girls or women who would be engaged at work during the day?—Yes.

7785. How are they to arrange to come to have lessons?—I should get one or two specimen babies.

7786. Do you not think that the Manchester plan is a more practical one, of having a visitor who goes to the actual place?—I think we shall have to do both. The ignorance is enormous and we shall have to try all sorts of plans for getting rid of it. The children in the school must be taught better than they are. We must have voluntary classes for these young women and mothers, and we also want the visitors. But I do not think the visitors will succeed in London unless they come with the sanction of some recognised authority.

7787. They must come as officials?—I think so.

7788. I do not quite gather what you mean; you have your crèche only five days a week?—Yes, because on Saturday the little girls are not at school and they have to mind the baby.

7789. Would it not be better for them to come to the crèche with the baby?—It would, but in working a crèche a great deal of cleaning has to be done and it is good to have one day to clean up. The babies do come on Saturday for half the day; they come till two o'clock.

7790. You say that milk costs you 4d. a quart. I have had information that the usual price is 3d.?—That is if one buys a large quantity.

7791. This is retail, sold at retail shops at 3d. a quart?—I wonder whether it is good?

7792. I cannot say?—I would rather pay 4d. and be sure of it. It is very good milk that I get.

7793. Your objection to the tinned milk is not so much that it is bad in itself as that it runs a great chance of being polluted?—I think that is the great difficulty. At the same time I should like to guard my answer in this way; that I have never tried feeding children on tinned milk because I despise the thing *ab initio*.

7794. To put it gently, might that not be an initial prejudice?—Yes. I never fed anybody on tinned milk.

7795. So far as you gave reasons for objecting to tinned milk, it was chiefly because of the danger of pollution after it was opened?—Yes; I am not a great expert on tinned milk, but there are two kinds of it. You can buy that which is good, and another which is called tinned milk, which is really tinned skim milk. The tinned skim milk is bad; it has little nourishment in it.

7796. I should fancy that the law could deal with such cases as that to a certain extent at present?—It is on the tin, but the mothers do not look. I do not think it is a matter of adulteration. The mothers buy it because it is a halfpenny or a farthing cheaper. I do not think there is any cheating. You can always tell which is the skim and which is not. The mothers think it is tinned milk, and they buy the skim milk.

7797. You could not prohibit the sale of skim milk in tins?—No; it is better than nothing at all.

7798. Rents seem to be very high in your quarter?—Yes.

7799. Are they as high in other quarters?—I think round Edgware Road and in Soho they are high.

7800. Lisson Grove?—I do not know about that.

7801. (*Colonel Fox.*) You told us that the main object of your crèche was to produce ideal mothers?—Yes.

7802. Rather than to encourage mothers to neglect their domestic duties?—Certainly.

7803. Then you told us also that the mothers who attend there are anxious mothers?—Yes; they are very kind.

7804. Do you not think that a large proportion of mothers are not anxious mothers, but are careless?—No, I do not. I think the great majority of mothers are very kind people indeed, and very fond of their children. Most of the mothers who come to me are sorry to have to put their children out to nurse.

7805. But they are ignorant?—Yes; they are really ignorant; they do not understand about the nature of food.

7806. Through ignorance you consider that enormous numbers of children are killed?—Yes, they are killed by kindness, so to speak.

7807. Therefore, if you only get the anxious mothers, the large proportion of mothers who are careless and practically not anxious about their children, through ignorance, are not taught?—You will not be able to make the world right in a day; you can only get the elect for anything.

7808. You have a better chance of training the large mass of women at the elementary school during the latter part of their school life, than you have by training these few in the crèches?—I think you can do a great deal. But do you know what I find in every department of life? I find girls come to my evening club at from sixteen to eighteen years of age, who cannot sew at all. I know that these girls when in the board school did beautiful needlework, but they have forgotten. If you get a little girl who has learned a good deal about a baby at fourteen, and then she goes to make boxes all day long at a shop, and marries at about twenty-three or twenty-four, she has forgotten. I am glad to say that the women do not marry very young in our part. I think it is at that point that the voluntary education in connection with crèches would revive their knowledge.

7809. Forgetfulness is not the fault of the teaching but the natural result of things?—I daresay they would not forget as much if the teaching was highly intelligent.

7810. I am speaking of needlework?—I think they forget. I think we all forget things.

7811. Do you not consider that the most receptive time of a human being's life is between thirteen and fourteen?—No; I think when you are seventeen or eighteen you have more sense, you know it is better to learn things, and you put your back into it.

Miss Eves.

7812. Is it your experience that you do not forget the nursery rhymes and fairy tales which you learnt when you were young?—I do not altogether agree with you. You remember some. I think a young woman who is engaged to be married knows she will probably have children, and I think she takes a keen, practical interest in it then. I think if you gave her a few lessons then, on the top of intelligent training when young, that is the time she will profit.

7813. Do you say these health visitors would be resented?—I think they would object to them in London. I believe it works all right in Manchester—it is a great success there.

7814. In many places the district visitors are resented and you only get a very small proportion of anxious mothers at your crèche; do you not think that you are far more likely to deal with a large mass by training them at the schools?—I should do both. I should give the children in the school as good a training as possible. It would not be the best because it would not be thoroughly practical because of the large numbers. I should compel a girl from fourteen to sixteen to go once or twice a week to an evening school, and on one of those evenings they would have to learn infant hygiene, which would also be largely theoretical, because you could not have babies. Then I should have voluntary classes of young women who are going to be married, and teach them in a thoroughgoing and practical way.

7815. That is only dealing with a small proportion?—Each good mother makes a good daughter.

7816. You must have some form of legislation if you are to deal with the mass; you cannot depend simply upon voluntary classes?—No, but I think you can do an enormous deal by voluntary classes. I think the London County Council has done a noble work by means of the Technical Education Board. I think they have done a large amount of most useful work, and I think we could do the same with this if we had the means of giving practical teaching in connection with the lectures.

7817. Then as regards these infants of three years old and upwards that attend the elementary schools, you consider it is better for them to run wild, to run about, and not be made to sit down at their desks?—Yes.

7818. Surely instead of having at every school rooms devoted to infants and teachers, you could have some form of hall built where these children could at times run about?—Yes; I think that would be excellent. I think the elder girls in the school would learn a good deal about these toddlers. But you would not touch the infant mortality.

7819. You were speaking about this question of children being kept at three, four, and five years of age, sitting down at desks?—I do not think it is good, but that is not my main point.

7820. I am dealing with what you said yourself. You considered that it was a very bad thing for infants to be compelled to sit down from three years old to four or five, when they ought to be running about?—Yes, I do.

7821. You looked upon it as a serious thing; therefore I ask you, in lieu of that, whether it would not be better to treat them as little tiny children, and let them run about and have rooms devoted for the purpose at the existing Board Schools?—I think it would be a great improvement.

7822. (*Dr. Tatham.*) I want to ask you one more question. May I ask you exactly where your crèche is situated?—In Shepherdess Walk in the City Road, just between the Angel and the Bank.

7823. It has been recently stated prominently in the newspapers that the great difficulty of dealing with the very poor is that a very large proportion of the unemployed are unemployed because they will not work, and that a great many persons who allow their children to be attended to and supported by charity could, if they chose to do so, support their own children; that the men are drunken fellows who do nothing but drink though they can earn from 35s. to 40s. a week, but inasmuch as they are drunken dissipated fellows they do not care and will not support their children, so long as other people will support them for them; that has been publicly stated in London within the last few weeks. In the district you know so well in the City Road do you think that state of things obtains?—I think there are a great many men who lazily waste their time, and drink, and the children would have had no food at all if the women had not worked.

7824. Do you agree with the suggestion that some legal pressure should be brought to bear upon people of this kind and that those who would not support their children should be made to do so: do you think that would be one way out of the difficulty?—I think it would be a very good thing, but I do not think it would touch the ignorance of the mothers. They are very ignorant. They do not understand the structure of the human frame at all. It would not touch the ignorance at all. It is a very wrong thing that a woman with a very young infant should go out to work and dump the child somewhere because the husband is drinking and idling his time; but such is the case.

7825. In the case I am supposing, when the husband is in receipt of good wages and could support his child, and keep his wife at home to look after it, do you not think that pressure ought to be brought to bear upon him?—I do, if it could be done.

7826. Have you considered the question of labour colonies at all?—Of course I have heard a great deal about them and have come across a good many men who have been sent to labour colonies. I think in some cases they are successful, but not in many. I think the regular full bred Londoner does not adapt himself to country ways, and I think they drift back to London again.

7827. Would you agree with giving the magistrates the power, in some of the worst cases, to commit men to labour colonies?—I certainly would.

7828. In that case the existing agencies for the assistance of the poor would probably almost cover the needs?—That is rather too large a generalisation. I could not say that.

7829. At any rate the existing agencies would be much better able to cope with it?—Yes. I think an enormous amount of misery, wretchedness, and physical deterioration is due to the fact that a large number of men do not realise their responsibilities as husbands and fathers.

7830. You would make them?—Yes, I should hold them responsible, certainly.

Mr. William Henry Libby, called; and Examined.

Mr. Libby.

7831. (*Dr. Tatham.*) You are headmaster of the board schools, Victory Place, Walworth?—Yes.

7832. And a member of the Executive Committee of the London Schools Dinner Association?—Yes.

7833. And also Honorary Secretary of the Scholars' Free Meal Fund in connection with the East Lambeth Teachers' Association?—Yes.

7834. Will you tell the Committee your experience in relation to the subject before them?—I may say that I have been in the service of the Board now twenty-nine years this March, and I have been headmaster twenty-seven years. I started as assistant in a very poor district, namely that in which I now am, and then I went to a better class district in Kennington—Clapham Road—and afterwards back to Walworth again. It always struck me that many children in the schools suffered from underfeeding as evidenced by the difficulty they had in doing their mental work. About six months before I started this fund there were two or three boys in the school, who seemed to be in great difficulties, and I said to them: "Why cannot you get on with your work?" They said, "Well, sir, we have had nothing to eat." I said "What do you mean?" They said "We have had nothing since yesterday morning." In order to prove the case I sent down to a baker's shop and asked the baker to oblige me with some of the driest crusts he had on the premises. He did so, and I gave them to the boys. I did not apparently watch them, but I kept my eye on them, and I can assure you that they ate ravenously, and in a very few minutes the whole of the dry bread was gone. I came to the conclusion then that they were positively hungry. I said to my fellow-teachers, "We are doing a little in aid of hungry children through the London Schools Dinner Association"—that had just been formed. I may say in connection with that Association that it is a central fund which was formed in order to amalgamate existing agencies and if possible prevent overlapping throughout London. I said to my fellow-teachers, "I think it would be wise for us as teachers to try some humanising influence in connection with our work in the schools by taking up a fund such as this is, that is to say, make it a factor in the teachers' organisation." You know the teachers have organisations—the National Union of Teachers and so forth—I suggested it should be made a factor of that for the simple reason that when the child left school he should feel that the teacher was a friend, and more than a machine driver, but had looked after the betterment of the child's condition. The teachers said, "We see a difficulty in taking this matter up as it will be such a huge thing; the Association will be responsible for a very heavy sum." I said that I would take the responsibility of doing it, and would start the fund on the lines that we should have the money paid through the bank and draw cheques, and the accounts audited by chartered accountants; the treasurer should be outside the teachers' profession, and the fund should be run on business lines. We started the fund, and I am pleased to say that it at once met with public approval. We secured a very good list of patrons, Members of Parliament and gentlemen connected with the district who lent their names, and subscribed, and furthermore we thought it would be nice for the children in the better class neighbourhoods, that is to say, Dulwich, etc., which is in the same division and under the same inspectorate, to take an interest in the children of the poorer class neighbourhoods, by means of school collections, concerts, and so forth. In some cases we have had those children up to see the children from the poor district fed—in Walworth, and such places. We formed the fund on those lines, making ourselves responsible, and I am pleased to say that we had help from the London Schools Dinner Association, to which we allied ourselves, because we thought it only wise and right, and also from the "Referee" fund, which collects a very large sum of money for a similar purpose. We have been able to keep the fund running for twelve years. The average balance in hand has been about £25. I may say in connection with the children and the teachers, we at once saw the advisability of getting the attendance officer to work hand in hand with us, for this simple reason that the attendance officer is brought into contact with the home life of the children. He knows when the father is out of work; he knows when the elder boys and girls have passed through the schools, and gone to work, and he knows when the family is in difficulties. But at the same time, he visits the homes without any idea of charity in the mind of the person whom he visits; in fact he visits the house in the course of his official duties for the purpose of driving the boy or girl into school who is out earning something. He can give us the very best information in connection with this work. He is visiting the home the whole year round, and not only the home but the area, the district; hence we at once incorporated these gentlemen on our Committee for the purpose of giving us general ideas of the state of the poverty they find in various districts. We have one from each corner of the East Lambeth division, and I am bound to say that we find them extremely helpful in giving us valuable information. Where teachers apply for large grants and other teachers apply for less, we say to the attendance officer, "How is this; there is a school two or three streets off which wants half as many dinners again as the other," and he gives us the reason.

7835. (*Chairman.*) What percentage of children do you cope with?—That depends. According to the information we can get, I should say about 12 to 15 per cent.

7836. In the poorest schools?—More than that in the poorest schools—sometimes 25 to 30 per cent.

7837. We were told early in the enquiry that something like 30 per cent. of the poorer children were insufficiently fed?—Yes, I based that on the wage earnings. These attendance officers have helped us considerably. We have been able to get full information with regard to the homes of the children, and the life history of several of the families has been dealt with, and furthermore, I may say with regard to culpable negligence of parents we made arrangements several years ago with the Society for the Prevention of Cruelty to Children whereby any cases which came to our knowledge of negligence of parents were sent to the Society, and they have helped us.

7838. That has had a very useful effect?—Yes.

7839. What is your standard of parents income which entitles them to assistance in this respect?—We do not depend upon the income; we depend upon the immediate need of the case. A man's rate of wages may be £2 or £3 a week, but he may be out of work for several weeks. If you ask him his wages he may say that he earns £2 a week. I had a man this morning who came to me in connection with the Southwark Borough Council Relief Fund, who has not had work for two years.

7840. He has no income at all?—None.

7841. In this family budget which you have been good enough to furnish us with, you talk about 5s. rent for a family of six persons?—Yes, that is rather low. We have Guinness's Buildings and Warren Buildings near Victory Place Schools. The former is connected with the Guinness Trust, and the latter with the Fishmongers' Company. Some rooms at the top of the building are let at 3s. 6d. a week, two rooms; and they come to 7s. 6d. on the ground floor. I have to average the thing. They are all huge buildings round where my school is; they are mostly in private hands; they would average about 5s. That would be taking a low estimate.

7842. Are most of the labourers lodged in buildings of this kind?—Yes, 90 per cent. of the people round the Elephant and Castle live in houses of that type. There is a whole series of blocks from the Elephant and Castle right down the Kent Road—also in the rear of the Kent Road.

7843. Most of these women have to work?—Yes, they have to go to work to augment the weekly income.

7844. That is an additional reason for providing a mid-day meal at the school?—Yes, the fully paid meal—I have always argued for that. I have stated in my *précis* that the mothers go out to work, and then I have considered the question of growing girls, looking at the future motherhood of our nation. Of course, I am not a medical man, but at the same time I think it is very hard upon girls who are growing and who have to live under conditions for two or three years where they are underfed systematically.

Mr. Libby.

7845. Is that due to parental neglect or parental inability?—I am sorry to say that in most cases it is due to parental inability. I have allowed only ¾d. a meal for each child, and in the case of four children that amounts, for three meals per day, to 5s. 3d. a week. That is as low as you can put it. The guardians allow about 1s. 6d. a week for each child, I believe, and I should say it would be extremely difficult to provide a child with dinner, breakfast, and tea, for a matter of 2½d. or 2¼d.; but they have to do it. I have noticed this in connection with boys who have gone to the Poor Law schools; they have been physically saved, for they have had regular meals, and have looked entirely different children—fattened up and robust compared with what they were before they went away. It is the same in connection with charity schools. I went to the Duke of York's School the other day to see one of my boys who had been taken down there. He was not at all a delicate boy. I said to the Chaplain, "These boys seem hearty and well." He said, "Yes, under our system of feeding and putting them to bed early and having good baths, they are wonderfully healthy."

7846. What charity schools do you refer to?—The Duke of York's School which I visited some little time ago.

7847. The boys are there for years, are they not?—Yes.

7848. Not for a short time?—No. One of our attendance officers told me this: He said that one boy said to him, "I wish I could go back to the truant school, because I get more to eat at the truant school than I do at home."

7849. On what scale do you feed them; do you give them a meal when they first arrive in the morning?—We have some breakfast centres and some dinner centres; they are mostly dinner centres.

7850. You do not give meals at the schools themselves?—Occasionally, but we do not as a rule, because the teacher has been teaching all the morning, and it is rather a tax to ask him to go and serve meals during the meal times; it is rather an arduous task.

7851. Could you not get voluntary aid to do that?—Yes, we can get any amount of voluntary aid.

7852. You could have that in the school as well as out of it?—It rather disturbs the arrangements of the school in the afternoon.

7853. Most of these schools have halls?—Yes.

7854. And most of them have kitchens?—No, very few have kitchens; the Board have only provided kitchens in a very few cases.

7855. Would it not be a useful thing if every school was provided with a small kitchen?—Yes.

7856. It would not occupy much space, would it?—You would have to have a room where the children could dine.

7857. The school hall would supply that?—Yes. But we find our teachers, especially in girls' and infants' schools, rather object to having the halls disturbed.

7858. We are thinking of the most practical method of doing it, and personal preference must be suppressed?—There is no reason why they should not use the halls.

7859. The use of special places for the distribution of these meals means additional cost?—Yes.

7860. You hire places, I suppose, at which these meals are given?—We do not hire them for the simple reason that if we did they would be liable to be rated by the local authority.

7861. Are they placed at your disposal?—Yes.

7862. What buildings are they?—They are connected with churches, and chapels, institutes and Sunday schools.

7863. And parish rooms?—Yes.

7864. That is not an element of cost?—No, but at the end of the season we generally give them £2 or £3 for the gas or attendance.

7865. Are the meals cooked in all these places?—They come in ready cooked; they are cooked at the central depot.

7866. All the meals come from a central depôt which is run by the organisation?—Yes.

7867. Do you mean that supplies meals all over the area?—Yes, except in one or two cases, where our local committees prefer making their own cooking arrangements.

7868. You would be inclined to argue that that is perhaps the cheapest way of doing it?—The cheapest and the only way of doing it for large numbers.

7869. You might have done it in the schools?—There would be a difficulty in getting the caretaker or the caretaker's wife to manage the whole thing.

7870. It has been suggested that it might be worked in with instruction given to the children in cookery?—A few of them attend a cookery centre; there are only a dozen to fifteen attendants at the cookery centre at one attendance. There would not be more than twenty. I suggested to the Board some years ago in giving evidence that they should teach the children in the cookery schools, not to cook fancy dishes, but to cook meals at a certain rate. For instance, you could say to a child, "Here is 4d;" "Here is 6d," or, "Here is 8d.; I want you to tell me what to get to cook a dinner for six people with this 8d."—supposing a man is out of work, and that there is only 8d. in the home. The children would go out and buy 8d. worth of whatever they liked, and cook it there and then, and see whether it would be sufficient for a man and his wife and four children. That would make the thing practical, rather than cooking fancy dishes. When they came to be mothers of families themselves they would know how far 4d., or 6d., or 8d. would go. With regard to the central depôt where the vegetarian dinners are supplied, we use the crypt of St. Peter's Church, Walworth. The parish removed all the bodies and Mr. Horsley, the vicar, had the place cleared out entirely for two objects—one a children's playground and the other our food depôt. Mr. A. F. Hills, of the Thames Ironworks, a very charitably disposed man, has two strong ideas—one is temperance and the other is vegetarianism—and he said to us, "I will establish a depôt for you on vegetarian lines, and fit the whole thing up"—it cost him £700 or £800—"providing you will endeavour to teach these children the benefits of a vegetarian diet." It did not matter much to us whether they had vegetarian soup or meat soup provided it was palatable and they were able to thrive on it, and sufficiently nutritive, so we accepted his offer, and he fitted up the depôt. He fitted up depôts in about six or eight different quarters of London—Bermondsey, Shoreditch, and so forth. His vegetarian ideas, as a rule, except in our division, failed. He had not an organisation behind him as we gave him, where he found customers every day at the depôt and food centres surrounding the depôt, to demand a supply of the food cooked. He gave up the whole idea; he decided to close his depôts, and was going to close ours, but we prevailed upon him to keep it open. The food is cooked overnight over gas. We buy a French preparation—desiccated vegetables—about ten different kinds of vegetables—to flavour the soup with, and then cook haricot beans, rice, lentils, and so forth, varied each day, and sometimes we have puddings; and when the dinners are cooked overnight they are despatched to the various food centres—these mission halls and places where we get assistance—in insulated carriers. An insulated carrier is something like a sanitary dustbin, and the soup in the insulated carrier will keep sufficiently hot for twenty-four hours for anyone to eat. The bread is brown, according to Mr. Hill's ideas, and we also have wholemeal cake. We cut that up, prepare the soup and despatch both by carrier in geographical order right throughout the district to the feeding centres. The soup is placed in charge of the carman, I should say, about half-past nine or ten in the morning. We use enamelled plates; they occupy little room, as they fit into a sort of umbrella stand. By the time the children come out of school—one centre takes two or three schools—our good friends connected with the church or chapel are ready to distribute the meals. The children come in and show their tickets—which cost 1d. each—and sit down. In a well arranged centre they sit down in an orderly manner It is something to teach the children how to eat properly. Sometimes they go in two drafts—one at twelve or ten minutes past twelve and the other at twenty minutes to one. Then the carman comes back on his journey, picks up the empty insulated carrier and the baskets, and takes them back to the depôt. They are cleaned out and ready for the next day. We cook puddings also. I may tell you there is no animal fat

in those puddings, but nucoline. We are bound to do that in order to keep to the strict terms of Mr. Hill's arrangement. Some are savory puddings and some sweet puddings.

7871. (*Mr. Struthers.*) No arsenic ?—I do not know what it is. I think nucoline is the name of it. It is quite tasteless and without smell. We can cook 5,000 meals at this depôt if required; we do not send out 5,000, but from about 1,500 to 2,000.

7872. (*Colonel Fox.*) Do you find this vegetable diet is nourishing ?—Yes. I have had a very good instance of that this season. At the Murphy Memorial Hall, in the New Kent Road, they got some outside assistance, and said: "We should very much like to cook our own food, and we do not care about your vegetable diet, your thick brown soup, and your brown bread, and brown bread cake." The pastor of the church said: "I am going to give them nice white bread, and have first-rate animal soup." We started and went on for four or five weeks. The week before last I said to the boys attending my school, "Which soup do you like, the soup you had last year, the brown soup from the depôt in the large tins, or the soup that you are having now with the nice little loaves of white bread." I separated these children and asked them individually. There was only one case where a boy said he preferred the soup from the animal food rather than the vegetarian. They said they liked the thick brown soup and the brown bread. It is more nourishing. In fact, they thrive on it. The advantage is this, with regard to the mission hall people, who help us, that there is no grease, the plates are easily washed and wiped, and there is no grease dropped about. That is a great advantage to the ladies and gentlemen serving.

7873. (*Dr. Tatham.*) You speak here of attending to the condition of our growing girls; from that I infer that you have under your care girls' schools as well as boys' schools ?—Yes.

7874. What is the special need you speak of ? In your *précis* you say that there is a special need for attending to the condition of our growing girls ?—I am not a medical man at all, but I thought it might affect the girl from the maternity point of view in future. That was my great point. In fact, I have asked one or two people if the mothers in the poorer quarters of Walworth have large or small families, and they tell me that the families are getting smaller. I do not know—I have not any data to work upon, but it struck me it would be a very useful thing for this Committee to have their attention drawn to the question of growing girls. The medical gentlemen will give you information on that, but it seems to me, as a mere layman, that it is a far more serious thing for a growing girl to be underfed than a growing boy, looking at the future of the State.

7875. I thought you might have had some special suggestion to make ?—No more than that I have inquired into it slightly.

7876. Have you any experience of the work of the Salvation Army in your neighbourhood ?—I have used the Salvation Army depôts in connection with our work, and I find them admirable from this point of view, that the Salvation Army officers—of course including the women as well—are robust: they are very hearty in their way, and do not mind turning up their sleeves and doing the work effectively. They have not helped us lately; at least we have not used any of their depôts lately, but when they go into this kind of thing, they go into it enthusiastically, that is to say, the thing must be done, and done properly. They are whole-hearted, if I may use the term. I am always pleased to work with them; they do an enormous amount of good. They have been working class people themselves and know the pinch and horrors of drink and bad homes; in fact, many of them are reclaimed people. They live among the people, they talk to them in their own phraseology, and they have a great advantage in that way. People in poor districts rather fight shy of the ordinary clergyman; they would, as a rule, sooner go to a layman. But they will not do it.

7877. (*Mr. Lindsell.*) What is the full price for a meal?—We can cook a meal for a child, consisting of about a pint of this vegetable soup and a piece of brown bread and a piece of cake, for three farthings, or a little less. It costs us one penny, including despatch.

7878. What is your charge ?—We charge one another a penny, because the depôt is worked in connection with the organisation. *Mr. Libby.*

7879. What is the child charged ?—One penny.

7880. The percentage of paying children is very small compared with those that get it free, is it not ?—Yes; about 7 or 8 per cent. That is because it is not thoroughly worked. I have always argued, in connection with our work, that the child in the elementary school should have the same advantages of a dining hall as the child attending a high school, such as the City of London School, or Dulwich, or St. Olave's School. This would apply where the mothers and fathers are out at work, and otherwise have sent them with a piece of bread and dripping to wait till they get home from work, and all sit down to a regular meal. There should be facilities in connection with our work in elementary schools, whereby that child without any charity whatever should go and get a hot midday meal for a penny, and it can be done.

7881. Does your Committee investigate each case and give a ticket ? I suppose you sell the ticket for a penny if you think he can pay, and if not you make him a present of it ?—No, we go in for part payment.

7882. You give a penny ticket for a halfpenny ?—Yes, or even a farthing.

7883. But so far as you can, you think it is a good plan that they should pay something ?—Yes.

7884. You would not give it free unless you were satisfied that the father was out of work ?—Not for a moment.

7885. (*Chairman.*) What percentage do these classes represent ?—I group the two classes together in the 6,000.

7886. What percentage pay the full cost ?—I should say about 2 per cent.

7887. And part cost ?—About 6 per cent. You see it is a charity. If we could get all our teachers to work on sound business lines we should get the thing done, full, part and free throughout.

7888. (*Mr. Struthers.*) It is so much easier to treat it as free than insist on money ?—Yes, very much easier, and of course we do not all look at it from the same standpoint. That is the difficulty; our teachers are very good, I am not reflecting upon them for a moment. They look upon the question as we talk of it in Committee, but two out of every three teachers are ladies, and they are naturally rather inclined to give it free than otherwise.

7889. (*Mr. Lindsell.*) What you look forward to is that these food centres should be taken up by municipal authorities ?—I think so; in fact I have gone into that idea. I started, and was a very strong advocate for many years of its being done on charitable lines entirely. I should premise that I believe if we take medical advice in connection with school life, we should find big revelations on this question. For instance, we had a medical man examining some children of a holiday fund, last summer. I think out of sixteen children he said seven suffered from valvular disease of the heart brought on by having wet feet and ill nourishment, and that kind of thing. That is a very large proportion.

7890. You think that all school children in rate-aided schools should be subject to some sort of medical examination ?—Yes. I am a very strong advocate of that.

7891. That is done to a certain extent now by the School Board medical officer ?—No, it is not done at all. We test the eyesight of the children. The teacher tests it in the first instance, and then the oculist comes round and makes an examination of the children above Standard III. My contention is this: that in connection with our teaching the medical officer of the borough or the Board should come into the school and examine the children from the physical point of view at least twice a year, so that they should not be classed simply because the children are of a certain age, or of such and such a mental capacity; they should be treated from the medical standpoint, and when we come to do that we shall find that the children who are organically sound, that is to say, have sound hearts and sound lungs, may not be robust simply from the effect of bad or insufficient nutrition. When I speak of bad nutrition I should like to pause for a moment. Bad nutrition arises in this way, that the mother of the family cooks for the father, she does not cook for the children, and the children all have to eat what the father eats.

Mr. Litby.

7892. (*Colonel Onslow.*) You only give these meals in the winter, do you not ?—Yes.

7893. Why do you not give them in the summer as well ; are they not required ?—We do in two instances ; that is the Old Kent Road District where the gasworks are ; we give summer grants.

7894. Is it not generally necessary to keep them all through the year ?—It is not that ; it is the fact that we should not be able to get money in the summer.

7895. During the school holidays these children, I suppose, have no food ?—None whatever from us.

7896. Your supply is entirely vegetarian ?—In 90 per cent. of our centres. We have one or two others where it is not so.

7897. If you had meat would it be possible to keep it down to that price ?—I could not say, because I never had any experience in meat. A man who cooked for this little centre in the New Kent Road, who gave the meat, which the children did not prefer, said that he made nothing out of it, and the pastor further stated that he made nothing out of it—it cost him the same amount as the vegetarian diet.

7898. Do you find the vegetarian system is satisfying to the children ?—I find it so, and they do not tire of it.

7899. If this could be extended so as to be made not a voluntary organisation but a general organisation under the School Boards all over the kingdom, would it be as suitable as a voluntary organisation ?—It would undoubtedly meet the need.

7900. Would it be possible to deal with parents who could pay and do not pay, in the same way as they were formerly dealt with when they could pay but would not do so ?—I should think so. The law should be strengthened in that way. We have always held that opinion. A man has no right to neglect his children.

7901. On inquiry if it was found that the family was absolutely unable to pay, then they could have it free ?—Yes.

7902. Otherwise they must pay the cost ?—Yes. I should charge the account to the guardians.

7903. And have the guardians recover ?—Yes. I should have it on business lines instead of indiscriminate charity ; in the hands of people who are capable of finding out the whole conditions of the case.

7904. (*Mr. Lindsell.*) Would not there be an immediate outcry about pauperising in certain quarters if you made the Poor Law the agency ?—There very likely would be, and some people would put their backs up, but I think it is the only system of doing it on proper lines.

7905. (*Colonel Onslow.*) Do you not think that one or two prosecutions would set the matter right in one district ?—It would have a wholesome effect.

7906. Was not that the case when the school fees were paid that one or two prosecutions of people who did not pay, and ought to have paid, stopped it ?—I do not know.

7907. When the people were disinclined to pay, but they knew that they were liable to be had up for not paying, did not that egg them on to paying ?—It had a salutary effect no doubt, but I think the parents generally looked upon free education—the point you are referring to now—the same as vaccination. They say that when you make a thing compulsory you must make it free. If you make education compulsory the consequence is that you make it free.

7908. This is practically compulsory. The suggestion is that the feeding should be compulsory, because it is either compulsory upon the parent to feed or upon the school to feed ?—Yes. The line you take will be to compel the parent to fulfil his duty.

7909. Is it not rather that the feeding of the children is necessitated by the fact that it is free education ? It is no use trying to cram free education into a wretched child who is starved and cannot take it in ?—Of course it is not. We come into contact with the children now day by day and we find out their circumstances. No doubt they wanted feeding before, but now we get information because we come into contact with them every day and see their difficulties.

7910. (*Mr. Struthers.*) This organisation of yours has been going on for many years ?—Twelve years.

7911. And the attendance officers take a great interest in the matter ?—A great interest, and always have.

7912. You must know pretty well all the children attending the schools in that district who have not been properly fed ?—I would not say we should know all, we should know a very large percentage of them.

7913. Do you think there is a considerable percentage that you do not know ?—There is a percentage we do not know, because you can never judge by a child's outward appearance. A child should be examined by a medical officer.

7914. If there was long continued abstinence from food there would be a significant thinness, would there not ?—Yes, but some people look fatter and fuller with insufficient food than others.

7915. This thing has been going on for many years ; you have the School Board officer taking an interest in them and he must know a considerable number of the children who have not been properly fed ?—Yes.

7916. Do these children who get this meal get properly fed ; are they fit for their work during the day ?—Yes, they improve very considerably although we only give the one meal.

7917. Do you think that that one meal and the chance of what they get at home is sufficient for them to do their work on ?—I would not say that, but I would say it would help them very considerably, I do not think it would be sufficient for a growing child to maintain its normal physical condition and have something to build upon.

7918. You give free breakfasts in some cases ?—Yes, we have two breakfasts centres.

7919. You would give breakfasts if it were shown that the child needed breakfast as well as a dinner ?—Yes.

7920. Will you tell us what you give for breakfast in those cases ?—We give cocoa and bread and jam as a rule.

7921. That is prepared at the school ?—No, we have breakfast centres. We entrench as little as we possibly can on the time of the teacher, although it is a teacher's organisation, for the reason that we can get so much voluntary help ; there are so many charitable people who take the thing up.

7922. You do not give them butter ?—Sometimes, but we prefer not because if we gave them butter it would cost too much.

7923. Have you ever thought of giving them porridge and milk ?—Yes, but they do not take to it in London. I have it myself. It is one of Mr. Hill's ideas, but they have not been educated to it.

7924. Why do you not try to get them to take it. I should think that if a child was offered porridge and milk and nothing else he would prefer that ?—Yes.

7925. In that way he might be encouraged to take it, to his own benefit ?—Yes, on the same lines as we have fostered a taste for brown bread.

7926. Is not the porridge and milk idea worth consideration ?—It does not take so well. I have always said that if they persisted in porridge and milk the children would get a taste for it, and I should much prefer that, looking at it as a food.

7927. What I wanted to get at was this, do you think that there are still a large number of children attending your schools in the Walworth district who are insufficiently fed ?—I think there are. I am bound to say so, looking at the class of casual labourers and unskilled workmen who are their parents.

7928. I mean in spite of your association's work ?—I think there are for this simple reason, that we have not the organisation for proper means of discovery. Ours is a rough method of doing things.

7929. But you have the attendance officer going to the homes of the children ?—We have that, but sometimes the mother and father are out and they do not get to know the whole conditions. I may tell you how we manage in our schools. The class masters first make a list, that is, the actual teacher of the class, of the children they think are necessitous. That list is for each class in each department, boys', girls', and infants', and the three head teachers go through the lists, mark them, and so forth. Then the list is gone through by the attendance officer,

and after that it is gone through by the manager who is appointed for this purpose on a small sub-committee. Then it is sent to the Charity Organisation Society to visit, if thought necessary.

7930. There are a considerable number of children who escape this agency?—Yes, I am bound to say I think there are.

7931. You have this centre erected for which food is selected by Mr. Hill who is a vegetarian on principle?—Yes, he equipped it; and Mr. Horsley cooks and distributes the meals.

7932. I understand that part of the condition of his furnishing the centre, was that the teacher should instruct the children in vegetarian principles: has that been done?—They have to instruct them, inasmuch as a *sine quâ non* of taking that depôt was that we should cook vegetarian food

7933. If the children are told day by day that to eat animal food is more or less a sin, and that vegetable food is proper—— ?—They are not.

7934. Do not you think that that might lead them to prefer the vegetarian diet to the other—they know the correct answer to give?—Half the children think it is animal food; they are never told that it is vegetarian food for a moment.

7935. They do not know?—No, 99 per cent. of them do not know the difference; in fact some of the teachers do not, I fancy; it smells so nice and savoury.

7936. And you think the children thrive on it.?—I do.

7937. You spoke about the necessity of feeding growing girls, and the danger rather of underfeeding and insufficient feeding in their case: do you think there is any greater danger of their being underfed now, than there was ten years ago?—I think these agencies have done something.

7938. You said something about a falling off in the number of families, and you connected that with the underfeeding of girls, at least you hinted there might be a connection; but if the girls are not worse than they were ten or twenty years ago, that does not account for the falling off of the families?—I should like to reserve my opinion on the question of growing girls. I put it in because I wished to draw attention to it.

7939. I suppose you visit some of these cookery centres?—Oh, yes; we have one in connection with our school.

7940. You are frequently there?—Yes, I visit very often.

7941. You have made a very interesting suggestion that the children should be asked occasionally, if not always, to cook a dinner for a given price, 4d., 6d., or 8d.: is not that done at your centre?—I do not think it is done generally.

7942. Have you ever made a suggestion at your centre that it should be done?—I made a suggestion, but the cookery teacher gets her instructions from the superintendent. I made a suggestion in the evidence I gave before the Committee on underfed children in connection with the School Board some years ago.

7943. There is no reason why it should not be done?—I do not see any reason at all.

7944. There is nothing in the Code or the regulations of the department against it?—I could not say what the syllabus for cookery is.

7945. It would be a good method to convert the actual teacher?—Yes.

7946. (*Colonel Fox.*) Is it not a common thing for children to receive 2d. or 1½d. from their parents with which they are supposed to buy fried fish for their mid-day meal?—It is very often done.

7947. Speaking of your fully-paid meal, how do you get paid for it?—These children prefer our meal to the fish meal.

7948. How do you get paid for it?—The children pay their 1d., and we give them a ticket. There is no question of charity; there is no discrimination, when they attend the centre, between those who pay, and those who do not. *Mr. Libby.*

7949. They do not give you a ticket or anything of that kind?—No, we give them a ticket.

7950. I am told that a great number of children receive 2d. or 1½d. from their parents, and their parents expect them to provide themselves with a nourishing meal, such as fish, and on enquiry they find they have spent perhaps a ½d. on a top and 1d. on marbles, and so on; they like sweets or nuts rather than good nourishing food?—I do not think that is very general. You get isolated cases like that, of course.

7951. Have you ever enquired into that?—I have heard people make statements of that kind, but when a child is hungry it goes to the fried-fish shop. Certain boys or girls may spend their money on sweets or toys instead of meals. I daresay there have been scores of such cases, but when a child is hungry, and there are not facilities such as ours, they get a halfpenny-worth of fish and a halfpenny-worth of potatoes in a piece of paper. One of our teachers suggested that we should feed the children in that way rather than by our method. That was only suggested, but we at once insisted that if the child was to be fed with our grants it must be fed on our food and not on fish and potatoes. Children like fish and potatoes, I daresay, but it does not contain a fiftieth part of the nourishment of the dinner we can provide at the same price. I think the custom of the children spending their money in sweets and that sort of thing is not general.

7952. Do you think they get more value for their money by taking your meal than by going to a fried-fish shop?—Oh yes, it is cleaner and there is no risk of bad food connected with our work.

7953. (*Chairman.*) Do you include any hard food, which is good for the children's teeth, in your dietary; do you make them eat crusts of bread?—They eat bread; they are long loaves.

7954. With plenty of crust?—Yes, crust as well.

7955. (*Mr. Struthers.*) There is a piece of crust to every piece?—Yes.

7956. (*Chairman.*) They use their grinders?—Yes.

7957. (*Colonel Fox.*) They do not put it in the soup?—Sometimes I have seen boys break it into the soup. They generally eat a piece of brown currant bread as they go away.

7958. (*Mr. Struthers.*) What kind of teeth have your children got?—There was a period when I used to have time to go round and examine the teeth pretty well every week, but as a rule I think they are fairly good.

7959. When you did examine you found them fairly good?—Yes, as a rule, but the difficulty was that the teeth were not attended to; they overlapped one another and I advised them to go to the hospital.

7960. (*Chairman.*) You think medical inspection would be hardly sufficient; would you require a dentist's inspection as well?—Any inspection as long as you get the health of the children attended to.

7961. The ordinary medical practitioner would not be much of a judge of the condition of the child's teeth, would he?—I do not know. I spoke of special medical officers, and I referred to officers who have had experience in connection with children's hospitals and know a good deal of child life. Weak and ailing children might be sent at any season to convalescent homes at the cost of the municipality on the medical officer's advice. Nurses should be employed to visit the schools periodically and attend to childish ailments of a slight nature and tell them the cause and treatment, thus giving practical instruction.

FIFTEENTH DAY.

Monday, 7th March, 1904.

PRESENT.

Mr. ALMERIC W. FITZ ROY (*in the Chair.*)

Colonel G. M. FOX.	Colonel GEORGE T. ONSLOW.
Mr. J. G. LEGGE.	Mr. JOHN STRUTHERS.
Mr. H. M. LINDSELL.	Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary.*

Miss DEVERELL, called; and Examined.

Miss Deverell.

7962. (*Mr. Lindsell.*) You have for some time past been working as a junior inspector of schools under the Board of Education?—Yes.

7963. You formerly worked under them in Liverpool?—Yes.

7964. And latterly in West Ham and its neighbourhood?—Yes.

7965. How long have you been in West Ham?—I came there two years ago last Christmas.

7966. In your experience as Inspector of Schools you have had, I suppose, considerable opportunities of seeing the homes of the children that attend the schools?—Not much of seeing their homes. I have heard of their homes from the teachers, and the children, and the managers, and, along with the attendance officers, I have visited the homes occasionally.

7967. Your information is mainly derived from what you have been told by teachers and attendance officers then?—Yes, and my own observations.

7968. Is it mainly by visiting the homes and by your observations thereon, or is it mainly from information you have succeeded in gathering whilst an inspector of schools?—I should say it was on information, corrected by my own observations.

7969. You have also had previous work of this kind before you were Inspector of Schools?—Yes. I was Secretary of a Working Men's College in Waterloo Road. I saw the home life of the poorer class, and I have also done some investigation for the London School of Economics, and I have been a member of societies which are interested in the conditions of working people, and various things of that kind.

7970. Therefore, your experience extends over a very considerable period and is not confined to the time that you were Inspector of Schools?—No.

7971. In all the areas in which you have worked you have come across some well-defined slum areas, is that so? The general impression I have is of considerable well-being, but there always are areas of great poverty and neglect, and also many cases in schools which are not entirely in slum areas.

7973. There is a certain percentage of slum life which exists, scattered about?—Yes.

7974. What would you like to say about the main features of those areas?—The most conspicuous feature has seemed to be negligence rather than poverty; negligence sometimes coming from the extreme difficulty of doing better, but very often from the want of knowledge.

7975. You are telling us now why it is more due to negligence than poverty?—Yes. A very good test that it is due to negligence rather than to poverty is the question of the sleep of the children. Anybody, however poor, can put their child to bed, even if several other people mean to get into the same bed later on, but you do not find that these children have any bed-time.

7976. You say that in your opinion the most conspicuous feature in these areas is not poverty, but negligence?—Yes.

7977. Many of those families have sufficient money to lead decent lives if they knew how to do so, you say?—Yes.

7978. And you notice that there is a good deal of unnecessary extravagance amongst them?—Yes, for instance, buying in very small quantities at the corner shop, which is very disadvantageous, for the things are dear, and they buy the wrong things.

7979. In buying in small quantities they have to pay more for them, and they would get them cheaper if they took in a larger stock?—The fact is that they have no larder, no place to keep the supplies. They could not buy flour by the sack, or a large quantity, and they have to buy it by the quartern or half-quartern; and so it is with highly respectable and well-trained persons, they have no place to put their stocks and they buy them in small quantities. The prices at the corner shops where they buy their things are very high indeed.

7980. Your experience is that food among them is generally plentiful, but it is unsuitable and taken irregularly?—Yes.

7981. Would you illustrate that?—Well, the children come to school, and they have no regular breakfast; they have, perhaps, bread and butter as they dress, and they get some bread when they start, and they have very cheap butter. But they bring lunch to school, but it is only bread they have, and they get bread only till they come home at dinner-time and in the evening. It is bread and butter, jam, and tea. Tea is the only form of cooking which seems to take place—I mean the making of it.

7982. How do they manage about the other food if tea is the only thing that they cook?—I do not think that they have much cooked. They have bread, tea, fruit, and sweets.

7983. And the parents—what do they eat?—It is difficult to find out about them. But I think that they live largely on the same kind of thing, and when they want cooked food they buy it. There are fish-shops, and quite decent working people buy the cooked food.

7984. There is hardly any domestic cookery among this class of people?—Hardly any.

7985. Another point is that the meals are taken at very irregular intervals?—Yes. They are always eating, more or less; they are generally nibbling at something, but they do not have a sit-down meal. I know areas where anything like a sit-down meal is unknown. Frequently you go into these houses, and there is not a table where you could have a meal, but generally you see the sisters and cousins eating something and drinking tea.

7986. There is no regular sit-down meal then?—No.

7987. Another cause of the neglect of children you attribute to the loose kind of family system that prevails in those areas?—Yes.

7988. A large number of people are not married, you say?—Yes. I think they live very faithfully together very often, but the person who is not the parent of the child is often negligent or cruel. A woman is very often negligent with the children of the man she is

tiving with. Frequently you find that the neglected cases in the school are the children who have not both parents, and the children frequently change their names. A boy will, for instance, be Jones one week, and another week he will come and give somebody else's name, and they say, "Oh, I have got a new father now," if the teacher asks them the reason of this change.

7989. The result of this is that there is very little orderly family life?—I do not know whether this disorderly family life is the result of the loose family system. They are both the results of other causes, such as overcrowding and irregularity of labour.

7990. You say that in some districts regular meals are, in fact unknown?—Yes; and then some of the children are self-supporting. Often the boys are self-supporting. The parents tell you that with pride. I know one school where the master says that they get most of their meals by meeting workmen's trains, and begging scraps from the men, and they earn pennies, and support themselves in various ways.

7991. You do not speak of your own knowledge of meeting workmen's trains, you speak from what you have learned from teachers?—Yes, and from many other people, school attendance officers. I have always wanted to see the trains myself, but I have not been able to meet them at the right time. But they tell me that the men who give these leavings are often the parents or the neighbours of the children, so that if they provide them with meals in that way they could give them regular meals at home.

7992. And the general result is that the children are very ill-nourished?—Very ill-nourished.

7994. Well, then, your next point is with reference to the want of sleep among children of this class?—Yes.

7995. Will you tell us something about that?—One can see them about the streets at all times, any hour at which grown people are about, and, as far as I learn, they do not take a regular bed-time; they are not put to bed. The parents take them to bed when they go, which is early in the winter and very late in the summer, and very late on Saturdays, and they go many hours after the children of well-to-do people. I think late hours for the children prevail throughout the working classes, but in the slums exceedingly late hours prevail, and they are often ill from want of sleep.

7996. Does that apply to children of all ages?—I think so. When I used to come every night through the Lower Marsh, the streets were crowded with babies on Saturday nights, and other nights rather earlier, but the streets were often full at nine o'clock.

7997. And even the children, if they were put to bed would not be able to get a chance of sleep, would they?—I think the little children would sleep under any conditions if they were put to bed. I have heard of bigger girls being unable to come to school, the children of immoral mothers, from illness produced by want of sleep.

7998. Then your third point is with reference to the clothing of those children?—Yes. There are many households where there is no such thing as needle and cotton. If you would teach the girls, and ask them, "Why don't you mend your pinafores," well they have no needle or cotton in the house and no means of getting it. In many households the mothers make no attempt to mend the clothes, much less to make them. They buy them at second-hand shops, and the children wear them until they drop off, or someone gives them something.

8000. Do their clothes get very dirty?—They are filthy, especially in the case of boys. I do not know much about the condition of the under-clothing; very often there is none, but the outer clothes are in a filthy condition. The smell from the clothes on a wet day is sufficient to make one sick.

8001. You have not noticed any improvement in that respect since you have been an inspector?—I have not been working long enough to see any improvement, and moreover, the character of the districts is changing so rapidly that one could not generalise about it. For instance, the largest slum area, the big area, in my present district is going down radidly. The respectable people are going further afield, and, therefore, I could not say what the same people are doing, whether they are improving or going down.

8002. But you do notice the fact that a worse class is coming into the district, a poorer class?—In that district. Other districts are going up, of course.

8003. But what do you attribute that change to in the particular district?—It would be the gr ater facilities of travelling that enable the better families to get out to a distance. But I have had too few opportunities of seeing that for myself. I have not been long enough in the district, and I have not known the families personally.

8004. What are those families that do now live there? What are the people employed in? Is it dock labour?—I should think so, but I do not know the district sufficiently well to generalise about the causes, whether it is poverty or negligence. All that I can do is to state the facts I have seen. I was going last week through a very bad area, where a good many of the men had no regular work, and some of the men who were at work, I was told, were up in town, perhaps working in a fish shop in the city, or something of that kind, and I got the impression (and an attendance officer said it was a correct impression) that a good many of them had come down here because something discreditable had happened. But no doubt the bulk of the population work at the docks there.

8005. (*Colonel Fox.*) Which is the dock area you refer to?—Canning Town Tidal Basin district.

8006. (*Mr. Lindsell.*) Then another cause to which you attribute this state of things is their absolute neglect of small ailments and so on?—Yes; for instance sore eyes, which is eczema on the edge of the eyelids, and it is perfectly easy to cure. It only needs their being properly washed, but it is neglected and it gets worse. They put tea leaves on the eyes, and they have other queer remedies of their own, but they do not get the children what is necessary for this complaint; and their dirty heads—and there again is just the same sort of problem. They are sent home for having these dirty heads, but they never do anything to them when they go home. If they get a scratch they allow the dirt to get into it, and it gets worse and worse, or if they have a bad finger, or heel, or something of that kind, it is not attended to; and they are neglected very much after an illness like measles, and they die at a great rate.

8007. You think that a remedy for this apathy and ignorance on the part of the mothers would not be found in gratuitous assistance to any great extent?—No. Possibly the children grow up better in health for the school meals, and the clothes sent to them, and from the newspaper funds and so forth, but the evidence seems to be that that is always demoralising to the parent. Last year there was extreme poverty and want of employment in West Ham, and some of the teachers having spent almost all they had to relieve it, appealed to the Press and got considerable funds, and the charity was distributed very freely, and the teachers tell me that in some of the schools which got relief the parents have never taken as much interest in their children since. They never keep them so clean nor so tidy as before, and they have been unable to get them back to the same standard of neatness.

8008. You think it simply weakens the little sense of responsibility the parents have?—They think so; and I should think it is very likely the case from what I can see, but I have not been there long enough to speak with assurance about it.

8011. Then we come to another point which is of considerable importance; that is the feeding of children in schools. We should like to hear your views on that subject?—I do not pretend to have a large enough experience to speak with any certainty, but the point I wanted to make was that it does not meet the case; that you cannot feed the children in schools and leave the education of parents untouched, because that only deals with a very small part of the problem. The feeding is only one of the things. The teachers cannot put the children to bed, or take care of them before they are born or up to three years old, and therefore even if you have the school feeding it is just as necessary to educate the parents. I cannot say about the effects of school feeding, what effect the school feeding has upon the parents, because I have not come to any general conclusions about it.

8012. There is a League in London which provides meals for the children in schools?—Yes.

Miss Deverell.

8013. Does that provide many meals in West Ham in the parts you know?—West Ham is not London; but it has a fund of its own, and there was one at Liverpool—in fact every place I have known has had something of the kind.

8014. Were the meals given purely gratuitously to children in a state of poverty?—In some cases, and in some cases they paid.

8015. It is rather, perhaps, want of system in the way it is done than any fault in the plan itself, you would say?—I cannot assert that there is a want of system, because I have never taken part in it myself. I have only heard of it incidentally, and that is the impression that I have got; in some cases, at any rate, you find them feeding them one day and leaving them unfed the next day or the next week; but I am not at all competent to criticise either the principle or the management of school feeding. I can only say that it does not cover the ground—it does not do all that is necessary to build the children up.

8016. Then of course it does not apply to the case of the children under the school age?—No, and that is very important.

8017. Have you any experience of the establishment of creches or babies' rooms at schools?—I have never seen such a thing.

8018. I suppose in the schools at Liverpool and West Ham the children come to school pretty young?—Yes, three years old, and younger if they can; and occasionally in Liverpool a child would bring a baby to school to take care of rather than stay at home and take care of it.

8019. Have you special rooms for these babies?—No, it sits on the child's lap in school, and the head mistress told me with great pride that it would eat anything.

8020. (*Mr. Struthers.*) Would you consider that disgraceful on the part of the teacher?—It is astonishing the amount of ignorance there is amongst the teachers. In that case I was very solemn and wrote down on a report form that "the baby must be taken into a crèche" and must not be brought to school, and I spoke seriously about its being given anything to eat, but I had no authority to do it you know.

8021. (*Mr. Lindsell.*) The great remedy you would have would be the educating of the mothers?—Yes, one could get up a movement on an extensive scale with that object. There is an immense amount of effort in that direction; but it is not connected—it does not cover the ground. There is nobody who has a survey of the whole situation connecting the various agencies, and making what is done adequate and progressive.

8022. There is a want of concentration in the whole work you think?—Of concentration and of system, and there are many parts of the works and many sides of the work which are left undone almost entirely.

8023. Have you any plan of your own which you suggest for bringing these things into better harmony with each other?—Yes, a plan which I have been thinking about a long time and which I have only not started because of the difficulty of being an official of the Board of Education. My idea is to form committees to concentrate and connect and foster and direct these agencies and to fill the unoccupied ground. They would fill sociological functions between the teacher and the parent, and they would be a very much needed recruiting and training ground for school managers for whom there is no particular training. The school managers ought under the new Act to pay much more attention to the sociological side of their work. My idea is that you could have one or two committees in the chief centres of population and a central committee in London.

8024. Would those local committees be established by purely voluntary effort or under the direction of school authorities?—That is a difficult question, and I have an open mind upon it; but, after thinking it over, it seems to me desirable to have a slight connection, but not a very definite one. You cannot connect them very definitely with a central authority like the Board of Education, because, if you do, your work is extremely limited, and you want those committees to have a very free hand. And then they must be connected more closely with the local authorities, but not too much. I think that their membership should be of the following classes of persons. The bulk, perhaps, should be educated women of leisure. I know such women in most of the big centres of industry, whom I have thought of as being willing and able to carry out such a plan, and I think that you must have a number of leisurely people on it, because it will mean an immense amount of new work. There should be representatives of the many bordering societies, such as the leaders of Girls' clubs, members of child study societies, of parents' unions, of charity organisation societies, settlement workers, and so on—those who are willing and able to help and who are already in the field. Then medical men in connection with school work, medical officers, medical oculists, or men from eye hospitals, say, very much interested in the schools; and the sanitary inspecting women, whose work is connected with the schools. I think that you should always ask the educational authority to appoint representatives. Probably the people who would naturally form the societies would be many of them school managers and some of them on the educational authority; but they ought to be formally appointed representatives, and the more representatives they would appoint the better.

8026. From what area would you have this committee to work; would you have it one central body whose work would be through sub-committees and workers in different areas, or would you form committees of smaller areas, acting independently of each other?—It would depend upon the size of the place. These committees would put their information and their help at the disposal of the education authority, and it is to be hoped that the education authority would employ them for certain purposes. For instance, it is very important that the education authority should employ them to go into the school and to watch whether the health of the children of the schools is suffering from such things as bad desks, too early use of books, bad methods of sitting in school, and so forth. That, possibly, could only be done by those members of the committee who were actual school managers. I do not think that the teachers would like the interference of people not formally connected with the school, but I think that the school authority might well authorise a small committee carefully selected to watch the teaching of the domestic subjects, domestic economy, and hygiene, cookery, laundry and housewifery.

8027. But would not that be trenching upon the duties of the authority itself and upon the school inspectors?—At present the school inspectors cannot do it. In the first place they are men, and they have got up a wonderful amount of information about these subjects, but they do not know them as a woman does, even a woman not an expert.

8028. There are some ladies, you know, who inspect these things?—A negligible number, such a small number that they could be left out of account, and they are extremely busy. Although I am specially interested in that side of the work just now I can hardly get time to inspect a cookery centre. I know that the cookery centre and the domestic economy are not helping each other sufficiently. They do not know each other's work. They never compare notes, or have a syllabus, or anything of the kind, or hardly ever in my experience.

8029. You want the local authority to authorise certain representatives on this committee to be present in the schools when this kind of instruction is given?—Yes, such representatives as would be acceptable to the teachers, and of high authority, of course, because you want someone to look at things from a height—from a distance—and survey the whole system; and it is extremely important that there should be somebody to do what no teacher can do; and I never heard of an inspector who could do it—to see that the work is carried on from the schools to the continuation school, from the continuation school to the boys' and girls' clubs, for it is very important that boys should learn about hygiene, and that there should be mothers' meetings. There ought to be classes for the care of children, and home work, talks and demonstrations upon it in public houses, and in the houses themselves, because it is in those places that you find people who do not come to classes. The continuation schools do not see such people, and yet they need those classes and lectures and talks most.

8030. The continuation school is rather distinct from teaching the people in their own homes. You appeal to a different audience, but you would still be teaching the young?—But what is so indefinite is that hitherto the teaching of the people in their homes has been left to churches and chapels, and such things, and voluntary charity, and there has been no connection between the two.

8031. Do you think it feasible to have home classes taught by the school authority: is that what you recommend now?—The school authority might say, "We are quite willing to give you all the apparatus for such a class if you will subject your syllabus to us, and let us know what you are doing in order that we may carry on the work that we have been trying to lay the foundation of in the schools."

8032. Is it your opinion that the attendance at evening schools should be in any way made compulsory if they have left the elementary school?—I think it should be tried. I am not sure that it would be successful

8033-4. At present a girl may pick up a certain amount of knowledge of household management and cookery at the elementary school, and then go away and forget all about it?—She forgets it entirely, and does not learn the thing she wants. She does not learn anything practical about food values, but she gets long names for different kinds of things—nitrogenous and carbonaceous—and words which I can never remember myself. But she cannot tell you how to make a wholesome meal for her little brothers and sisters, as a rule. She learns to do some very beautiful patching and some fancy darning, and so forth, but she might be taught when she gets to her home to be able to put the bottom of her skirt right, or take the collars off her brothers, and put on larger collars, or refoot a stocking.

8035. We should be very glad to hear if you can tell us any way of improving the teaching of domestic subjects?—I think that it is of practical value in making good servants and where the girls have good, respectable homes and where their mothers have taught them. It is in the very poor, the very bad homes where they do not benefit by it at all.

8036. (*Mr. Struthers.*) Not from any part of the instruction: do you think that it is peculiar to cookery?—It was needlework I was talking of.

8037. But even in the needlework do not you think that it applies to the whole instruction?—Certainly I think that they benefit to some extent. I think that they all benefit in certain ways, and here and there you find people benefit more than you expect. For instance, in a very bad street last week, in Agate Street, I was with an attendance officer and going into the homes, which were all of them very dirty and stuffy, and horrible places—I went into one and the floor was scrubbed, and to my immense astonishment the window was open, and possibly the woman thought I was almost frightened at the open window, because it was such a very unexpected thing. The woman said, "I like the window open. I used to go to school in Battersea, and we learned to have the windows open, and I like the feeling of the fresh air." There you get the air very bad when you don't open the windows.

8038. That is an instance of the effectiveness of the teaching of household management?—That was one in a million upon whom it had an effect.

8039. (*Mr. Lindsell.*) You approve of practical teaching. Are there any faults that you see in the system which you think could be remedied?—Oh, yes.

8042. Take the needlework. You said they cannot mend their own pinafores, although they have learned all this in school. How can we remedy that?—What I am trying to get them to try now is to depart from the old system, chiefly the making of stitches—I do not like to disparage the work of sewing, because they take such trouble, but the result of its being inspected by men is that they pay the most attention to the making of stitches, which is the part a man can get up, and he cannot get up alteration in the making-up of garments.

8043. But the needlework is criticised by ladies?—I do not know how much of it.

8044. And there is a report of the needlework by lady inspectors—it is not the criticising of the unconsidered male?—But these ladies do not know the conditions of each school. The scheme of instruction in needlework needs to be considered in relation to the special conditions of the pupils. It cannot be directed satisfactorily from the central office. Probably the scheme at present in general use suits the bulk of the well-to-do schools very well, though I think that even in their case more self-reliance in the way of cutting out and fixing should be required of the pupils. But there should be, I think, schemes of a quite different sort for poor schools by which the girls would be required, from the beginning in the infant school, or—if they do not begin needlework in the infant school—in Standard I, to do any piece of work which they attempt entirely themselves. In other forms of manual training, *e.g.*, carpentry, it is held that every piece of work should be the pupil's own work from beginning to end. This is held to be essential if the pupil is to get the greatest amount of benefit, psychological and physical, from the work. In the same way, I think if you are going to develop self-reliance, patience, sagacity, manual dexterity in the girls through needlework, you must let them do the work from beginning to end, and learn through failure how to do it well. At present many schools dare not risk failure, because, most unfortunately, a custom prevails of trying to make the needlework self-supporting. The sale of the garments made is supposed to cover the cost of the needlework materials. I believe that local education authorities seldom actually *require* this to be done; but their regulations are often so worded as to suggest that they desire it, and their inspectors sometimes ask the head teachers to try as far as possible to have no deficit on the needlework. Consequently the headmistress or teachers must do the greater part of the cutting out, to avoid waste of material. The garments made also must be those which are most saleable in the neighbourhood, rather than those which are most educational to the child. In order to follow the plan I suggest the headmistress must have liberty to waste a considerable amount of material, and to turn out some garments which will sell for little or nothing. But I believe her girls will develop into practical, capable needlewomen. The plan is already in practice in some schools. Instead of having their "specimen" given to them, with the hem turned down and tacked, those who follow this plan let the beginner turn down her own hem and tack it. This is really an easier way of beginning for little girls than to begin by learning to make small stitches at once; the turning down of a hem is more like their "kinder garten" occupations, *e.g.*, paper folding. They would never be set to work upon a garment which was too difficult for them to cut out and fix, and they would be allowed to make many attempts at cutting out the simple garment in paper and at length in material. Less time would be devoted to the making of beautiful stitches, and the garments turned out would not be of the uniform merit now expected, but they would have learnt to cut out economically and to make garments by themselves. Then much more might be done in the way of renovating garments. This is a very difficult matter for the teachers. In a school in a very poor neighbourhood the children's clothes are too filthy to be mended in school, and the teachers cannot bring their own garments to be mended by children who are generally dirty and sometimes verminous. If ladies who give away their cast off clothing would send the garments to the schools to be mended or altered before being given away it would be a very great help to the teachers. Two or three well-to-do women could provide a school with enough mending and making-over for a whole year. Instead of that we have ladies forming needlework guilds and making things for the poor, and thus, people of great experience tell us, they cause the poor women to take less trouble for themselves. It would probably be far more useful to give the girls old garments to mend and alter under the teacher's direction.

Miss Deverell.

8045. Besides the usefulness of your committee in the school teaching of those domestic subjects you would put other matters in their hands, arrange for domestic lectures and so on. Have you any further work that you would suggest to the committee?—Yes. May I say one more word about the hygiene. They are so young when they leave—fourteen years—they are such children then I think it right to try and instil principles into them, and it would be more useful to give them habits and precepts than scientific knowledge. I do not think they can take

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in very much scientific knowledge of hygiene, but it would be better for them to form habits where possible.

Then about the arranging of talks and little lectures on the care of children, the home, etc. That has been done to some extent, but in a rather loose and desultory way, and I think it wants to be done under the supervision of somebody who sees the whole ground and who has the whole teaching of the subjects in their view. There is an immense field for women to lecture and teach such people. I find whenever I have spoken to anybody who is working among poor people, they say, "Will you send us a lecturer?" It is done in some parts of the country I hear of a man in Leeds who is going to their haunts and giving lectures on the moral care of children, or such questions as how to tell them decently about the physiology of birth and the relation of the sexes which they learn in very dreadful ways; and I have known intelligent working men doing it, and after their work they go and talk to people about that kind of thing, and there is also a little set of young men, skilled workmen, who get a little library on such subjects and lend to boys who are growing into men, and so forth.

8046. Do you know anything about Manchester? The Ladies' Health Society which practically is doing this work which you have been describing?—No. I just heard of it years ago, but do not know about its work.

8049. They distribute leaflets on matters about the way of dealing with their domestic arrangements; that is part of the work that you would advocate?—Yes, and then committees would probably find themselves driven to advise the school authorities and to supplement it with a doctor—not to do the work but to call at the homes and show how parents should wash the children's eyes and faces, or clean their hair, or wash out a scratch, and a hundred other little things. They have such respect for a woman who would come and show them these things, and many of them would be glad to do it, and would, if somebody would show them. A good number would not—some never would—some are invincibly careless about anything.

8053. But you would do this work not merely through the agency of the committee, but through the Government officials and societies; and you suggest the local authority official?—Yes.

8054. To assist in the matter?—And I think that they would probably want more women sanitary inspectors and if there was no such thing already, a medical inspection in the schools.

8055. But that would be rather trenching on the work of the voluntary committee, if the sanitary authority took it up?—No, I think that there is an ample field for paid as well as unpaid work, and the supply of unpaid work is always limited; the more you can get done by paid visitors the better.

8056. In Manchester I think that the sanitary authority do subsidise the work?—It would work out differently in different places.

8057. Another thing would be the teaching of the teachers themselves?—That is the most important of all, they can do more than anybody.

8058. Let us hear what you have to say on the co-operation of parents with teachers?—I would get the parents into the schools more, that is entirely neglected in some parts of the country. The parents are hardly allowed into the schools.

8059. But would you not be afraid of some of them assaulting the teachers?—Well that is an impression. They do assault the teachers when they can hardly get in, and then only by stealth; but where the teacher asks them to come in in a friendly way they are very often pleased. They are very much pleased to get somebody to teach them anything about their children.

8060. Would you have the parents in during the school hours?—The plan they try in the district which I am working at present is to have an open day sometimes during the year when they let them walk in and see the classes at work. They are immensely interested and pleased, and it has an effect upon the way in which they help their children. One will say "Look at so and so's child. I should not like mine that way," and they feel proud of their own children and sometimes they are ashamed if their children are not looking as well as others.

8061. You would have a sort of visiting day for them?—It is rather a good thing because it interests them in the school work and they are immensely pleased with it. Personally, I think that it would be a very good thing for a head teacher to invite the parents and to have a little intimate talk with them about the training of their children and the co-operation of home work with the school work. She would have to give them tea, you know, they would not come without, but the managers must provide the teacher with the tea. Hitherto the expense of such things has fallen upon the teacher.

8062. Do the teachers attempt to do that sort of thing at all?—Not precisely that—I have not seen it tried, but I have known cases of schools, where they have had an evening so as to get the fathers as well as the mothers, and where they have given them refreshments, and taken them round and shown them the school work, and had a little social intercourse—that is not so interesting to the parents as seeing their children at school.

8063. (*Colonel Fox.*) The school where I once saw them was Michael Faraday's school, is that the sort of at home you are now speaking of, where all the mothers attended?—That is quite the kind of thing.

8064. It struck me as excellent, for the mothers take an enormous interest in the whole work?—Yes.

8065. (*Mr. Lindsell.*) It would rather vary according to the neighbourhood which might be a difficulty?—Well, say in very poor neighbourhoods, there is a very great deal of gratitude and admiration for teachers very commonly on the part of the parents.

8066. Where they have come in contact with the parents?—Yes.

8067. That is one of the things you would advocate?—Yes. Teachers have said to me, if they had some very homely literature that they could send to the parents occasionally—a little literature telling them what to do when the child had grazed its knee or its heel, or had chilblains or sore eyes, or dirty head, or something of the kind, or of the effects of coming to the school without breakfast, and bringing lunch to school and that kind of thing, and for that purpose I thought of a Central Committee affiliating these local committees, and having one or two of the representatives of the Board of Education upon it. I talked to Mr. Morant about it, and he thought it feasible.

8068. And you would get this literature disseminated by the committee to the teachers, and by the teachers to the parents?—Yes, the committee, of course, would often have teachers on it.

8069. Then the hygienic question, the physical condition of the children—would you utilise the teachers with regard to that—you know, eyesight, for instance?—Do you mean to ask the teachers to wash them.

8070. The children's eyesight—that is very important nowadays, is it not?—Yes.

8071. Would you advocate the teachers being taught how to test the children's eyesight, and that sort of thing?—I do not think that anybody but a medical man could pronounce whether there was any use in teachers testing eyesight. Personally, I think there ought to be an annual visit of an oculist.

8072. An oculist has told us that the preliminary work might be done by any person shown how to do it, and that it would be easy, and of course it would save the expense of having skilled persons?—I have seen the preliminary work done by teachers, but what I find very often is that people are taught that Providence sent the complaint and Providence intended it to remain. In the case of eczema, which is catching, and in the case of serious affection of the sight itself which requires serious attention, the children sometimes stay on in school unless the inspector does something, because the teachers do not recognise it, and even in some cases do not see it, they have got so accustomed to it.

8073. How far, in your experience of teachers, would they be ready and willing to do this, because it would be a somewhat considerable addition to their duties?—My experience is that they are always willing to do what is for the good of the children. The slackers are a very small minority. Most of them are very industrious, and they would be perfectly willing. It does not give much trouble. If you observantly look round the childrens'

faces every day, you could put down all cases which need attention, and you could give them to the head mistress, who would forward them to the medical officer or managers, or whatever the right authority might be.

8074. You know, of course, the question of extraneous duties has been rather pressed by the teachers' representatives?—The teachers' representatives do not represent the bulk of the teachers. I can rarely find any traces of that feeling in the schools.

8075. They are quite willing not only to perform the strict letter of their engagement, but to interest themselves in the well-being of the child generally, you think?—Very much so.

8076. They do not wish to take their stand on this being an extraneous duty?—Far from it. This morning I received a letter from a Liverpool teacher not more interested than any others, I think, and she says how glad she would be if anybody could be appointed who would do anything to look after the physical condition of these children. The difficulty is that there is a good deal of pressure of work, and a good deal of monotony of work, and consequently some of these teachers working among the children do not look at the children as a newcomer would, they want pointing out the ways in which they could help the children.

8077. Is there any further observation you would like to make on the subject generally, that you have not put down, or have you anything to say which you have omitted?—No, except that I think, if it is not impudent for me to say so, that it would be a good thing if the Committee were to adopt a scheme something on those lines or on some such lines that would commend itself to them as a useful experiment to try. Personally I mean to do something in the matter. I mean to try to get it started in one or two cases where I have friends very well qualified to help me, and also to try to get an affiliation of the committees, but of course it would be a great help to have the recommendation of this Committee.

8078. From what we have heard, what you want is more organisation and co-ordination between those various benevolent bodies rather than the mere establishment of a new one that is wanted to bring them into relationship with each other?—It would have also to cover a new ground and do new work. One would start by affiliating the existing agencies, and connecting and co-ordinating them.

8079. (*Dr. Tatham.*) You were speaking just now of the loose family system as you know it in the slums?—Yes.

Miss Deverell.

8080. Do you think that intemperance is at the bottom of some of that?—No. I do not think there is necessarily anything wrong at the bottom of it. I think it is just the custom.

8081. Pardon me. I mean to ask, do you think that drunkenness is probably connected to a great extent with this loose system of family life for instance that you spoke of?—You generally find the two things together. The kind of looseness I mean is not positive immorality, although there is a great deal of that in some quarters. It is rather that the custom of the people is not to be very particular either as to the formality of marriage or as to the sexes living together, but they are very faithful while they are together. But the effect on the children is that they are often living with someone who is not their parent.

8082. We have had evidence of a very sad state of things, of intemperance and drunkenness amongst the classes to which you refer. Is that your personal experience to a great extent?—I have not seen very much of it, but one supposes it must be so, because one does not see where the money would go to otherwise.

8083. I thought you were going to give us some such evidence when you spoke of this conspicuous feature of these areas being not poverty but negligence. You said that often sufficient money was coming in for a decent life if the people knew how to use it. I thought you were going to tell us that it was not because they had not the means of providing their children with household necessaries, but rather that the parents being intemperate persons spent the money upon themselves?—Some of them do, and others without being particularly self-indulgent waste their money, and do not know how to buy the food, or how to make the best of it. One finds that they have money, because, for instance, when they assault a teacher they can pay the fines. I came across a case where a woman in Southwark had assaulted a teacher, and she was fined 30s., and she said the next time the attendance officer went round: "I do not grudge it, it was worth that to me."

8084. You spoke just now of your personal domiciliary visits amongst the poor. May I ask you whether you think it necessary to go with someone for your personal protection; or do you think that you are safe in making visits amongst the slums?—Perfectly safe, but I should feel it impertinent to go into a house without an excuse. I go with the attendance officer, and it is an introduction to the people.

Mrs. GREENWOOD, called; and Examined.

8089. (*Chairman.*) You are one of the Sanitary Inspectors of Sheffield?—Yes.

8090. In the course of this work you have been much struck with the high infant death-rate in Sheffield, in common with some other towns, most unfortunately?—Yes.

8091. And you have arrived at the conclusion, supported by medical evidence, that a great many of those deaths are preventable?—A very large number of them.

8092. What is the death-rate in Sheffield?—201 per 1,000.

8093. That represents an enormous waste of human material?—Yes.

8094. To what should you attribute, in the first instance, this high rate of infant mortality?—Do you mean in Sheffield?

8095. Yes, the place with which you are most closely connected. Incidentally, may I ask you how many years' experience you have had in this work?—Four years and nine months, working continuously in the slums.

8096. And previous to that had you had any experience of this kind of work?—Not in slum work. My husband was a doctor, and it was not necessary.

8097. You were not professionally employed?—No.

8098. Let us turn, then, to the causes, as you term them, of infant mortality, which, of course, is higher in the summer months?—Yes, that is a very important factor; you will find the infantile mortality is much higher when the temperature is above the average.

Mrs. Greenwood.

8099. Is it not also so when temperature is below the mean—in a cold winter, surely, children suffer more from diseases of the respiratory organs?—I was thinking of the third quarter of the year. I think that the summer heat has a greater effect on infant mortality than anything else.

8100. But is not extreme cold fatal to young children?—Not so much as extreme heat. For instance, the ten years—1881 to 1891, were years of rather low temperature, and the death-rate, the infantile mortality, is not marked.

8101. That is the low summer temperature?—From 1891 to 1901 there were seven summers with abnormal heat, and the consequence was that the death-rate rose immensely, so that the temperature in the summer months has an important relation to the infantile mortality.

8102. You do not attach much importance to the employment of mothers in Sheffield?—No, in Sheffield a very small proportion of the married women work.

8103. It is on that ground, not because you think it may not be a cause in other places?—It may be a cause where it obtains, but it does not obtain in Sheffield.

8104. To what do you mainly attribute the infant mortality of Sheffield?—To the insanitary conditions; and conditions more or less within the control of the people themselves.

8105. Under this head, too, would you include habits of life?—I would. Of course unhealthy surroundings have a very important effect on the health of the people, and tend to typhoid and diarrhœa.

Mrs. Greenwood.

8106. Is the drainage of Sheffield bad?—It is bad. First of all there are a large number of rubble sewers. Then there is the privy midden system, and a large number of unpaved courts.

8107-8. Which are saturated with all sorts of filth, I suppose?—Yes, the contents of the midden are turned out on to the court, and the surface cannot be cleansed.

8109. It remains there until it has evaporated?—Yes. The sanitary conditions are shocking in that respect.

8110. How far are these sanitary conditions due to municipal neglect?—Well, there are a large number of unwholesome houses.

8111. Is the municipality of Sheffield quite indifferent?—They are very much behind the times.

8112. Are they doing any work?—They are working to get rid of the privy system, but they have been prevented in many instances by the rubble sewers. They are spending large sums of money, and they have recently obtained a loan of £50,000 for the purpose.

8113. And these adverse conditions are in process of being remedied?—Yes.

8114. Is it being done on a sufficiently comprehensive scale?—I think everything is being done.

8115. They are alive to the importance of the work, and putting their backs into it?—We had a very energetic medical officer who has left us to go to Birmingham, but we have another, who is also a good man.

8116. Can you tell me whether the Local Government Board have at any time brought any pressure to bear upon the municipality?—I really do not know. I cannot speak of what happened before I went to Sheffield. Sheffield is essentially a city of small homes, and they have as many as 15,000 back-to-back houses. These are plans of some back-to-back houses (*handing in diagrams*).

8117. Is this a group of four houses?—Yes.

8118. With four rooms each?—They are three-roomed houses, back-to-back, containing, a living room, called "house place" and two bedrooms, called "the chamber and the garret," one above the other. I have had this little plan prepared showing back-to-back houses (*exhibiting*). *This* is the window, and *this* is the door, and *this one* I had made with a little out-kitchen which gives a little more room to the house.

8119. Is this a ground plan of one house?—It is the ground plan of four houses. Where there is a larger family they think that they will have a little more room by taking a house with an out-kitchen.

8120. That is only one house, then?—Yes, there are, perhaps, two houses in the yard, with these out-kitchens. I find that the health of the people in the houses with kitchens is worse because they get no direct air into the house, and they take away both the sunlight and the fresh air, and we find in them anæmic and ricketty children.

8121. How many people inhabit them?—Sometimes eight or nine or ten, or even more.

8122. What is the maximum in one of these?—It is difficult to say.

8123. What is the average of occupants in the houses that you are describing?—I have found families of ten or twelve people in these houses.

8124. In three-roomed houses six is the maximum that ought to be permitted?—Yes, some houses are very small, the size varies so.

8125. What would happen if the Town Council proclaimed at the end of six months that not more than six persons were to live in a three-roomed house—what would be the effect?—I do not know what they would do with all the people.

8126. Could not they redistribute them in the suburbs?—Perhaps, yes, in the suburbs; but in the suburbs the rents are high, equal to the rent of two houses in the centre.

8127. Is the rent in the suburbs higher than in the town?—Yes, because they are not allowed to build back to back three-roomed houses. Most of the houses in the suburbs contain two living rooms and two bedrooms, and sometimes a garret.

8128. You mean they are a better class of house?—Yes, and the people cannot afford it.

8129. Are they building upon plans and under building regulations approved by the City Council?—Yes; but the building bye-laws, even now, are not as stringent as they ought to be.

8130. They do not adopt the Model regulations of the Local Government Board?—No, Sheffield is a very peculiar place. It is extremely hilly and has big gradients and other local peculiarities.

8131. The people are very self-opinionated?—Yes, I am not a Sheffield person myself. There is one insanitary area, for which a provisional order was obtained fifteen years ago, and it has not been cleared yet.

8132. Is the City Council doing anything itself?—It has built a few flats and is trying to build a few more houses.

8133. Has it ever submitted a scheme for any clearance?—No, only the one referred to; it is too expensive.

8135. Do you not think it would be a good thing if some pressure were brought to bear upon a Town Council so situated to compel them to act?—I think that it is a very difficult question, the question of housing.

8136. To place a kind of time limit upon those unsavoury and overcrowded tenements?—I think that more might be done to make clearances without sweeping away whole areas, one or two houses might be taken down to admit air. But they won't do it because of that Clause in the Act, that if a house is knocked down it must be bought and maintained as an open space, in which case the landlord would be benefited, and the ratepayers of Sheffield would have a great objection to that.

8138. Does not the infant death rate move them?—They talk about it now and then.

8139. Is the general death rate high in Sheffield?—It is high also. We had until the last two years serious epidemics of typhoid every year.

8140. Is the condition of the health of Sheffield worse than it was?—I should say that it is improving because those conversions are gradually going on.

8141. But up to within the last few years would you say it has deteriorated much?—I have no means of judging.

8142. Do you think that the people are improving?—I understand that Sheffield is improving.

8143. Was the evidence of deterioration four or five years ago one of the causes which stimulated the Town Council to greater activity?—I think that it was the serious outbreaks of infectious disease.

8144. Has any Mayor or Town Councilor died from these diseases?—I do not know, it is these large epidemic diseases which have led them to deal with this as they have done.

8145. There is no reason from its situation why Sheffield should be worse than other places?—Naturally it is extremely well situated.

8146. Yes, you have the moors all round with very fine air?—Yes, the natural advantages are great.

8147. And it is entirely due to municipal neglect?—Yes, in the past.

8148. But you do not seem to think that they are doing as much as they might in regard to this building question?—It is the opinion of a great many that the Corporation are not pushing on things as they ought.

8149. Because they are not remunerative? But the charges for these epidemics must be considerable?—Many people think that the death rates are very high.

8150. But they do not think so much of the high death rate as the high pecuniary rate?—They seem to be doing something now.

8151. Will you turn to the causes that are due to, or more or less within, the control of the people themselves. Do you attach importance to their rooted habits as being among those causes?—I do largely.

8152. Do you see any way to get rid of those habits. Don't they prefer to pig it?—A great many of them do. They would not live in better houses if you provided them. As soon as one very unhealthy area is pulled down containing very insanitary surroundings they move into the next place, a shade better perhaps.

Mrs. Greenwood.

8153. Where they can maintain their tradition of filth ?—Yes. And often when they go out into the suburbs they carry their habits with them, and they have to be visited.

8154. Have you any feeling towards better things amongst the rising generation in respect of these conditions ?—There is certainly an improvement in Sheffield during the last five years.

8155. Do you think that the young married people when they begin housekeeping, would naturally prefer decent surroundings ?—They desire them more than they used to do. The people complain of things in a way they used not to do. For instance, the abominable smells: they are beginning to realise that they are not obliged to live under such conditions.

8156-7. Is that the effect of training in the elementary schools ?—Do you think that there has been a general elevation of the people from that ?—I have not much opinion of the training in the elementary schools.

8158. You do not think it good ?—Many of the women have forgotten how to read. Before I give a paper of instructions on Infant Feeding, I always ask "Can you read." The doctors at the Children's Hospital always ask the mothers "Can you read," before giving written instructions.

8159. You think that it should be represented to the school authorities to give more attention to these subjects ?—Yes. I should like to see something done.

8160-1. Do the people resent instructions, now ?—No. On the whole it depends entirely how you go about it. I have been working nearly five years in Sheffield.

8162. Do you distribute leaflets ?—Yes; "On the Care of Infants and Children." Also with regard to the cleansing of heads and a warning with regard to fires, showing a picture of a fire guard, but I have never known them to buy the guard recommended.

8163. Could the City Council enforce the use of fire guards ?—I have never heard of such a thing.

8164. Would it be resented if they tried to do it ?—I do not see how that could be done unless it was put into the building bye-laws.

8165. Are many children overlaid in Sheffield ?—Occasionally.

8166. Is that often done intentionally ?—That I should not like to say. It frequently happens on a Saturday night.

8167. When they are drunk, I suppose ?—It is largely due to intemperance.

8168. It would be difficult to insist upon a small child being put into a cot, as it is very often taken into bed for motives of warmth, and whatever the consequences may be that is a praiseworthy object, is it not ?—Yes. The deaths from accident are largely due to burning and drowning in the dolly tubs which are used in Sheffield. When the child overbalances itself there is no chance for it, and it is drowned.

8169. Is there any indifference to the care of their children, or is it more owing to ignorance that this comes about ?—It is largely due to ignorance. Of course there are a large number of cases of neglect. The Society for the Prevention of Cruelty to Children take up those cases.

8170. Have they often to see to those cases ?—There is a great deal of work done. There are two inspectors in Sheffield, and it is considered rather a bad place for cruelty to children and animals.

8171. Have deaths of children been the subject of investigation ?—That is a point I am glad to have an opportunity of speaking about. The number of non-certified deaths is higher than in any other town in England. From 1st January, 1904, to 6th February, 1904, there were 43 non-certified deaths, 16 of children under 1 year, 3 of children from 1–5 years.

8172. And they should be certified ?—Yes. Every child under five years of age.

8173. And still births should be registered, too ?—I should say it would do a great deal of good.

8174. Now do you take any steps to ascertain the fact of babies being born, or is it brought to your knowledge, so that you may correct parental neglect from the outset ?—Since November last a visit has been paid to every house where a birth has taken place in three districts of the city. Now that the City Council and the Education Authority are one body, they can get the list of births by paying the Registrar for them.

8175. You register them some weeks after birth ?—Generally when they are between five and six weeks old.

8176. A good deal of damage may be done in that time ?—I have not found it so.

8177. Do many of the mothers suckle their children ?—A large proportion. I have advised the Medical Officer and the Health Committee that we should visit the births all over the city, and if possible to give a second visit in three months' time. Out of 725 infants visited within a week of registration, 572, or nearly 79 per cent., were being fed on the breast only; 106, or about 14½ per cent., were having the breast with other food, and 47, or nearly 6½ per cent. were entirely hand-fed. I think you inquired as to whether the mothers went out to work. Well, it is not owing to that that the women were not able to suckle their children, because not more than 1 per cent. of the mothers were working.

8178. Do you think that opportunities of infant insurance operate adversely to infant life ?—I should not like to say. It is very universal, advantage may be taken of it sometimes, but I do not think that it influences the Sheffield mother generally.

8179. What have you to say about water supply ?—We have a beautiful water supply.

8180. Is it easy for the parents of the children of the working classes to get milk if they want it ?—That is a point upon which I should have liked more information. It is wonderful how little milk is used. It is appalling.

8181. Is it because they cannot get hold of it ?—They cannot get it in the way you get milk in London. You see very few dairies in Sheffield. The milk comes in from farms at certain times and the man has a certain amount, you do not find a dairy in every street as in London. I was living in a suburb, and I found that it had to be ordered in the morning.

8182. There is no municipal organisation ?—No.

8183. And no charitable organisation has taken up the work of getting milk for the poor people ?—No, there is a good deal being done to ensure that the milk is supplied clean, but our law is not very stringent.

8184. But you do not think that the children are given much ?—It is rare.

8185. What do they get: is it tea and bread and butter ?—It is tea and bread and butter.

8186. And rancid fish thrown in at times ?—Yes. This is a house I visited the other day: "A back-to-back house, occupied by a man and wife, and five children. Eldest boy, twelve—another boy, ten, diseased spine—girl, three, small—a child, seventeen months, cannot walk—and baby, ten weeks. Diet of child who cannot walk—was weaned at three months, and fed on bread 'pobs,' (that is bread, boiled in water for an hour to get the barm, that is the yeast, out of it, and a little milk added), and a pennyworth of milk daily up to about twelve months, when no more milk was given. Lives on bread and butter and tea—dinner same as others—is always eating bread and butter. A pennyworth of milk now taken daily for the whole family." There are five or six slices of bread given between breakfast and dinner, and perhaps three or four slices in the afternoon.

8187. (*Dr. Tatham.*) They do get some butter ?—Bread and butter and dripping. It is not uncommon to find three children in one house not able to walk owing to rickets.

8188. (*Chairman.*) Have you much rickets in Sheffield ?—Yes, the number of deformed people is something terrible.

8189. That is associated by some witnesses with the factory work of mothers ?—It may be so; but it is not so in Sheffield.

8190. It is due to other causes there ?—I am told by the matron of the children's hospital that they are not so bad as they were.

8191. How long have you had your present water supply ?—I do not know.

Mrs. Greenwood.

8192. That ought to have improved it, if there was plenty of lime in the water ?—I do not think that the lime in the soft water has much effect upon rickets ; I think it is lack of sunlight and fresh air, and bad feeding, that is the cause.

8195. I see you say here that one of the things is that the sanitary authorities should ensure the purity of their milk supply ?—I think that they should do that.

8196. But still if children do not drink the milk that would not matter ?—But the children have a certain amount of milk, and of course it is very necessary that they should have it pure.

8197. Do the Sheffield children use that abomination called the indiarubber nipple ?—It is universal.

8198. That has a disastrous effect upon the size of the jaws and upon dentition when the jaws are supple ?—I think that it is a most injurious thing.

8199. Cannot you take steps to prevent that ?—We can only advise, and we are continually advising.

8200. And it has not lessened ?—Unfortunately they do not carry out what we tell them.

8201. They think that they know as much as you do, or more ?—Yes. Sometimes where I see a very bonny baby, I say, "You give him the breast," and the mother replies, "He won't feed." They try to make the babies eat.

8202. He won't eat a beef steak, will he ?—It is the habit to give the baby a taste of whatever is on the father's plate. There is a superstition that if the baby tastes everything the mother eats her milk will not disagree with the child, and therefore a taste of everything is given and the child's taste vitiated, so that it will not afterwards take milk.

8203. You are doubtful about the value of municipal crèches apparently ?—I am very doubtful about it, or of anything that will relieve the people of responsibility.

8204. But if you make them pay you can enforce that responsibility ?—Yes.

8205. An eleemosynary treatment of the subject would be disastrous you think ?—We have one crèche, but it is managed in a way I could not approve of by an ignorant midwife, who feeds the children just in the same way as the ignorant mothers do.

8206. Do you find that on the whole there is an improvement in infant diet ?—Yes.

8207. Have you got a sufficient staff to bring it home to the people ?—We are getting rather over worked ; first of all we found the houses so filthy in Sheffield and we had to try to get them cleaned.

8208. Have you tried to bring the responsibility home to the landlord ?—All structural defects are referred to the landlords by the men inspectors. The women inspectors deal with the tenants and endeavour to make them keep the houses clean. The tenants are responsible for whitewashing and papering and cleansing the premises, and we have done a great deal in that way ; there is quite a marked difference in the courts and houses since our work was started.

8209. You can threaten them with penal consequences ?—It is very difficult to enforce it.

8210. Can you enforce it ?—Every tenant of a court would have to be summoned, and it is an extremely difficult matter to enforce such a thing, especially in a large court of thirty houses.

8211. But that court system has been abolished ?—No, the court system still obtains, but they are being better paved, and the sanitary arrangements are better.

8212. You do not believe that much can be done in the way of instilling a knowledge of hygiene in school. You think that should be done afterwards ?—Pardon me. I say what is taught is not having the effect that it should have.

8213. You think that the teaching in the school should result in something better ?—Yes. The children are taught like parrots in the elementary schools. Many of the teachers are ignorant and have a low standard. The schoolrooms are only scoured three times a year, and in the low parts of the town you can imagine the state of the boards. Personal cleanliness is not insisted upon as it should be. I find children in a most filthy condition going to school, and they are allowed to go with sore heads. Some of the teachers are very fine men and women, but, on the whole, the ability of the average Sheffield elementary school teachers is not high.

8214. A good many things might be done in schools which are not at present done, you think ?—I think so

8215. Have you any scheme for preventing what is learnt in school being lost before the girl reaches the age when she undertakes family responsibilities ?—It would be a good thing for them to go to continuation classes.

8216. That is a subject we have considered. Could you not make it obligatory upon girls from fourteen to sixteen to attend twice a week continuation classes, where subjects of domestic economy and household management would be taught ?—Yes, I should think that would be very good indeed.

8218. And a great many in their homes might apply during those years the lessons they have learned in the continuation classes ?—Well, they learn them like parrots. They are not taught in a practical way. For instance, the girls are told that nurseries must be ventilated. These people do not know anything about nurseries. They want to be taught in a very simple language.

8219. You want the children to see the principles that they acquire carried out ?—Yes.

8220. Would the school teachers in Sheffield raise any difficulty ?—Many of them do not know how to deal with the dirtiness of the children, or what powers they have to deal with it. They do not even know that they may exclude children from school for that cause.

8221. Will they not be informed about that very shortly ?—That is what I suggest—they ought to have instructions given them.

8222. You think that there is an awakening of the public conscience ?—I do not think there is. I have talked with teachers and others, and a great many of them do not realise the state of the children.

8223. You regard the concentration of all the functions of the municipality in one authority as an improvement ?—It might be better. I do not see this difference.

8224. The same authority is now responsible both for the health of the town and for the education of the town, and surely education will now be made contributory to the health of the community ?—There is the machinery if they would only use it.

8225. You think their being one authority should make it easier ?—It should be easier.

8226. You would expect it to be so at any rate ?—Yes, I should think they would co-operate. But in Sheffield there is a great severance between the people who are doing the work and the different members of those bodies. So far as I know, for instance, there are no means of the head teachers coming in touch with the Educational Committee. There are no managers as in London, and I have known cases where the head teachers have asked to meet the School Management Committee, and it has been refused, everything has to go through the inspectors—there is so much red tape.

8227. This discourages the teachers when they get no sympathy or support ?—Yes, I have known teachers almost break down altogether. Until I went there they said nothing had ever been done to help them in dealing with neglected children. In May last I suggested to the medical officer of health that the Education Committee should be communicated with, and that a circular should be sent out to the head teachers asking them to report to the Health Office cases of neglect and of sore eyes ; some of the teachers have responded, and they have written how thankful they were, others have been quite indifferent and made no response.

8228. Has the school authority had any medical officer ?—Only for the examination of defective children.

8229. You attach importance from this point of view to the medical inspection of schools ?—Yes, children are at school who ought not to be there, and others are at home who ought to be at school.

8230. (*Dr. Tatham.*) I have one or two questions to ask you about infant mortality, which I believe you have given a considerable amount of attention to?—Yes.

8231. You spoke of the mortality of a single year—1901. You state it to be 201 per 1,000 in Sheffield?—Yes.

8232. That applies to the whole of Sheffield?—Yes. There are parts very much higher.

8233. Very much higher indeed?—Very much higher. It is as low as 112 in one district, and it goes up to 234 in another, in the worst district.

8234. Can you account for that enormous difference?—Yes, one district is in the best part of Sheffield, the residential part, with beautiful houses and gardens, well-cared for children, with nurseries; and the other is in a slum quarter with small back to back houses, and insanitary privy middens, and with the very ignorant mothers. In north Sheffield, behind the Old Church, in the Crofts, and all round Edward Street, and Scotland Street, the death-rate is very high—also off Broad Lane and Ecclesall Road.

8235. There is nothing in the climate that causes this amongst the children?—No, it is healthy.

8236. Otherwise you would not have 112 per 1,000 amongst the well-to-do children?—No.

8237. You spoke of the question of milk. That is a matter we have had a good deal of evidence about here. Do you really think from your experience that practically the children of the poor do get much milk at all?—I do not think they do. I am surprised to find how little milk they take for a whole family. They do not realise that milk is a necessary food for young children. It is very difficult to make them understand it.

8238. Do they use tinned milk?—Frequently they do, and unfortunately machine skimmed milk.

8239. Do you mean separated milk?—Yes.

8240. Now you said that the children do not like the milk?—Yes.

8241. Is that because the milk itself is decomposed?—No, because they are taught to drink tea from infancy, and they lose the taste for milk because their taste is vitiated by the mothers, not intentionally, but ignorantly. I asked the matron of the Children's Hospital, "Do you have any difficulty with the sick children in getting them to take milk?" and she said, "Not after the first day—they take it after the first day or two."

8242. And they get to like it again?—You mentioned about the keeping of the milk. They have no proper pantries in the houses and the food is generally kept in the cellar-head.

8243. Is milk sold at a prohibitive price in Sheffield?—No, about 3½d. per quart for new milk.

8244. So that the ordinary Sheffield artisan who earns comparatively high wages would have no difficulty in getting the milk on the score of expense?—That is so.

8245. Is it simply a bad habit and ignorance?—It is ignorance.

8246. Are there any voluntary associations working in connection with the poor in Sheffield to teach them how to cook?—There is a Neighbours' Guild Association which is working, and the Croft Settlement in Garden Street. Of course, there are mothers' meetings, but there is not any extensive work amonst the poor. There are a certain number of girls' clubs, but there are large tracts in Sheffield which are left—poor neighbourhoods with poor churches—with very little visitation at all by voluntary workers. There is no charity organisation, and no central organisation, and the charities are very apt to overlap.

8247. You have nothing corresponding to what exists in Leeds and Manchester and one or two other towns. Would you welcome them?—I would welcome every voluntary or charitable agency, and it has been my endeavour to get in touch with those that exist and to bring cases to their notice.

8248. Is the age of marriage of young persons very low in Sheffield?—Yes.

8249. What is the age of marriage?—Seventeen to twenty-one years of age.

8250. Are there more at the lower age—do they not marry very early?—Often the husband is not twenty-one.

8251. And even considerably less than that?—From eighteen years of age upwards.

8252. What I have heard is that it is frequently less—Yes, sixteen, and seventeen, and eighteen.

8253. Do you trace any ill effect upon the children to that fact. Are young mothers less able to look after their children?—Yes. When I was tabulating in 1901 the deaths from infant diarrhœa I noticed the large number of first children who died which pointed to maternal inexperience. I could send to you the proportion of first children who died.

8254. That would be very interesting, and we should be very glad to have it?—I will make a note of it.

8255. From what causes did you find those children die—the first children of the young mothers?—The work that I did was in connection with summer diarrhœa, so that I have no statistics with regard to the mortality in other directions—out of the number of children so many were first children. I was very much struck by it.

8256. With regard to the prevalence of rickets in Sheffield, have a very large number of the children died of rickets?—No, comparatively very few. During ten years the deaths were only 114.

8257. Out of what number?—In ten years, under five years of age, there were only 114 deaths from rickets in Sheffield. But they are increasing in number. I think that more attention has been directed to rickets than was the case formerly; but the rickety children die from other things—from bronchitis and convulsions.

8258. They are more easily a prey to diseases like pneumonia and bronchitis, and to infectious diseases?—Oh yes.

8259. Has consumption been very prevalent amongst young children?—No.

8260. Tuberculosis, I mean?—Of course there is meningitis, and what is called consumption of the bowels. There is more care taken in specifying these cases than formerly.

8261. But the notification does not apply to phthisis and consumption?—In Sheffield it is compulsory.

8262. Notification of phthisis?—Yes, for seven years. It has just been started. It was in the last Corporation Act.

8263. That is the first time that it has been done in England then?—Yes.

8264. (*Chairman.*) There are some things in which Sheffield is a pioneer then?—Yes, on that point.

8265. (*Dr. Tatham.*) You do not seem to have a very great opinion of the elementary schools?—No, I find so many children, in visiting from house to house, in a terribly verminous and neglected condition, and I have said to myself, How can the teachers permit it? Then the cases one reads of, as being prosecuted by the Society for Prevention of Cruelty to Children, are all going to school. They are not reported by the teachers, as they should be.

8266. They have got to educate the children. Unless they are so bad that they are a danger to the other children they cannot take steps to prevent their coming to school?—But those children are a danger to the other children. They are not fit for any decent child to sit beside. I read this paper on the mortality of infants and children to some of the head teachers, and asked them to report to me any bad cases they had, and many of them did. My point is this: how can you teach a child the necessity of cleanliness if it is swarming with vermin? Surely the first thing that should be insisted on is personal cleanliness.

8267. They can send them away?—They should be excluded over and over again, and if the mother does not send the child to school in a fit condition she ought to be prosecuted.

8268. (*Chairman.*) Is that often done?—It is not done much.

8269. (*Mr. Lindsell.*) You say the schools are so dirty—are these the board schools?—Yes, the board schools, which now all belong to the Council

Mrs. Greenwood.

8270. I thought that they rather prided themselves on the extreme efficiency of their schools?—I do not say anything about the efficiency of the schools, but the schools in the lowest part of the town are not scrubbed more than three times a year.

8271. Do you know that the teachers do not endeavour to impress the value of cleanliness upon them?—I should not like to say that. Some of the teachers are splendid, and the interest they take in the children is wonderful, but I do not think that a great many of them know how to do it. I think that more care should be taken in the training of the teachers. I should like to corroborate what the last Witness said, who recommended that instructions should be given to the teachers about eye complaints and sore heads, and so on. I think that a great many of them do not know how to deal with them. But I do not think it is unwillingness.

8272. But do you not think that the school visitors would do this?—There are no school visitors. There are no managers like you have in London.

8273. Do they not appoint managers?—Now I think of it each member of the committee is supposed to have a district, but I do not fancy that they visit very largely in the schools.

8274. Do you find that occurs in the voluntary schools as well as in the council schools? Do not the voluntary schools take any interest in the children's condition?—I cannot speak generally. My work is in the very poor districts. I think the code enforces the same instruction upon children in rural districts and in towns, and the child of the respectable artisan is taught just exactly the same as the child out of the slums, and it seems to me that the child from the slums requires special care, special instruction, and special means for cleanliness. I should like to see baths in schools in low districts.

8275. Have you swimming baths attached to your schools in Sheffield?—I do not know of any.

8276. (*Chairman.*) Is not the Baths and Wash-houses Act in operation? Are not there free public baths?—Not free. They are having baths in connection with the defective children's centres in the dirty parts of the town.

8280. Is there any improvement in the school children in your experience?—It is only recently that I have taken up any school work, so that I could not say whether there has been any deterioration or improvement.

8281. (*Mr. Legge.*) I only wish to go into a little detail with regard to the point you have already raised, that is to say, having special schools for districts in towns. Are you acquainted with other towns besides Sheffield?—No; not with regard to slum work, I am sorry to say.

8282. Have you lived in any other town?—Only in London and in Surrey. I have not lived in any other provincial town.

8283. You are not aware of a particular class of school known as the Day Industrial School?—No; I am not.

8284. The object of that is to take the very lowest class of children who cannot be got to attend schools, who play truant, and they are subjected to a special curriculum; they are given their meals in the school, special attention is paid to their cleanliness, they are given a half day's schooling and half day's industrial training at simple kinds of trades or employments, the girls at laundry work and cleaning up and helping in the kitchen, with demonstration classes and so on; is that the sort of scheme you have in your mind?—Yes, quite. I have never heard of it before; I should say it was a most excellent thing. That is quite what I should think is wanted in the lowest, the slum districts.

8285. In the lowest districts do you find that there are a number of mothers who keep their houses fairly well?—Yes, in every district, it is curious. I think the children would have to be selected for these schools possibly.

8286. Do you think that it would encourage such mothers to keep on in their good courses if they were allowed to have their girls out for half-time employment at home in domestic occupation for a certain number of days in the week?—Do you mean would it help the untidy mothers if they might have their girls at home?

8287. No, would it help the good mothers to continue in their good courses if, as a reward for keeping a good house, they were allowed to have their older girls of say, thirteen years of age, half-time at home for domestic employment?—I think there are a very great many mothers with large families who would find it a great help if it could be done.

8288. Do you not think there would be a great inducement to a woman to keep a decent house if, after satisfying the managers of the school that she had a decent house, she could obtain this privilege?—It seems to me if the woman keeps her house clean without the help of the girl she probably would not want to have her at home to help.

8289. It must be a very severe strain on many a woman?—Yes.

8290. One wants to remove as far as possible any feeling of prejudice in the minds of parents against school attendance?—Yes, quite so.

8291. And if the girl could attend half-time at school for the literary side of her education she would still learn a good deal?—Yes.

8292. And there is the practical training which she would get in a good home to be considered?—I see what you mean.

8293. It would be better for her than anything you could produce under artificial conditions?—Yes. You mean there should be this other sort of school for the children of mothers who seem incapable either of keeping their own houses clean or of teaching their children?

8294. These would be schools where children have to be dealt with because they come within the meshes of the law for actual truancy in the legal sense of the term?—It would only apply to truant children.

8295. Yes, but this last suggestion of mine is to meet the case of an ordinary school in a poor neighbourhood?—You mean would it induce the women to keep their houses better in order to have their children at home?

8296. Yes, licences and half-time employment in domestic work?—Yes, I think possibly it might, I think that anything which would induce the mothers to make a special effort to keep their houses better would be a good thing.

8297. (*Colonel Onslow.*) You are described as a sanitary inspector of Sheffield?—Yes.

8298. Are you appointed by the Corporation?—Yes.

8299. To whom do these back-to-back houses which you have given us a plan of belong as a rule?—To various owners—to the city councillors and various private owners.

8300. Are they small or big men?—The women inspectors have no means of finding out. Most of the rents are collected by agents, and it is only when there is some structural work to be done that the sanitary inspector comes in contact with landlords.

8301. What is about the rent of these houses?—They may be from 3s. 6d. up to 4s. 6d. or 5s. 6d., these three-roomed houses.

8302. Are the people who occupy them people earning good wages or of the loafer class?—You will find them all over Sheffield occupied by artisans, and by people of all descriptions.

8303. It is not confined to the poorest?—No, you find some people living in those three-roomed houses who are well-to-do. They have no standard above that. But they are well off.

8304. They are getting from 30s. to 40s. a week?—More than that—£3 or £4.

8305. Iron and steel workers—skilled men?—Yes.

8306. When you have found insanitary conditions prevail do you report them?—Yes, and all structural defects we report to the district inspector.

8307. Such as defective midden privies and so on?—Yes, all those we continually report. As a matter of fact they have the worst of them pretty nearly all in hand. I mean they have an amount of work in the office which will take them several years to get through.

8308. If you report them or they are reported to the Corporation so that the effect on the rates would be serious, surely the Corporation would compel the owners to put

things into proper repair?—The Corporation pay one-third towards the conversion of these middens.

8309. Need they do so?—I think that has been settled now by a Corporation Act in order to get it done.

8310. Could not the owners of these houses be forced to put them into a sanitary state under the existing law?—I think they could, but they have not done so. The Corporation is paying one-third now.

8311. It appears very unfair on the ratepayers generally that they should have to take their share when it is really the owner of the property who is to blame?—Yes, but that was done before I went to Sheffield. I do not know what circumstances brought it about.

8312. It may be because of the drainage?—I think it is very likely that that has to do with it.

8313. There being practically no main drainage?—Yes.

8314. With regard to the women workers whom you have mentioned in this pamphlet, you lay considerable stress upon their being well instructed?—The workers amongst the poor?—Yes, I do.

8315. The women inspectors, visitors of voluntary associations, etc.?—Yes.

8316. It is also very essential that they should be specially fitted for it from the point of view of tact and so on?—Yes, I do think that.

8317. That is even more important than knowledge which to any educated woman is natural?—No. I think it is better to have an educated woman to talk to them—of course she wants to know with regard to food and so on: she wants to be able to tell the women the reason why they should do this or that.

8318. The most of the married women who have been mothers themselves—or even unmarried women of the upper classes—would have learnt a good deal?—Yes, they would. In Manchester you see the work which is done by the Ladies' Health Society is done by superior working women. There again in Sheffield my assistants are women of the lower middle class. Several of them have only had a board school education, and I know that they have not weight and influence with the mothers; they have not the respect for what they say as they have for an educated woman who comes there.

8319. A lady in fact?—Yes. My colleague and I have found very little difficulty in dealing with the women, and I know that my assistants have had a difficulty. I know they do excellent work. I do not say anything against the work they do; and I know they try to qualify themselves, but it is not the same. I think that no one appreciates the difference so much as the working class people. I think they take very much more notice—I know they do—of what is said to them by a lady.

8320. They take more notice of what is said by a lady than of the best instructed and most tactful woman of their own class or a little superior class to themselves?—Yes. I do not mean that they do not do good work, but it is not to be compared I think. Then again the lady who comes down sees the reason why, and her knowledge is able to be made use of. With other people their knowledge is not available; they do not know how to make use of the experience they have gained.

8321. (*Mr. Struthers.*) The board school visitors that you speak of are paid, I suppose—the women of the lower class that you spoke of as visiting these homes are paid for their work by some association?—I did not speak of any in Sheffield.

8322. You said in Sheffield for the past three years house to house visitation has been going on in certain districts?—Yes, I mean by the women inspectors—my assistants.

8323. I thought perhaps it was some voluntary association, corresponding to the Manchester Ladies' Health Society?—No, this was by the women inspectors.

8324. You do not think that work is enough in itself?—I think that it is very necessary.

8325. Yourself and your assistants visit these houses and instruct these mothers as to how to take care of their children and how to feed them properly?—I think it is very valuable work, and there is no doubt that a great deal has been done in Sheffield. Take, for instance, a simple thing like the type of bottle the children use. We are always trying to instruct the women not to use the tube bottles, but the others. Chemists now tell me that there is more demand for the boat shaped bottle than before. It is in that way that one can find some notice is being taken of the educational work which is going on.

8326. Have you sufficient staff for that purpose, at present, to do the house to house visitation in really necessitous and slum districts?—No, one cannot do more than a certain amount. Hitherto we have dealt with cleanliness and getting the houses whitewashed and so on. Then there is the feeding of infants and also the care of children and the cleansing of the courts.

8327. Do not you think the feeding of infants and the care of the children is sufficiently important in itself to have a special staff allotted for that purpose?—Yes.

8328. Not to be distributed over a town, but to certain districts?—Yes. That is what I told the Medical Officer of Health—that I thought it was very important work, and we had better direct our attention more to that than to some of the other things.

8329. You think that by a staff which gave its attention mainly to this matter in certain districts of the city, you could effect a very considerable improvement in the habits of the mothers as regards the children?—Yes, I think so. I think if that teaching was enforced in schools in a practical way it would be of advantage.

8330. That is the point I was coming to. You think that all this direct instruction of the mothers in their homes, which you speak of, would be insufficient without some further teaching of the children?—I certainly think it is desirable that the children should be taught in the schools.

8331. Do you know when the children leave school?—Fourteen.

8332. At the latest?—Yes.

8333. They may leave earlier?—Yes.

8334. The children of the classes you are speaking of are probably very irregular in their attendance?—Yes, they are.

8335. And at fourteen they have not acquired any great command of the three R's?—No.

8336. Indeed, you told us, I think, that you had come across in your visitation, mothers who cannot read?—Yes.

8337. Who have, presumably, gone through a Board School education?—Yes.

8338. Would it not be rather a pity to take away from the school time to give practical instruction of this kind in the school when the time is all needed for their ordinary school work, especially when you consider that you are going to have this staff of special visitors visiting the mothers later on?—I think that the early years of the child's life are the most impressionable and I think that the children are taught many things, perhaps, which are not of nearly so much use to them.

8339. Have you made some inquiry on that point, as to what is actually taught in the schools?—Yes; and I had a book sent to me the other day, by one of the head teachers, of a course which is taught in the schools, in which infant feeding was touched on, and the value of foods, and the reason why we take this, that, and the other; and I noticed the long words and the various physiological facts.

8340. Was this book for the use of the children, or for the use of the teacher?—It was a note book of notes which the child had taken during the lessons. It struck me then that it was not as practical as it might have been. There was a good deal of material which was burdening the child's mind, with very little practical use. More practical instruction might be given, and more demonstration.

8341. That is to say, the instruction was good enough but it might have been better done?—Yes.

8342. Was it of the proper kind?—Yes, but there was not enough with regard to the feeding of infants, I do not think that it was full enough, and I do not think there was sufficient reason given.

8343. Have you thought of this point, that a girl leaves school at fourteen, and goes into various odd occupations, and has nothing to do with the keeping of a house until she marries?—That is a very great drawback.

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8344. Then you do think that the school teaching which you would give her in household management would reasonably affect her after-life, or do you think she would forget it all?—She does forget a great deal.

8345. Considering these mothers you speak of have forgotten how to read after, undoubtedly, having been doing very little else for seven years, do not you think it much more probable that they would forget what little household instruction they got?—I have come to the conclusion that these women who cannot read are very largely drawn from that class who have evaded the school. I do not mean that a girl who attends regularly at school would absolutely forget how to read.

8346. You think that is impossible?—I think that she belongs to the careless class which it is so difficult to deal with, who forget absolutely how to read—either they were ill, or something prevented regular attendance.

8347. Those you want to meet are just the careless ones who forget one thing just as much as the other?—Yes. Then there is the point of the value of cow's milk as a food for children, because it contains material which builds up the tissues in a way which no other food does; and there is the object lesson in the kind of bottles to be used. Then the child should know that mothers'milk is the best food for all young—all animals are brought up on it. I cannot help thinking that that would run to their minds afterwards, when the sanitary inspector visits them.

8348. You think it would?—Yes, if the elder girls were taught that.

8349. The house to house visitation is the much more important thing?—I cannot say it is much more important. I think both things are important.

8350. Let us assume that they are both important, but which is of the more practical importance?—I think the house to house work is most important. It cannot be done away with. I should consider every agency—for instance, the utilisation of girls' clubs and mothers' meetings to educate people.

8351. Suppose you had two alternatives, one the house to house visit without the instruction of this kind in the school, and the other the instruction in household management in the school without any house to house visitation; which do you think is likely to produce the better effect?—I think it is better to visit the houses where the births take place.

8352. You speak of the sanitary authority requiring to have their hands strengthened by the passing of the new Public Health Act, which will bring provinces up to date and in line with Scotland. What is the point you referred to there?—There was not any special point, except that the Scottish Act is very much more up to date than the London Act. I would strengthen the hands of the local authorities in dealing with insanitary property.

8353. Can the sanitary authority in Sheffield visit the schools and inquire as to whether they are sanitary or not?—No. At least I do not know whether they would have the power, but hitherto all the visitation of schools has been done by school inspectors appointed by the local authority, and also the Government inspectors. There are three inspectors in Sheffield, I think, who continually visit the schools.

8354. But the sanitary authority has no power to send their official into a school?—I do not know whether they have or not.

8355. That is a point which is worth clearing up?—Yes. I have been wondering whether anything could be done.

8356. If the condition of schools in Sheffield is such as you have told us, I should have thought it was rather a matter for the sanitary authority to have made inquiries about it?—Quite so.

8357. And if they had not the power it would be known that they had not the power and they should try to get it?—I think the inspectors think that cleaning three times a year is sufficient.

8358. But you do not think it is sufficient?—No.

8359. And you, as an official of the sanitary authority, might have reported this fact to your authority, who might have visited the Board School, or instructed you to visit it?—Yes. It is only quite recently that I have found out. I have been making inquiries quite recently about it.

8360. Then as to the actual things you would teach in school. I suppose this special instruction in health and feeding and dressing and washing of infants, you would confine to the older girls?—Of course the teaching of the washing of infants will have to be confined to the older girls, but there are a great many things which can be taught from the very beginning, such as cleanly habits, habits of self-control—things which I know in all well-ordered homes they are taught as babies—they learn them automatically. Amongst the poorer classes that is not so, especially in Sheffield, and I think that a great many things might be taught the children—you could hardly put them down?

8361. You say in good homes the children are brought up to do these things at a very early age automatically?—Yes.

8362. That is because they are in the home all day, or at least in connection with the home all day?—Yes.

8363. Do you think that a teacher with fifty, sixty, or seventy children before her can possibly affect them in the same way as a mother could do at home?—No, I do not think they could.

8364. Do you not think it is a matter of improving the homes again?—I know that in America they deal more in detail at the school. They teach them the necessity of washing the ears, and the teeth, and the reason why they should have their hands washed regularly before meals.

8365. It is very easy to do it as part of the school work, but it simply goes buzzing through the child's head, and becomes like the catechism?—I see the difficulties.

8366. All instruction of that kind is much more effectively done at home than through the school?—I quite agree with you.

8367. But there are some things which might be taught in the school, such as teaching the children the proper methods of breathing, and some attention should be paid to physical culture—I suppose you mean physical exercises in the school?—Yes, and certainly the position in which the child should sit, and that it should breathe through the nose instead of through the mouth.

8368. You would insist upon that?—Yes.

8369. There is a scheme in preparation which I think will make that the rule in all schools—that is to say, if it is carried out. Then you suggest that in connection with every school there should be a model workman's cottage, and every boy and girl should be shown how to keep it clean and to cook plain household dishes: do you suggest an actual cottage?—I feel this, that a small living room and a small bedroom, and a small room with a sink, such as they find in their cottages, would be of advantage, so that the girls and boys could be taught practically. I put that in, because I find very frequently a large family, the father out of work or ill, the mother going to work, and the big boys at home will not do anything; they think it is not manly to do anything in the house. They are making it dirty and have filthy habits, with regard to spitting, and so on. Then there is another point also—the number of widowers that I find with children with no one to look after them, and they have not any notion of how to do anything. The house gets into a deplorable condition. I think there are certain things which a boy might be taught as much as a girl. Also if the fathers know the value of fresh air and the bad habit of spitting, they could help their wives very much.

8370. But look at the practical question: you propose room of this kind in connection with a school of 1,000 or 1,200 children?—Yes.

8371. How do you propose to teach even the boys and girls of even the highest class in the school to do this?—Of course I quite admit that with the Code the whole method of instruction would have to be altered.

8372. How does the Code prevent this?—There is so much crowding of things in.

8373. Have you looked up the Code to see how much is compulsory and how much is voluntary?—No, I cannot say I have. I feel there I would like to know a good deal more.

8374. It is a document which is well worth studying?—In my experience of teachers they always tell me that there is no time—that they would like to devote more attention to certain things but there is no time.

8375. I see you ask here as to whether these things do not bear more relationship to practical things than a knowledge of physiology, the names of muscles and various other useless facts which could be recited by numbers of School Board children. I rather gather that your impression is that that is necessarily taught in a school ?—I have been told that a great many subjects are optional.

8376. Do you think this is a compulsory subject; is that your impression ?—I am not sure whether physiology is.

8377. (*Mr. Struthers.*) Mr. Lindsell will tell us what is the case in England. Physiology is not compulsory, is it ?

8378. (*Mr. Lindsell.*) No.

8379. (*Witness.*) There is what they call science which is taught in the schools, which is a mixture of various things.

8380. Is that obligatory ?—I think they have a choice in most of these schools of one thing or the other.

8381. But still I think you will find if this kind of instruction is given in any particular school in Sheffield it is not because the Code says it shall be given, but because the local people will have it so, or because the teachers themselves choose to have it ?—A great many of them do learn these things.

8382. Coming back to this room attached to the large school, do you think it is practicable with a room which after all must be a limited place to put perhaps three or four hundred children through in the course of a week ? The room having been once cleaned cannot be very well dirtied in order to have another set of children come in. They will see the whole thing is a sham and an unreality ?—I think most of these things are taught by demonstrations.

8383. Do you think demonstrations are really much good in the case of children unless backed up by actual practice ?—I think practice is necessary.

8384. I think it is found in most school subjects that mere demonstration is very much like a stage show—the children are amused for the time being, but it makes no permanent impression unless followed up by actual cooking—in the case of cookery—by their own hands ?—It is no use telling them to keep the sink clean unless you tell them the reason. I should tell them the necessity of keeping the traps clean and all those things.

8385. Do you not think it would be a more effective way if those boys and girls were brought back to the continuation school till they are sixteen and taught things of this kind and nothing else ?—Yes, I think that would be a very good thing.

8386. They would devote more time to it and it could be more effectively taught and the children could make better use of it ?—I think it would be good for them to be brought back compulsorily. My idea is that with regard to continuation schools at present such a large number will not come.

8387. Would you favour the idea of having the children made to attend the evening school compulsorily ?—I think it would be an excellent thing.

8388. What do you think parents in Sheffield would say to that proposal ?—I suppose they would be highly indignant.

8389. And you cannot make rules unless with the consent of the people ?—No, everything depends upon the public opinion.

8390. (*Colonel Fox.*) You said just now that in Sheffield the proportion of children who were suckled by their mothers was very great ?—Yes.

8391. A medical officer in Sheffield states that only one in eight of the infants is brought up at the breast ?—I should like to ask him where he got his figures.

8392. And the rest are bottle-fed with consequent ill-health evidenced by rickets, diarrhœa, and high infant mortality ?—I can only give you those figures. We have only been visiting the births since November. I have given you the facts relating to those that we have visited so far. Out of 725 infants 572 or nearly 79 per cent. were being fed on the breast only. That bears out my impression. These children were visited when only about two months old. If when they are visited at four months old a different state of things would be revealed, remains to be seen.

8393. I am speaking now of babies ?—Yes, my impression is from the visiting I have done that a very large proportion of mothers suckle their children. There is no reason for them to do otherwise. It is the most economical thing for one reason.

8394. Then he goes on further to say that there is a deplorable spread of the practice of artificial feeding which if not the chief cause of high infant mortality, leads the survivors to continue the struggle for existence with constitutions seriously weakened and impaired; so that it is not only that there is a very small proportion of children suckled, but that number is decreasing. Those are statements made by Doctor Robert Jones in a lecture on physical and mental degeneration ?—I think there is quite a wrong impression among medical officers of health and many doctors as to the number of women who refuse to perform their maternal duties, and I am not the only one who thinks so. Dr. Robertson had that impression, and I said I felt sure—I was looking forward to this work of visiting the births in order to really demonstrate this so far as Sheffield is concerned—that the working class woman as a rule wishes and intends and does suckle the child. I do not mean to say there are not exceptions where she might not do so, but a working woman in Sheffield does not wean her child as a rule. It is exceptional for her to do so in order to go out to work. It is the case with illegitimate children where the mother has to go out to support them. I do not know where he got his figures to go upon. There have been no available statistics.

8395. I thought it would interest you to know that he did state that in a lecture, and very recently?—Yes. Is it Dr. Robert Jones of Sheffield ?

8396. No. He states that a medical officer in Sheffield said that ?—Because there have been no figures available. Dr. Hall of Leeds wrote to me to ask if I had any figures available and would I give him the result of my experience, because I stated in my paper that it was extremely difficult to get any definite information on the subject.

8397. (*Chairman.*) With regard to the condition of a great many of these houses in Sheffield, I understand you to say that they do not come up to what you hold to be the minimum standard of decency ?—It is not that there are not houses which they could go to.

8398. A great many of the houses which are occupied by well-to-do working people do not come up to what you consider the minimum standard of decency ?—No.

8399. You are inclined to attribute it to a want of legislation enabling the local authority to deal with such conditions; but here we have got section 7 of the Housing of the Working Classes Act of 1885, a section which has not been repealed:—"It shall be the duty of every local authority entrusted with the execution of the laws relating to public health and local government to put in force from time to time as occasion may arise the powers with which they are invested so as to secure the proper sanitary condition of all premises within the area under the control of such authority." That is placing pretty extensive power and laying a pretty strong duty upon the Local Authority is it not ?—Yes.

8400. Then as to clearing unhealthy areas. There is an obligation on the local authority on an official representation to proceed to make an improvement scheme. Official representation means representation by the medical officer of Health; and twelve ratepayers or two justices may complain to the medical officer and he is bound to make a representation. Surely if these people will do their duty under the existing law the existing law is strong enough ?—It is fifteen years since a provisional order was obtained.

8401. That is because they will not make use of the powers they have. What is the use of entrusting people with further powers if they will not use what they have got ?—They find that procedure under the Housing of the Working Classes Act is frightfully expensive.

8402. But the question of expense is no plea for delay. This statute takes no notice of expense. It is a duty ?—Why do not the Local Government Board enforce it if the local authority allows it to become a

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dead letter? You see public opinion is not strong on that point.

8403. Your complaint is against the central authority for not using its powers for bringing the local authority to a proper sense of its obligations?—Yes. In this scheme in Sheffield why does not the Local Government Board insist upon its being carried out?

8404. Then with regard to the closing of insanitary houses there is an obligation on the medical officer to report to the local authority any dwelling-house unfit for habitation?—Yes.

8405. I understand you to say that there are scores and scores of such houses?—Yes, and the medical officer cannot get the stipendiary magistrate to deal with it.

8406. How does the local authority act?—A great deal depends upon the stipendiary magistrate. All the cases have to come before him.

8408. And after a closing order there may be a demolition order?—They do not do it.

8409. Your point is that they do not make use of the powers which the law confers upon them, not that the law wants strengthening?—I do think the law wants strengthening—at present they are working on the Act of 1875 with a number of amendments.

8410. This a much more recent Act that I am referring to?—I quite agree that they do not do what they could.

8411. With regard to the smoke nuisance, do I understand you to say that the atmosphere of Sheffield is much more polluted by smoke than it should be?—I do not know whether it is more than it should be because there are so many exceptions; there are so many industries in Sheffield which are excepted from that clause of the Public Health Act.

8412. Is that a private Act of Parliament which they have?—I do not know. There is a great deal being done. The corporation have two inspectors.

8413. In that respect do you think that the stipendiary magistrate is not as severe as he might be?—The stipendiary magistrate is not a severe man.

8414. You think he is just as indulgent as any manufacturer himself who might happen to be on the Bench when a case of that sort was brought forward?—I do not know about that.

8415. Do you say this class of case comes always before the stipendiary?—Yes.

8418. (*Dr. Tatham.*) You have some valuable evidence of special cases there. Will you put them in?—Yes, I will. I have also particulars of 100 houses which I have investigated, giving the percentage of people occupying them. (*Documents were handed to the Chairman*).

Dr. EUSTACE SMITH, M.D., F.R.C.P., called; and Examined.

Dr. Smith.

8419. (*Chairman.*) You have had considerable hospital practice in the East End of London?—Yes.

8420. Which hospital are you connected with?—The East London Children's Hospital.

8421. Does that provide for a very large number of child patients?—An enormous number.

8422. In and out?—Yes.

8423. Therefore you have had exceptional opportunities of studying the causes of malnutrition in infants?—Yes, in the last thirty years.

8424. We had better go through the causes which you think are most prominent—the weakliness of the parent is one?—They marry very young.

8425. You know from the Registrar-General's returns that people do not marry so young as they used to do?—They live together very young, then; you see very young mothers going about. I do not think they are particular about marrying.

8426. You must remember that the rate of illegitimate births is diminishing too, so that on both sides the children cannot be born into the world so early in the lives of their parents as they used to be?—There are a great many illegitimate children there. Is that taking the whole of London when you say that there are less illegitimate children and that the parents are at a greater age when they marry?

8427. No, the country generally. Of course, you agree that, where it does take place, the marriage of very young persons is very prejudicial to the physical strength of the infant?—Yes. You must remember the parents themselves are weakly, too.

8428. Do you think that has an important effect? We have been told here that, however feeble or degenerate mothers may be, nature makes a very strong effort to bring a young child into the world as vigorous as possible—Still, I think it stands to reason that, where the parents are weakly, the children must have a bad start, at any rate.

8429. We have heard that it costs a greater effort on the part of a weakly parent to bring a child into the world, and the parent suffers more acutely, but the child is not so prejudiced by what you describe as a bad start as you might suppose?—That is where there is no constitutional disease in the case of the parents, I suppose?

8430. Are many of the cases you refer to cases in which there is constitutional disease in the parents?—The children are very often born with syphilis and strong tendencies to consumption.

8431. Are those causes as prominent as they were?—I think so, quite—more so, perhaps. I am speaking of the East End of London.

8432. We have heard in this room that syphilis is diminishing, both in extent and in virulence?—I do not think there is very much less.

8433. As far as the effect on young children is concerned, you do not find any diminution?—When I first went to East London—I had an experience before of the poor in the West End—it struck me that syphilis was not so prominent in the East End as in the West, but that was only a general impression.

8434. Your opinion does not rest upon any statistical information, at any rate?—No.

8435. Now as to the next cause which you attribute, with regard to the malnutrition of infants, you have heard what was said by the last witness, that the impression which has prevailed as to the suckling of infants in Sheffield is entirely erroneous, and that, whereas Dr. Jones made that statement at the Society of Arts the other day, that only one in eight children in Sheffield are suckled by their parents, she produced statistics showing that the number was 79 per cent.?—Yes. Sometimes they nurse their children for a month or two.

8436. Her impression is that they continue as long as they can?—That is not the case certainly in the East End of London. In fact, it is quite the exception. We have a babies' ward. I am thinking of the babies brought into hospital. A very small proportion of those babies are suckled. We have them from birth in our wards.

8437. Are they fairly representative of the generality of the parents of the East End?—Quite, I think.

8438. Representative of the great bulk of the population?—Yes. Of course they are the very poorest.

8439. One would have thought, from economical motives, the very poorest were those who would suckle their offspring?—So many mothers cannot.

8440. It is inability as a rule you think?—I think so, and I think it is increasing. I think that certainly the proportion of women—both the well-to-do and poor—who can nurse their children is diminishing very much.

8441. I suppose the children of the poorer classes suffer so much more because it is impossible to bring them up by hand with the same care and attention which exist with the children of the upper classes?—Of course in the East End of London so many mothers go out to work.

8442. There is a good deal of factory employment in the case of married women?—I do not know where they work, but they are not at home. They go out and work.

8443. What becomes of the children?—They are put with a neighbour or at one of the crèches.

8444. We had evidence here from a lady from Hoxton who described one of the crèches there?—There is a crèche somewhere near the hospital, but they can only take a limited number, of course.

8445. They are not sufficient in number ?—No.

8446. Do you think it would be a good means of dealing with the problem if they could be extended in number ?—I think it is much better than being left with some ignorant older girl.

8447. Would you suggest the establishment of municipal crèches to deal with these things ?—Yes, I think so under proper medical supervision.

8448. And of course not resting upon any eleemosynary basis ?—No.

8449. But the parents should be made to contribute to the full extent of their capacity ?—Yes, I think it would be a very good thing.

8450. In regard to the subject of feeding, I suppose the inability to get milk, or ignorance as to its value, is one of the principal causes of the inappropriateness of the food which children get ?—In the East End they use tinned things so largely.

8451. Even for very young children ?—Yes.

8452. Do you mean tinned milk ?—Yes. Then, of course, they are very poor and they go on using it when once it is opened. Of course it is kept in a horribly bad atmosphere and they use it to the very end, and I suppose that a large proportion of it is stale by the time the child takes it.

8453. It is almost poisonous, I suppose ?—In very many cases. In the summer I think it is quite poisonous.

8454. Are there any other tinned foods or patent foods which you condemn that are being generally used ?—In the East End where my hospital is they cannot afford to buy the more expensive tinned things like Savory & Moore and Benger's food, and they generally fall back upon sopped bread, sometimes with milk and sometimes without. They give what they call sop, which is merely bread moistened in water and sweetened, with not very much nourishment in it.

8455. To children of what age ?—To children of six months and upwards, or even younger than that.

8456. Just at the time they should be weaned in the ordinary course ?—Yes.

8457. If they are not suckled what are they fed upon up to six months old ?—I think they give the child tinned milk.

8458. Are you aware of any municipal efforts in the East End of London to organise a proper milk supply ?—We are going to try ourselves at my hospital.

8459. I believe in some of the children's hospitals in Paris they do organise a system of that sort ?—There is a good deal of talk about them. It wants a certain amount of money to start, but we are very anxious to do it ourselves.

8460. I suppose you will be able then to guarantee at the cheapest possible rates the best possible supply of milk to the mothers ?—Yes. The milk will be brought from farms kept under strict supervision, and it will be kept under supervision the whole time it is in our hands, and will be sold as cheaply as possible.

8461. After the initial expense of starting a system of that sort are you inclined to think that it would be self-supporting ?—Yes ; I think so.

8462. If a certain number of parents avail themselves of it ?—Yes.

8463. Do you think in the course of a short time a sufficient number would be properly informed of its advantages so as to make full use of it ?—I think those who could afford it would certainly do so.

8464. Do you find any reluctance or any slowness on the part of the people to realise what is for the advantage of their children, if they are told ?—No. We have leaflets printed at my hospital and these go to the out-patients, the women who come with the children.

8465. Do they use them to light the fire with ?—No, I think they make use of them because they have learned a great deal.

8466. You think they have ?—Yes. Certainly comparing now with twenty years ago the children are very much better managed.

8467. You think it is more useful to teach the young mothers directly by means of that kind than to attempt to teach children in school on the chance of their remembering when they come to be mothers ?—I do not think that is so good.

8468. How long have you been connected with these hospitals ?—Thirty years.

8469. So far as your observation goes do you think the condition of things is less favourable on the whole than it was thirty years ago ? Do you think that the rising generation now—the children under five years old—are better or worse than thirty years ago ?—I do not think they are getting worse but I do not know that they are any better—I do not think they are.

8470. I suppose as yet they are hardly enjoying the benefits of such improved instruction as has been introduced ?—Our difficulty is the poverty of the people. They are far poorer than the same class at the West End. Some of these East End people are horribly poor.

8471. A good many of the parents live on occasional labour ?—Yes, and sometimes they do not have anything to do ; and they starve till they have.

8472. This is the very poorest class in London—the residuum ?—Yes ; this and the borough I think are the poorest parts.

8473. That is a standing problem which none of these palliatives would do more than touch the surface of ?—I think that is so.

8474. When children grow older and are in a better position to determine their own diet, do they get a better chance of being decently fed ?—They do of course if the parents are in work, but it is the common practice amongst the very poorest people when they have a little money to go and buy food and put it on their tables. They never think of clearing it away or anything of that kind. Anybody who feels hungry goes and sits down and takes a meal.

8475. Any member of the family ?—Yes. When that is done, if they have no money to buy any more they have to starve till they have. It is a shocking state of things.

8476. Do most of them provide meals in the house when they can or do many of them go and buy cooked food at the cook's shops ?—No, I think they provide it in their own homes.

8477. You think a large number of these children are sent half starved to school ?—They must be I should think. Of course I have no accurate knowledge of that. It is highly probable I should think.

8478. The food is not only inappropriate and insufficient but of bad quality, when they do get it ?—Yes, very often.

8479. I suppose the parents have very little knowledge of what is the best sort of food to give the children ?—They are told in this leaflet, and they learn in this way. We find that almost all the babies who are brought to us, if the mothers can afford tha expense, are being fed on milk and barley water, which they are told in these leaflets to do.

8480. Is this system of leaflets supplemented by any house to house visitation ?—No, we cannot do that.

8481. Could you not enlist voluntary help ?—We do not look upon that as our business.

8482. Could not some sort of charitable organisation organise this work side by side with the hospital ?—Yes. I think it is done a good deal amongst the Jewish poor.

8483. The Jewish people do look after children ?—Yes, much better.

8484. And the well-to-do Jews look after their poorer co-religionists to a much larger extent than is common amongst the other religious communities, except perhaps Catholics ?—Yes.

8485. Then as to housing arrangements ?—They are awful—the whole family sleeps in one room.

8486. How many children, from your knowledge ?—Three or four children and the father and mother.

8487. You think there are many cases of six occupants in one room ?—I think so. If they have a very large family, of course the mortality among them is very high. They generally have three or four children.

8488. What is the infant mortality in this particular part of London ?—I cannot give you the figures. With

Dr. Smith. every child that comes in we have a history taken, and the family history and the symptoms, and it is common to hear that five or six children have died, and that the one brought to us is perhaps the solitary survivor. It is quite shocking sometimes.

8489. From some points of view it is perhaps the best thing for the poor creatures that they should die?—Yes, but we medical men think it is our business to keep them alive.

8490. Have you any suggestion as to how the problem might be dealt with?—No. For warmth, as a rule, they keep all the windows shut.

8491. The atmosphere is very foul, I suppose?—Yes, shocking.

8492. Does the medical officer in that district attempt to report these conditions which you are describing?—I do not see what he can do. They can only afford to have one room. I do not see what the medical officer of health can do really.

8493. Except that the local authorities are empowered to deal with conditions of this sort, and unless they are prepared to deal with them at whatever cost, it is not easy to see how any amelioration is to come about?—I do not know at all what the medical officer of health would do in a case of that kind.

8494. Would you go so far as to advocate the community in the form of the State, or the local authority taking charge of these children?—Do you mean taking them away from their parents altogether?

8495. Yes, and placing them in nurseries. Of course enforcing, as far as possible, parental responsibility by enforcing payment on the part of the parents wherever possible?—Of course it stands to reason that if these children are taken away and brought up under good conditions, they must be better than when they live in an insanitary way in their own homes.

8496. Would you in extreme cases recommend that such steps should be taken?—Yes, I would certainly.

8497. Do you think there is much of this state of things due to neglect on the part of the parents, or is it due to inability?—I think it is due more to inability than anything else. There are many illegitimate children, and some of the children are insured—of course there is a large system of insurance.

8498. Does that work prejudicially to infant life?—I think it must do. They only pay a halfpenny a week and if the child lives they get nothing for it.

8499. But we understand that if the child dies they get very little more than the expenses of the funeral?—Perhaps they would spend it all over the funeral, because it is their notion to have a grand show at the funeral. But I do not want to make any accusations. I think it makes them a little neglectful; it must do. One of the causes which acts most keenly in these cases in preventing proper nutrition is the bad clothing of the children. They are only half clothed and they live in a state of gastro-intestinal derangement; they do not digest what they do eat.

8500. That is due to extreme poverty, I suppose?—Yes, that is due to poverty.

8501. Do they know what is the best thing to spend their money on with a view to warmth in regard to clothing?—Yes, they know flannel is a warm thing to wear.

8502. They do not get flannelette or that sort of thing instead?—I do not think they do.

8503. Do you think that drunkenness has much to say to it?—Yes, the women drink too much.

8504. Do you think that is increasing?—I do not know.

8505. That would be a fruitful cause of parental neglect?—Yes.

8506. And indifference to their duties altogether?—Yes.

8507. Are there many children overlain in the East End of London?—A good many.

8508. That is often due to drunkenness?—Yes. It is one of the reasons why I think the Jewish children are better nurtured than the others, because there is so much less drunkenness amongst them.

8509. They recognise their obligations to their children?—They are very fond of their children.

8510. (*Dr. Tatham.*) Speaking of the causes of mortality and sickness amongst young children, do you notice any difference in the prevalence of tuberculosis amongst them?—It is a very common disease, of course.

8511. Do you think it is commoner now than it was?—I do not think it is. It always was very common.

8512. You know that a great many cases used to be termed *tabes mesenterica* without any evidence of tuberculosis?—Yes.

8513. Do you think that really tuberculous disease is on the increase as evidenced by the post-mortem examinations?—No, I do not think it is on the increase; it was always very common.

8514. I mean amongst children?—We have always got some case which is tuberculous; it is almost always in the hospital.

8515. Either tuberculous meningitis or peritonitis?—Yes, we get a great many, one after the other, and general acute tuberculosis is one of the commonest things possible.

8516. Syphilis, you spoke of, as certainly not much diminishing?—I do not see so much of it now because I do not see out-patients, but I thought it was not so common as in the West End.

8517. Do you know the reason?—They are so poor. They cannot afford to spend money.

8518. You would be of opinion that syphilis is nothing like so virulent now as it was when you and I were students?—No, perhaps not.

8519. Nothing like it?—No, I do not think it is.

8520. In regard to the milk these poor children get for food, do you think it is of fairly good quality?—I do not know. Of course they get it from small shops in the neighbourhood. I do not think they are very particular about cleaning the jugs, and so on, to get it in. I expect by the time the child gets it it is not very clean.

8521. It would be reasonable to suppose that when the infant gets it, what with careless preservation and with filthy feeding bottles, and one thing and another, the milk cannot be very nutritious, and is probably decomposed?—Yes.

8522. With regard to tinned milk, do you know whether or not the use of separated tinned milk is on the increase now? We have heard it is. Evidence has been given to that effect?—I do not know at all.

8523. Of course you would disapprove of that if it were so?—Yes.

8524. You spoke of the superiority, as a rule, of Jewish children over Christian children: Do you think that is very marked in the East End?—The Jewish children are so much fatter and sturdier; you very seldom get a Jewish child who is emaciated. It is curious.

8525. That is quite in keeping with evidence we have got from others?—I have often been struck by that.

8526. Is it your opinion that Jewish mothers are more inclined to take care of their children than Gentile mothers?—They are more at home than the others. When they work they generally work at home, and the others go out to work as a rule, so that there is more personal supervision of their children. I think that is one reason.

8527. That is quite in accord with the evidence that we have from Manchester—where there is rather a large Jewish population—that Jewish mothers do attend to their children, and Christian mothers neglect them?—Yes, it is very much so.

8528. We have also had it in evidence that infants suffer very considerably in health from want of sleep. It is very common in crowded neighbourhoods, especially during the night. Do you think that any nervous diseases are attributable to that?—Except that a child will sleep through almost anything, I do not know whether noise will affect a child.

8529. (*Chairman.*) They sleep in a very bad atmosphere?—The bad atmosphere is the worst thing. They cannot assimilate their food.

8530. (*Dr. Tatham.*) You do not think it is operative to a great extent?—No, not now.

8531. Then you think that whatever improper treatment the children get, it is much more often due to ignorance and to poverty than to actual neglect ?—Yes, I think so.

8532. Rather than to wilful neglect ?—Certainly, I think so. Because they very often seem very fond of their children. Sometimes, in the case of illegitimate children, they do not seem to care very much about them, but as a rule they do seem interested in them.

8533. With regard to the arrangement you spoke of as being on the eve of accomplishment by your hospital—the attempt to supply pure milk at a reasonable price—do you think that will be carried on on anything like a large scale by voluntary means ?—If it were to be self-supporting I think it would be very much increased.

8534. You know, I daresay, that several municipalities have taken up that question ?—So I understand, and have made it self-supporting.

8535. The fear, of course, is that as a voluntary association you would be subject to a considerable amount of opposition from the so-called genuine milk trade ?—Of course it has to be discovered whether that is so.

8536. As a matter of experience I know of at least one instance where a voluntary association was simply run off the ground by the competition of the ordinary milk trade, and it was found to be a very costly experiment. The municipal authorities certainly are the people who ought to undertake the supply ?—Yes. A great deal of that would depend on the scale on which it was done.

Dr. Smith.

8537. You do not propose to attempt anything very extensive ?—Not at first, but we should hope, of course, to increase it.

8538. (*Mr. Legge.*) There is one question of a general nature. It has been suggested to us by more than one Witness that a valuable step would be the appointment of a central anthropometrical bureau which should periodically take certain superficial measurements of children and young persons, and adults throughout the country, and compare the results at different periods, and in different districts. What is your opinion of that, speaking as a medical man ? Do you think that it would afford good data for judging of the comparative deterioration of different districts and so on ?—You mean comparing the different parts of England ?

8539. Yes, and the population of the whole and of parts at different periods ?—Yes, I suppose it would afford some ratio. You mean supposing children were brought up differently in different places ?

8540. Supposing it came out that in Tyneside, to take one particular district, the physique of the children was extraordinarily below that of London and Edinburgh, then there would be ground for some special inquiry in Tyneside ?—Yes. One would have to take into consideration the climatic conditions.

8541. But still there would be grounds for making a special inquiry in that district as to why the children or the adults are so much poorer in physique than in other parts of the country ?—Yes.

Mr. J. Lewis, called; and Examined.

Mr. Lewis.

8542. (*Chairman.*) You are assistant teacher in an elementary school in North London ?—Yes, the West Green Board School.

8543. You have given special attention to the effect of the present system of cookery teaching ?—In my own particular area and its application in that area.

8544. Its application to the equipment of good housewives ?—Yes.

8545. You hold that the present conditions of attendance are unfavourable to instruction in cookery ?—Yes.

8546. What you say here is not intended to apply to the district with which you are familiar ?—Yes, to the district with which I am familiar, and it applies in other cases too, but I do not mean it to apply in every case, because I know cases where things are very much better managed.

8547. We are dealing with general conditions now. Will you say why you do not think the conditions are favourable ? I want you to explain why the conditions of attendance are unfavourable to children obtaining proper instruction in cookery ?—In my own particular area it is because the local education authority does not provide sufficient facilities for instruction.

8548. Do you think that is typical of the rest or not ? The evidence of one particular area is not of much value ? —I have good reason to think it applies in other areas.

8549. What are the conditions which you think are unfavourable ?—They do not offer sufficient facilities for instruction of all children eligible by age.

8550. Will you explain how ?—The cookery centres are not sufficient, the teaching staff is not sufficient, and children needing the instruction are not taught.

8551. They do not give instruction in the schools themselves ?—Instruction is given at centres and by teachers not on any particular shcol staff, and the head teachers themselves do not take much interest in the matter.

8552. Do you think that the instruction does not cover a sufficiently large class among the children ?—No. In my own district, and I should say the same of other parts, Southampton and Bournemouth for instance, where it applies only to selected children.

8553. That is due to the action of the teachers is it not ? They might make it much more general if they chose ?—They are unable to do so under present conditions.

8554. You mean that the regulations of the Code render it difficult ?—They are expected to reach a certain standard in their ordinary elementary subjects, and as only a limited number of children can be accommodated at the cookery centres only those who are well up in their ordinary work are sent.

8555. I thought individual examination was a thing of the past ?—Yes, but the individual examination still exists in the school under the head teachers, and the requirements are such that they must give first attention to the ordinary subjects of instruction at school, and cookery and other domestic subjects come in quite as secondary matters.

8556. You think insufficient importance is attached to those subjects ?—I think teachers look upon them as side issues—I mean the head teachers.

8557. Do you think the inspector does not attach sufficient importance to them ?—I suppose he has to take things as they are.

8558. But surely it is part of his business to aim at bringing up every school to what should be the best standard, from the point of view of general advantage of children under instruction in it ?—The inspector is not responsible for the organisation of a school. He approves the courses of instruction laid down, but as far as I know does not go into the question of general utility. What are you going to do in a case like this ?—It is typical of ten or fifteen in the district. A school has about 200 children eligible for cookery lessons by age and standard, the cookery teacher visits the school and finds that at first no children can attend the centre ; the headmistress cannot spare them from their ordinary subjects. After a time she sends eighteen out of 200 eligible children to the cookery class, and those eighteen are the best children in that particular school.

8559. There are managers to those schools ?—Yes.

8560. Surely they might take the matter in hand ?—At present, possibly because of the pressure of other matters, they take no interest in it whatever. I must say that they are to some extent new to the work, because they have been elected under the recent Education Act.

8561. You are inclined to think that may produce a healthier condition of things ?—I think under the Act the new members will take more interest if it is pointed out to them—if it is brought more definitely under their notice. At present cookery teachers tell me that the authorities take no notice at all of the instruction.

8562. Are you in the school area of London ?—No ; a suburban area. I am under the Tottenham District Council.

8563. What is your educational authority ?—The Education Committee of the Tottenham District Council.

Mr. Lewis.

8564. Do you think they are likely to be more alive to the sanitary value of educating children in these things than the old School Board were, as they are responsible for the health of the district?—To some extent I think so, but I think that there is still the question of the rates. The new authority has certainly shown more interest in the physical and sanitary condition of the district, as they have recently appointed a Medical Officer for Health. If these centres can be worked without loss then I think they would encourage them.

8565. The disposal of food enters into that?—Yes. That takes an important place in it.

8566. But if the food were of such a quality that the occupants of cottage homes could purchase it, would not that be a very good thing. Would not that facilitate the arrangements?—But how are you going to get to the cottage homes?

8567. The schools exist in the centre of them. If the cottagers wanted it they could get good soup from the school or vegetables cooked in an appetizing way, and they would take all that the school had to provide, would they not?—It is possible, but I have never heard of it being done.

8568. No effort is made to bring the fact home to the parents and the food as cooked is often not of the character which is consumed in cottage homes?—No. Then I found that even in the districts round where it is perhaps managed a little better there is a general opinion that cookery is not of a very practical nature.

8569. In what respects?—The things which should be taught are not given sufficient attention, and other things which are not really necessary are taught.

8570. What things would you give prominence to?—Just the simpler forms of diet. I mention here stews, bread puddings, fish, and things like these.

8571. You have not mentioned soups, but with regard to all those things, if they were prepared in sufficient quantities, surely the parents of the children would be only too glad to take them off the hands of the school managers for the purpose of consumption at home?—Do you mean the food to be consumed on the school premises?

8572. No, I do not, but it might be. There is no reason why children coming to school, instead of spending their pennies in the way you describe in this *précis*, should not place the money in the hands of the school authorities and receive a decent meal which has been cooked by the scholars?—Yes, that is the point. I thought it would be much better if means could be devised by which the cookery teachers in the centres could obtain information early in the morning as to what meals are required by the children who are attending the school.

8573. Their pennies might be pooled?—The teachers would know what funds were at their disposal and could make use of it. Then there would be no loss.

8574. Could not the parents be induced to give that information with a little organisation?—At present there seems to be no sympathy between parents and head teachers, and head teachers and cookery teachers.

8575. The cookery teacher is employed at a centre, and is looked upon as a person apart, in whose work the head teacher takes no interest?—Yes.

8576. That is the vice of the system?—Yes.

8577. You would advocate, in preference to centres of cookery, that every school of sufficient size at any rate, should teach within its own limits such of its scholars as were qualified to get instruction in cookery?—Yes.

8578. If that were done that might be worked into a system of providing such of the children as came from any distance or preferred to be fed in the school instead of going home, with dinners there?—Exactly.

8579. (*Dr. Tatham.*) At what age do you begin your cooking instruction?—It varies in different districts. We begin at Tottenham at about eleven, but it is not so much the age which fixes it, but the standard; no child is allowed to go to a cookery class until she has passed what we call the fourth standard.

8580. (*Mr. Lindsell.*) Where do you get that from?—That is what holds good in Tottenham. I do not think it is laid down by the Code.

8581. It is what they arbitrarily lay down?—Yes. The head mistresses tell me that they are not allowed to send a child into the cookery room until she has passed the fourth standard.

8582. Whatever their age may be?—Whatever their age may be.

8583. That is, of course, an arbitrary rule of the place. The only restriction in the Code is that attendances made by girls under eleven will not, as a rule, be recognised?—One teacher pointed out to me the advantage, in her opinion, of making it according to the age, and not to the standard.

8584. That is what we have made it. The authority is acting contrary to the intention at any rate of the Code, if they make the standard the condition; it is expressly abolished. It is an age condition only?—I do not know that.

8585. (*Dr. Tatham.*) Do you arrange for the cooking of dinners of one kind only during one day, or of various kinds?—In the district to which I am referring at present, the only dinners that are taught, as far as I can find out, are teachers' dinners. There are a certain number of teachers who live out of the district, and they find they can get dinners provided at the centre, and they arrange to have them.

8586. You do not arrange for any variety?—That depends entirely upon the cookery instructresses. There are only two in my district, whereas there are 2,000 children eligible for instruction.

8587. (*Chairman.*) In the whole of Tottenham?—I take it in this way. There are ten large schools, and in one school I estimate there are, even under present conditions, 200 children eligible for instruction, and of these, only between 18 and 30 attend a course. The reason for it is that the head teachers prefer to keep the children at their school work, but the cookery teachers themselves say that if the matter were better organised they could themselves take as many as 500 children per year through the course of instruction, instead of less than half that number as they do now.

8588. In the schools themselves?—Yes.

8589. (*Mr. Lindsell.*) How many centres are there in Tottenham?—I think about eight altogether. I would like to point out that at present several of them are not used at all, for the simple reason that the accommodation there is rather bad, and the cookery centres are used for class rooms.

8590. Cookery itself is not taught?—Cookery has to give way to ordinary school instruction.

8591. Are these centres those of the old School Board?—Yes. They had a good intention, but they never carried it out. I spoke to one head mistress on Saturday last with regard to the attendance of her children at cookery class; she told me they ought to attend a cookery centre at about a mile from the school. She said that that is where she is supposed to send them, but she is not going to send them there because she does not believe in them wasting their time in walking through the streets.

8592. Have any of the schools got a provision for cookery attached to a particular school?—In most cases they have.

8593. It is attached to the school?—Yes, on the school premises; but it is used more as a class-room.

8594. There is the means of doing so if they choose?—Yes.

8595. There is not a cookery class going on there at all?—No. As an instance of that, at the school at which I am engaged at present, we have a cookery class-room fitted up properly, but owing to the school being rather overcrowded the room is used as a class-room, and the children who attend cookery at all go to another centre about a quarter of a mile away.

8596. You think there is more probability of the new school authority improving that matter?—I have come to the conclusion, since I have taken an interest in the matter, that they are not sufficiently aware of the conditions and the circumstances.

8597. Are there more centres in the voluntary schools?—Not so far as I am aware of. The voluntary schools seem to be in a worse condition altogether.

8598. You know the new authority could provide a centre which could be attended by both schools?—Yes; I understand that.

8599. Is it your opinion that the children are not sent young enough or are sent too young to the centres?—It was not that. I thought that facilities were not given to those children that leave early and those who are not well up in their ordinary subjects. So many children are anxious to get away from school at a very early age.

8600. At 12?—Some of them do not reach the fourth standard, and consequently, according to the arrangements there, they do not get the instruction.

8601. Suppose they were allowed to come at the age of eleven, and went away at twelve, it would not be much practical use to them, unless they went on with their instruction.—That is a point I inquired into. We found the first course of instruction is the most practical, as a rule, but, again, it depends upon the cookery instructress. We have no course laid down at all; the teachers are able to do what they like. If the teachers are interested in the work they take it up in a proper manner, but, at the same time, if they wished to let the thing go they could.

8602. Are there any opportunities in Tottenham for continuing this class of cookery after leaving?—No.

8603. No technical schools, or evening schools?—There are evening continuation schools.

8604. But there are no cookery lessons given at them?—There is no cookery at all. In one or two cases they attempt needlework in the evening schools. That is useful, but that needlework class is not attended by those who ought to benefit by the instruction.

8605. You mean they are a better class, who do it more from amusement?—We find married women and young women who really, I should think, could afford to pay for the instruction. The instruction provided is free. In our neighbourhood, I ought to point out, there is a large factory, and girls of the poorest class leave school as early as possible to go to the factory, and these girls finish work about six or seven in the evening. These are the girls I should like to see go to the evening class to learn dressmaking, cookery, and so on; but we do not get them.

8606. You do not think those factory girls come to the evening classes?—No. You find them about the streets in the evening in dozens.

8607. There is nothing to prevent them coming if they choose?—Nothing at all.

8608. Do you think it would be too severe a strain upon them after their day's factory work to go to an evening school?—It would be almost a rest, seeing that most of their work is fairly active. At the same time, they seem lively enough in the streets, and I do not see why they should not be capable of taking up workin the evening schools.

8609. With regard to the food which is cooked, it is bought and used by the teachers who come from a distance?—Yes, in the centres that I refer to

8610. Do you think, practically speaking, that it would be possible—supposing a large number of children were provided with meals at school at a small payment—do you think the cookery centre could turn out a supply of food?—Decidedly, but not with the present staff. You would have to increase the staff.

8611. It would be very limited instruction to the learners, would it not? They would only learn one or two simple things which were perpetually supplied. What you would give the children would be, I suppose, soup and mutton broth?—Yes, and other cheap dishes.

8612. Do you think there would be a sufficient field?—I have seen them turn out a good variety in the course of a week.

8613. But would that do for the feeding of the children? Are they taught to turn out things which would be of service for the feeding of the children of the school?—I think if they had the means of getting the material for cooking they could make it practical, useful, and varied; but at present they have to rely upon what is required, or else buy very small quantities.

8614. Then the cookery centre would have to be at the school itself in all cases?—I have thought of that, and I think that if a cookery centre was arranged so as to meet the requirements of two schools that were near to each other that would do. *Mr. Lewis.*

8615. You would get the food for the children?—Yes. That depends, of course, upon the nearness of the two schools. Where there are large schools I think there ought to be a cookery centre at every school, and teachers maintained for that purpose.

8616. That is to say, a really large school of 500 children?—Yes—girls only.

8617. (*Chairman.*) Would it not be better to make the instructor itinerant rather than the children?—I thought it was a question of food—where the children could get their dinners?

8618. (*Mr. Lindsell.*) As far as that is concerned, one centre for two schools would enable food to be got by the children at each school?—Provided the schools were not too far apart. I think, too, in order that this waste of money should not go on, there ought to be some means of checking how the money is spent. Perhaps the teacher could give the children a kind of receipt.

8619. If you did allow the children to purchase their meals, it could be done by some series of checks?—Yes, you would want some check upon them.

8620. And in cases of extreme poverty they may be given free—that might be done by benevolent effort?—Yes.

8621. And in the other cases the children could pay a penny?—Yes.

8622. Have you any other remarks to make with regard to the system of cookery instruction under the code? Is there any other point which strikes you as wanting improvement? You have seen the teaching given?—Yes. I have seen it given in Bournemouth when it was in its first stages, and when the cookery consisted almost entirely of fancy confectionery. What is done there now I cannot say, because I have not been there for some years.

8623. Do you think the children sufficiently learn that kind of cookery which will be useful to them afterwards as wives and mothers?—That depends entirely, it seems to me, upon the instructress. If the instructress likes to make it so, then it is so to a great extent, but my experience is that it is not done in every case.

8624. It could be done?—It could be done; it depends upon what is to be done with the food when it is cooked. If they have no facilities for getting rid of useful dishes, the teachers must cook or prepare something they can get rid of. Pastries and things of that sort they could get rid of—the children would buy them with odd pence when they would not buy a proper meal.

8625. (*Colonel Onslow.*) It is really a matter of organisation in the first place, and obtaining suitable teachers who will get suitable things?—That is so.

8626. And then you could get a meal for the children whose parents are unable to provide food for them at home?—Yes.

8627. If you have the children whose parents were unable to provide for them at home, getting their dinners at the schools, then the cookery teachers would simply cook dishes like soup, suet puddings, stews, and simple things like that which the children would eat, enjoy and benefit by?—Just so.

8628. If you cannot have these cookery centres at every school—perhaps that is impossible—there might be a means of conveying those cooked dinners from the centre to the schools by means of carts, or something? We had evidence before us that it is done in a district of London—it is sent round to the different schools?—Yes. I did not think of anything quite as remote as where you would require a cart.

8629. Or even perhaps the children who are in want of their meals could be sent to the cookery centre to get it?—That is what I thought.

8630. A very large number of children could be employed either in actually doing the work or looking on, could they not, every day?—Yes.

Mr. Lewis.

8631. At present, owing to the difficulty of getting rid of the food, you are confined to dishes which are not suitable to the starving children?—That is so. I mentioned also in my *précis* the way they go about obtaining the materials for cooking.

8632. You say you think the children ought to be instructed how to buy?—Yes.

8633. One difficulty you have is that the staff would have to be increased, but I presume once this was in working order some of the older children could be made part of the staff in the same way as you have pupil teachers. You might entrust them with minor details and superintending the others?—Yes. I daresay they could be appointed monitors, or something of that kind.

8634. And also in buying things. I think you stated that they should be instructed to go out and buy a few ingredients for a meal?—Yes. I find at present that it all depends upon the cookery instructress herself. She tells the tradesmen to call within a certain time, and if she requires anything she gets it.

8635. It would be better if the children could be sent out to buy what was required?—Yes; under supervision, I think. It would hardly be wise to send them out without.

8636. Send them to buy what was required—that would teach them the value and the proper things to get?—Yes, and how to make the best use of the money at their disposal. An attempt is made in one district I know of where they send children out to buy the food, but in that particular district it seems to be done only just in one school; that school is rather a high grade affair, and so it does not touch the class of children where instruction is most needed.

8637. Is the cookery instructor a woman?—Yes.

8638. Specially appointed for the work?—Yes, and specially trained for it.

8639. And she is under whom?—She is appointed by the Education Committee.

8640. She is not under the head of one particular school?—No; that is the difficulty, and for that reason the head mistresses do not take the interest in it which they would otherwise do.

8641. To what age do these children go on with the cookery classes—until they leave school?—It all depends on the centres. Some children would not get to the centres at all. I have come across cases where children have left school at fourteen and have not attended a centre at all.

8642. With regard to those who do attend, do they generally attend until they leave school?—Do you mean do they go through more than one course?

8643. Yes?—I have known them go through two or three and sometimes four classes of instruction. At one school I know, eighteen children went through a course of instruction—what we call Course I. The cookery teachers sent to the school and asked for a second batch of children to be sent. I want you to notice that only eighteen could be taken from this particular school. The head mistress said: "I cannot spare any more at present, so you had better have the same lot for another course; so the teacher took them through a second course within the period immediately following.

8644. That is due to the local regulations that only children of a certain standard ought to be allowed to go to the cookery classes?—Yes; and to the fact that the dull children cannot be spared from their school work.

8645. (*Colonel Fox.*) What is the population of Tottenham?—I have not got it exactly, but I should say about 90,000.

8646. And Hornsey?—That, I think, is slightly less.

8647. Do you know what was the result of the town which was built near Tottenham, which was commenced—the suburb they were to build for the working classes of London?—They are at present building model dwellings.

8648. Is Tottenham a typical poor district?—It is comparatively a poor district; much more so than Hornsey, the neighbouring district.

8649. Have you heard of a housekeeping centre in Hornsey where girls are trained in domestic duties?—There is one which has been recently opened?

8650. Where girls are trained?—Yes, in housekeeping; but that is in connection with a high grade school, not with the ordinary elementary school.

8651. It is not in connection with elementary schools at all?—I believe some of the children in the elementary schools attend this housekeeping centre.

8652. Are there any practical women teachers who can teach cookery now?—Yes, there are women who are appointed for this cookery class and housekeeping class; they are specially qualified for that purpose.

8653. Do you find at Tottenham that there are any facilities for the physical training for young men and women?—There are no facilities whatever. Tottenham suffers more in that way than any other district I know. The Government does not encourage the instruction of physical training in the evening classes, and the evening classes are the only means of working up anything of the kind in the district. Then, of course, subjects which pay, such as book-keeping, shorthand, and so on, must be taken.

8654. Surely there is a great number of halls there which may be used for that purpose?—I think almost every school has a hall. I might say all the schools except one, where evening classes are conducted, have a large hall.

8655. Could not those at times be used for physical training for the young men and women?—Yes; I think they could very well be used, and it is the very thing which is required, provided they could be fitted up with the simple apparatus necessary.

8656. Why are they not used now?—Because there is no grant for the subject. The Government pay a grant for certain subjects, but not for physical training.

8657. There was at one time?—So I understand.

8658. And now it no longer exists?—It no longer exists.

8659. Supposing you got up some kind of organisation, could you not encourage classes to attend there?—I think I could. I think if some grant was made for physical instruction as is made for the other subjects taught in the evening schools it would be an advantage.

8660. The only expense attached to that would be for the gas, would it not?—Yes; and, of course, to pay the instructors.

8661. You said the boys and girls attend evening schools?—Yes.

8662. What do they attend there for? What is their object in attending them?—The nominal object is to acquire the various subjects which are taught, shorthand and book-keeping, and all that sort of thing; but I think the chief object is social intercourse. I think they would attend whatever the subject if they had means of communicating with one another a little. As an illustration of that I may say that teachers will sometimes allow a class to take up musical drill, or physical exercises for half an hour before the ordinary classes start, and then the attendance is ever so much better. They come for that, and not for the other subjects. I know of one or two centres where they allow the pupils to dance for half an hour after the instruction is over, and this materially improves the attendance.

8663. At all events, it has the effect of drawing them away from loafing about the streets?—Yes.

8664. Have you any Boys' Brigades in Tottenham?—There are several Boys' Brigades, but they do not take all the youths.

8665. They might at times use the halls, might they not?—They do in some cases.

8666. They have already commenced to use them?—In very few cases. They generally use the parish room or something like that, on a smaller scale.

SIXTEENTH DAY.

Wednesday, 9th March, 1904

PRESENT.

Mr. ALMERIC W. FITZ ROY (*in the Chair*).

Mr. J. G. LEGGE.
Mr. H. M. LINDSELL.
Colonel GEORGE T. ONSLOW
Mr. JOHN STRUTHERS.
Dr. J. T. W. TATHAM.
Mr. ERNEST H. POOLEY (*Secretary.*)

Dr. HENRY ASHBY, M.D., F.R.C.P., called; and Examined.

8667. (*Chairman.*) You are connected with a very large hospital in Manchester?—Yes.

8668. And have special knowledge on this subject?—Yes.

8669. Will you please state what you believe to be the principal causes of the weakness of children at the present day. You think that heredity figures largely?—Yes, I do certainly. I believe the three chief causes to be (1) Heredity, (2) Unintelligent Mothering, (3) Effects of improper feeding.

8670. Food comes rather under the heading of the want of intelligent mothering?—Yes; but it is so important that I want to emphasize it by giving it a separate heading.

8671. Will you state what you have to say under the heading "heredity"?—There are a large number of infants born who are weakly from the very first; their start is a bad one; they are perhaps late members of a large family in which the mother is exhausted with child-bearing, as well as from the effects of hard work and poverty. Before the child's birth development has been proceeding badly on account of the illhealth of the mother, and the infant comes into the world really handicapped from the very first.

8672. If the mother and the father are in receipt of good wages there ought to be no marked poverty?—No, it is so often secondary poverty.

8673. Neglect and waste and improvidence?—Yes; wages badly spent. Of course the question of alcohol comes in; the money is not spent on the family as it might be. Under poverty one includes secondary poverty as well as the question of poor wages. An infant with a weakly constitution from the first has a poor chance of withstanding a bad environment and bad feeding.

8674. We have had it stated here that however feeble or debilitated or depressed may be the condition of the parent, by the operation of some law of Nature an exceptional effort appears to be made to bring the child into the world under as favourable conditions as possible, to give it as it were a fresh start, and in the process the debilitated mother suffersmore than the mother who is in good health?—That is, no doubt, true to a certain extent, but if there is such a law, the law operates only partially. The mother may suffer too, and nature may make an effort to bring the child into the world strong, but fails to do so.

8675. Then Dr. Cunningham, whose name you probably know, said positively that there is what he called a mean racial type, to which every successive generation made a great effort to conform, and he thought in most cases it did so unless the depressing causes were alcohol or syphilis?—I do not doubt the transmission of the racial type or the depressing effects of alcohol and syphilis; but I feel certain that the depressing effects of the struggle for existence generally on the parents is transmitted to their off-spring.

8676. He admitted the effects of alcoholism and of syphilis did depress the issue?—I have no doubt they do.

8677. And acted as a countervailing influence to this effort of nature back towards the racial type?—I should only put alcohol and syphilis in a comparatively minor place. I do not doubt that syphilitic children come into the world very weak, and I have seen a case where a mother was continually drunk during pregnancy the child was badly nourished and grew up with a defective brain. But I think also the effects of poverty and hard work and weakness of the mother while the child is being formed in the womb do undoubtedly have the effect of producing weakly children who either grow up weakly or die. *Dr. Ashby.*

8678. Do you think some restriction should be made upon the labour of mothers during that period?—Most certainly. When you say to what extent legally, I do not know, but there is no doubt the effect is bad.

8679. There is no restriction placed upon the labour of mothers before delivery, but there is for about a month afterwards?—Yes.

8680. Would you extend that restriction?—I would most certainly, because I think it is exceedingly important.

8681. How far back would you put it, how long before the estimated date?—At least two months and as much more as you could get.

8682. You do not think that would be accompanied by any material hardship to the family?—I should not think so.

8683. Would it not give rise to doubt?—I quite understand the difficulties of making such a law, but I do not doubt if it could be done it would be of great advantage.

8684. Could it be done; would not the manufacturer say that he had made such reasonable inquiry as was possible, and it is a matter of speculation as to when the two months begin?—I have no doubt there would be practical difficulties, but I do not doubt it would be beneficial if it can be done.

8685. Would you extend the period beyond the present month?—I should be inclined to most certainly.

8686. You would not prohibit the work in factories of married women with young children?—I should certainly do it if I could, because it is a cause of a great deal of infantile neglect. Put it under the question of food; the woman goes to work and nourishes the infant at the breast during the night, and it is fed in all sorts of ways during the day.

8687. Some people say that the mother who goes to work is very often more regular and methodical in her ways during the time she does spend at home than the mother who is in the house all day and gossips with her neighbours?—It may be she is a more careful woman.

8688. Habits of work give her a trained sense of the value of method?—I should not have thought so. I should have thought there was plenty of work to be done at home.

8689. There is no method about it?—No; but I think going to work leads to neglect at home.

8690. Would it affect the supply of labour very materially if any restriction on married women was made?—I was present at a debate in Ancoats a few weeks ago; a large number of those present were Socialists, and the men were

Dr. Ashby.

exceedingly strong against the women going to work. An opinion was expressed that there ought to be a law that no married woman should go to work but should stop at home. There were plenty of men out of work.

8691. From that point of view because they think they take the food out of the men's mouths ?—That was partly it, but they are very intelligent people, and they were very strong upon the women stopping at home, to mind the baby and the children, and not to go to work. It was the husband's business to wage earn.

8692. Surely those men can enforce their views in their own families ?—I believe they do. As a rule they are an intelligent hard working class.

8693. Or has the husband of that class as little influence on his wife as the husbands of most classes ?—That is the opinion of that class, and I think they carry it out. It is among the more reckless class that the mother works. With regard to women going to work, a girl goes to work and then she knows nothing about household work, and then she marries a man who is working, and the wages of the two amount to something pretty fairly high—30s. or 35s. a week. Then they can get married early, and then the woman is laid up and goes to work too soon again, or the husband gets out of work and they are nowhere.

8694. Do you think something might be done in order to inculcate some knowledge of the tending of children and so on, in the young; in the case of girls who go to a factory they might be called upon to attend continuation classes twice a week ?—Yes.

8695. Would that be putting too great a strain upon them ?—No. I think it would be an exceedingly good thing.

8696. They spend their evenings mostly in the street ?—Yes.

8697. It would be a very good thing from every point of view ?—Yes, I think so, most certainly. A good deal is being done in Manchester by the Education Committee.

8698. But the girl passes away from that influence so early in life that she loses all touch ?—I quite understand that.

8699. Efforts are made in that direction, but a great many are wasted ?—I quite agree it is not wise to specialise too soon. The nurse does some good at anyrate in going round and lecturing to these girls.

8700. Can you mention what you hold to be the particular respects in which mothering of the children is deficienct ?—Want of cleanliness, badly fitting and insufficient clothing, bad ventilation in the home, exposure to cold in the streets often late at night.

8701. They do not give them enough sleep ?—No; and they lie in wet and foul napkins all day and get sore in consequence. The infant is fed whenever it cries, often with stale and improper food.

8702. What is done with the children while the mother is at work: are they sent to a crèche or placed in the hands of a neighbour ?—A woman is paid to look after them.

8703. I suppose she generally neglects them ?—I will not say that, but she is usually the most ignorant individual you can find anywhere, and makes her living by looking after children. Perhaps she is given a certain sum weekly, and naturally she wants to make as much out of it as she can, and sopped bread is the cheapest thing to be given and always handy.

8704. Would you advocate by charitable or municipal organisation some system of trained nurses or crèches to which they could be sent ?—I think the greatest work would be done by educating the mothers.

8705. If the mother has to go to work ?—Then no doubt properly managed crèches are a considerable advantage.

8706. Could they be made self-supporting do you think ?—It is very difficult to get money out of the parents but they ought to be self-supporting and people ought to be made to pay.

8707. The money paid to these women to look after the children ought to be enough to run a crèche on economical lines ?—It ought to be.

8708. You do not bring any charge against Manchester mothers that they decline to suckle their children ?—No—I believe it is the universal experience, it is certainly mine—they make a start on it as a rule provided they are not going to work, and then if they are going to work they will do it a little, but they soon stop.

8709. Do they marry young in Manchester ?—Yes.

8710. Not so young as they did ?—That is difficult to say. The temptation to marry early is great when both are wage earners.

8711. Is the milk supplied good ?—Great efforts are made to improve it, but it is not at all what it should be.

8712. Is it deficient in quantity, or is it difficult for mothers to get hold of it, or is it bad when obtained ?—A large amount of it comes from a distance, and the evening's milking comes during the night and is sold next morning in Manchester, and there is very careless handling, in the farms and in transit and then there is careless handling again in the household. The consequence is a great deal of the milk which should be fresh milk which is taken, is stale.

8713. Once it gets into those houses there is no means by which it can be kept uncontaminated ?—No; unless, of course, they get it in bottles—that would be the best way.

8714. I understand the dealers do not facilitate that distribution in bottles ?—No; it costs something. A great deal of the milk is bought in pennyworths for the infant; a child is sent out with a basin or jug to get a pennyworth—half a pint, or something like that.

8715. I should have thought the Ladies Health Society might have done something towards organising the supply of milk ?—It is very difficult question. It has been debated in Manchester a good deal. I do not know whether Dr. Niven has told you that pressure has been brought to bear upon the Corporation to supply it as they do in Liverpool. He is I believe opposed to it and personally I agree.

8716. He is opposed to it and you are opposed to it too ?—Yes. What I mean is this. The first business of the Corporation is to be a censor I take it; that is to say, to take good care that dirty milk is not sold. If they become traders as well, they are in the double position of censor and trader, and they weaken their position as censor.

8717. Do they discharge their duties as censor ?—As much as the public will let them—there is the difficulty. The milk dealers are up in arms. Honestly, I believe, they are doing what they can, I believe they are seeking fresh powers at the present time. I would certainly give the Manchester Corporation credit for very vigorously obtaining powers and applying them.

8718. Are they careful to see milk which comes into the city comes from rural areas where all the protection which the law permits is in operation ?—They take samples at the station and they have powers to track back the milk to the cow. That is to say they find tuberculous milk or they find milk with strepto-cocci in it, and they trace it to the diseased cows, as a matter of fact, and stop the milk being used. One knows it is not only tuberculous milk and milk producing disease which is the evil; it is the difficulty of getting it fresh and clean.

8719. Tinned milk used as a substitute ?—Yes, there is a great deal of tinned milk used.

8720. When first opened that may be all very well and good but in a very short time it becomes bad ?—I prefer for a good many reasons fresh milk to preserved milk for infants.

8722. I suppose the condition of housing has something to say to it ?—It is difficult in the centre of the town to get houses at a reasonable rate for the working classes; the price of property goes up and they perhaps pay four or five shillings a week, which perhaps they cannot afford.

8723. I suppose children at home are breathing constantly a very polluted atmosphere ?—Yes, no doubt.

8724. Apart from the ordinary atmosphere of the city the atmosphere of the rooms is bad ?—Yes, undoubtedly.

8725. I suppose three or four sleep in one room ?—Yes.

8726. Do you think the Corporation is doing what it can to reduce the evils of overcrowding and their effects ? I believe they are most anxious both with regard to open spaces—at any rate, we know the medical adviser is most anxious with regard to open spaces, and also to provide workpeople's dwelling-houses outside the town where there is a tramway connexion.

8727. Would not an expenditure of that sort be remunerative by the improvement in the health of the community ?—I think so, most certainly, I quite agree that airy spaces where the babies in summer time can be wheeled would be a great advantage.

8728. It would attack the evil in the citadel and prevent rooms being occupied where there is not a minimum of cubic air secured to every occupant ?—Yes, that is quite so.

8729. Do you think it is quite a counsel of perfection to hope that some limit might be imposed on the number of occupants of one or two, or three-roomed tenements ?—I don't think so.

8731. You know there is ample power now to prevent overcrowding, to treat it as a nuisance and abate it by the most rigorous means ?—Yes. I was meaning specially for the moment open spaces. In New York they have done a great deal, I believe, in buying property and demolishing the houses, and making a park or open space.

8732. The centre of Manchester is very badly provided in that way, is it not ?—Yes ; in the industrial quarters.

7733. The effects of this bad feeding and careless mothering are very noticeable in the condition of the children, are they not ?—Yes.

8734. Would you explain what the effects are which have come under your knowledge ?—Bad nutrition and the production of rickets ; as a result they are undersized from interference with the growth of the bones, as well as having loose joints and weak muscles. They grow weedy and poorly nourished.

8736. Do they ever recover from that ?—They may, undoubtedly, if they are put under better conditions later.

8737. During which period of a child's life do you think they improve most—during school age or in the period after school life?—In the worst cases the deformity lasts for life, in the milder cases improvement gradually takes place during the period from, say, four to seven years of age.

8738. I want rather to gather whether you thought the period of school life was a favourable one, on the whole, to development or not ?—Certainly, under favourable circumstances.

8739. Under the average conditions which a child meets with in the elementary school of to-day do you think it is a period of development ?—As far as the school is concerned, but they are probably still under bad conditions at home. I see a good many school children from the fact of examining children for the special schools in Manchester. A good many of these are suffering from the results of rickets.

8740. Do many go to school half starved, do you think ? —I am inclined to think not. I have been associated with a lady (Miss Dendy) who inquires of every child what he has had for breakfast, and I have been struck with the good breakfasts many of them have had.

8741. They have had good breakfasts ?—Yes ; at any rate there has been no want of variety.

8742. With regard to feeding in the middle of the day, we have been told by a Witness that the parents very often give children a penny or three-halfpence or twopence to provide their own meals, and more than half of that sometimes goes in buying marbles, or a top, and they starve themselves ?—I think that is possible.

8743. And sweets they buy in large quantities ?—A meal is provided for a penny in some schools, at the school itself.

8744. Does that pay the cost ?—It does very nearly. It does not pay the cost of the utensils used in cooking, or the fire, or the labour, but it very nearly does cover the cost of the food. In a school in Siddington, in Cheshire, a penny-halfpenny covers the whole cost.

8745. A system of that sort might be adopted to a much greater extent ?—Yes. The girls and boys are made to lay out the table and so on. *Dr. Ashby.*

8746. It helps to train them in household management ? —Yes. They bring their pennies, and if there is any deficiency it is supplemented from a private fund. But if the place was adapted for the purpose and pots and pans and plates were provided, a penny or three halfpennies would cover the cost. They have Irish stew, rice pudding, or soup and rice pudding.

8747. It might be part of the plant of the school for teaching cookery so that that could be provided ?—Yes. At the school I referred to, Hague Street, Newton Heath, a dinner is provided every day and the pennies are collected. They say that the children, although they may not do the cooking, do the laying of the tables and so on. I have watched them a number of times, and that is far and away the best plan.

8748. You think they are adequately fed on the whole ? They are often badly fed in the sense that they are given improper things.

8749. But a sufficient amount of money has been spent upon their food ?—Yes. They have bread and butter and bacon for breakfast. At least, half of them will say they have had bacon and bread, and sometimes an egg, and so on.

8750. Have you noticed the effects of tea drinking ?—No, I cannot say I have.

8751. What about juvenile smoking ?—I think it is bad, but I do not think it is at all comparable with other influences.

8752. How long have you been in a position to observe the conditions in Manchester ?—Twenty-five years.

8753. Should you say those conditions are aggravated or ameliorated ?—I should say they are better on the whole. I cannot give you statistics. I think the effects of the teaching of the Sanitary Association and the various agencies with regard to mothers feeding their children on cow's milk instead of artificial foods and bread, and also urging them to nurse their own babies, have had a good effect.

8755. You think the parents meet the efforts made in that direction ?—Yes. I think the generation that has grown up in the last twenty-five years is better than the generation of twenty-five years ago. There is a great deal of ignorance still, but I think it is less.

8756. Therefore, you look to see a further amelioration in the course of the next generation ?—Yes, I do.

8757. You think the worst conditions now are due to causes which are diminishing in intensity ?—I do. A great deal of it turns on this one question of intelligent mothering, including food and hygiene.

8758. And you would concentrate effort upon that ?—Yes I should. It all comes from the little things on which there is ignorance on the part of mothers. There is no patent road.

8759. (*Dr. Tatham.*) You have been for a great many years physician of one of the finest Children's Hospitals in Europe ?—Yes.

8760. That is not an extravagant description, I think. The Chairman has spoken of a little discrepancy between your opinion and that of a gentleman who has given evidence here before with regard to the condition in which infants come into the world. I take it your opinion is based very largely upon your very long experience as a practical physician ?—Yes.

8761. And also based upon experience in a very large Lancashire city ?—Yes.

8762. So that although you may differ with a gentleman who argues entirely on theoretical grounds, the reason is the difference of your kind of experience ?—It is very possible. I believe that a large number of infants are born in a weakly condition resulting from the weak health of the parents.

8763. I am glad to hear you say from your experience in Manchester that you do not think the condition of the infantile portion of the population is deteriorating ?—No, I do not.

8764. You think the reverse ?—I think so. The condition is very bad, of course.

8765. It is a most important thing to get that from

Dr. Ashby.

you ?—It is my impression most certainly. Some of my colleagues and myself have stated in our hospital reports that we think we see improvement.

8766. I want rather to take you through the points as you deal with them in your *précis*. You say here that you think that rickets in many ways affects the physique of the young child ?—In the worst cases the bones do not grow in length ; they remain stunted and curved and bent, and the joints become knock-kneed, the muscles become poorly nourished and the child does not walk till three or four years of age ; it digests badly all that time. In the worst cases what is produced in those early years never passes off. They do not necessarily attend at a dispensary, but I see them at the special schools as school children, and I can see very marked rickety defects —knock-knees and so forth.

8767. There has been a statement made here—I am not sure whether by a medical man or not—that rickets is largely produced by the absence of lime salts in the water ?—I am entirely sceptical about that. Lime has nothing to do with it. It has been shown over and over again that in the blood of rickety children there is plenty of lime. Rickets occurs in spite of plenty of lime in the food.

8768. You are the author of an important work on physiology, and I think you have dealt with that subject ? —Yes.

8769. With regard to knock-knees and flat feet, they are produced mainly by rickets, are they not ?—Yes, I have examined candidates for the Post Office. I have seen a number of men with flat feet, who are candidates for postmen, who have been refused by the ordinary attendant of the post office, and therefore referred to an umpire. It is a question of physique, and a certain proportion are refused. You see the effects of rickets again in the flat feet which are likely to prevent a man being a postman on account of his having so much walking to do.

8770. The same effect will probably cause his rejection as a recruit for the army ?—Yes.

8771. If children were properly cared for and properly fed, to a very great extent that might be prevented, although it is difficult to cure it ?—Yes, it might be prevented, undoubtedly.

8772. You give statistics with regard to admissions to the Manchester Children's Hospital in 1903 ?—Yes. During 1903, 901 infants and young children were admitted as outpatients to the Manchester Children's Hospital, suffering from rickets in the early stages ; in addition to the above, 539, mostly children of over three or four years of age, were admitted for various deformities, as knock-knees and bow-legs, the result of rickets.

8773. Do you think rickets is on the increase or not ? —No, I do not think so. With regard to hospital statistics, as a hospital gets larger and as communication with outside towns becomes better it tends to get the chronic cases out of proportion to acute cases, because it is drawing from a larger area.

8774. You examined 750 school children who had been selected for examination on account of their inability to learn in class ?—Yes, eighteen were suffering from marked rickety deformities, being much undersized, with knock-knees and flat feet, whilst their mental status was much lower than that of average children, in spite of their having attended school. They were not only backward but had dull brains. Many of the others were of poor physique, with curved or limp spines and flat feet, due to rickets. These have not been selected at all for rickets ; they were selected because they were backward. I do not mean that because a child has rickets it is dull and backward, but in the worst cases it often happens that it is. There is a dulness of intellect with it.

8775. There is an association of the two ?—Yes ; I do not wish to say that there were only eighteen of these suffering from rickets, because I could see traces of rickets in a large number of them, but these were *bonâ fide* dwarfs.

8776. You say that it is easy to trace in the children of the special schools a poor physique due to infantile disease. —Yes. I was referring to rickets, but also to general weakness—rickets perhaps in the minor degree, loose limbs and flat feet, and then deafness is produced by ear disease, and hemiplegia and paralysis occurring in infancy.

8777. With regard to tuberculosis, a most important matter, I should like to have your opinion on that as regards its prevalence amongst children ?—It is exceedingly prevalent. It is not common in early infancy, that is in the first six or seven months of life, but after that there is a very great deal. There is tuberculous disease of the internal ear and also of the glands. Then we come to the more serious forms in the shape of hip and spine disease. In the Children's Hospital last year there were 275 cases of tuberculous spine disease, and 314 cases of tuberculous hip disease ; and this does not include knees and elbows and so on ; so that there is a very great deal of deformity being produced by tuberculosis which lasts more or less for life, rendering them unfit for the Army and often from earning their own living.

8778. With regard to the disease popularly known as *tabes mesenterica*, what proportion of the cases do you think are really tuberculous ?—Many of them are not. There is no doubt whatever about that. It is a very unfortunate name.

8779. You would agree I am sure that it would be desirable to get rid of that term if possible ?—Yes.

8780. Call it tuberculous peritonitis or something of that kind ?—Yes.

8781. I think you will agree that the statistics with regard to mortality from *tabes mesenterica* are simply unreliable ?—Absolutely so.

8782. Then you come to the question of the milk supply of Manchester ; you say that you think the women of the poorer class are more careful in the matter of artificial feeding of their infants than they were ?—I think so. They make a greater effort to nurse their own children for a start, and then after that they more often get their pennyworths of milk and dilute it, than the bread sops which used to be so exceedingly common twenty or twenty-five years ago. My own idea with regard to that is that they should be encouraged to nurse as long as possible, supplementing the breast with cow's milk. There used to be a prejudice—and there is now—against mixed feeding, but I think that the best thing a working woman can do when she is feeding an infant at the breast is first of all to take care that she takes plenty of milk herself, and if she finds her breast milk is failing she should give the infant a little diluted milk in addition ; and go on in that way as long as she reasonably can.

8783. As regards the condition of the milk which is given to young children in Manchester, do you think that tinned milk is very much used in place of the other ?—Yes, I think there is a good deal. I received a communication from the secretary of the Grocers' Association the other day asking whether it was right for them to sell condensed skim milk for infant feeding. They put the question categorically to me. They said a great many grocers did it on account of trade competition, but they always had a sort of feeling that they ought not to recommend it for infant feeding.

8784. We have had it in evidence here that in certain places the use of condensed skim milk is common simply because it costs a halfpenny or a little more than a halfpenny less than condensed whole milk, you do not think in Manchester that is the case to any great extent ?—I think there is a great deal of inferior condensed milk, but not perhaps sold openly under the term "skim milk." The ordinary condensed milk would contain 12 or 13 per cent. of fat ; I fancy 8 per cent. of fat in condensed milk is a common thing. I think in skim milk there would not be ½ per cent.

8785. With regard to illegitimacy do you think that causes a very great deterioration of physique ?—I should think so certainly. The mortality of illegitimate children is very high.

8786. It is about double that of others ?—Yes, in so many instances the woman has to work. She is unmarried, and she goes to work in a factory or a warehouse, washing steps, and then, poor wretch, at night she has to give the child the breast, and nurse a crying baby. Then in the day the child is under the care of somebody who is ignorant and careless. One can quite

understand the higher mortality and also the number of those who grow physically unfit.

8787. Is syphilis very prevalent amongst the infantile population of Manchester?—Yes, to some extent. I have here a list of the out-patients of last year, 1903. With regard to the number of congenital syphilis cases admitted I see that out of 18,000 patients we had 124 cases of congenital syphilis with three deaths.

8788. The proportion is not very large?—No. I suppose it is an important item, but I do not think it is widely spread over the population.

8789. Is it your opinion that such syphilis as occurs is less virulent than it was twenty-five years ago?—Yes. Here we have only three deaths out of 124 cases.

8790. With regard to the voluntary agencies at work amongst the poor in Manchester, may I ask you to say what you know of them as existing at the present day?—There is a great deal being done by the Ladies Health Society and the Sanitary Association by means of workers going about among the poor, the ladies themselves personally take a great deal of interest and do personal work among the poor on organised lines in connection with the Corporation, so that there should not be overlapping, they work with and alongside the Corporation lady visitors, so that I think they are doing exceedingly good work. The only thing is there is too little of it.

8791. You think that work might be extended?—Yes, and I think that is the most hopeful method really. I am doubtful on the question of the municipal milk supply, and doubtful to some extent even of philanthropy doing good by giving milk away. For instance, in the municipal milk supplies a certain mixture is made and half-a-dozen bottles are given; the mother puts the nipple on and feeds the child out of the bottle. That is good, but it is not educating. You cannot do that for ever. You will produce more good in the long run by teaching them to help themselves.

8792. (*Mr. Legge.*) I should like to ask you a question or two about the matter of married women working in factories. Do you think that the number of those women working in workshops in Manchester is great?—There is a good deal of it, but it would be very difficult for me to give any statistics at all.

8793. It seems to vary a good deal in different parts of the country, largely, I suppose, according to whether the main occupation is textile or non-textile?—Yes.

8794. In the textile occupations of Manchester or the neighbourhood, I suppose it is likely there would be a considerable number?—I take it a great deal of the weaving in the weaving sheds is done by women, married and unmarried.

8795. In Manchester itself there is not much actual weaving?—No, I am speaking more of the Lancashire district.

8796. It is more warehousing?—Yes, but still there are a great many mills immediately round Manchester, a good deal of cotton cloth is made—what is called grey cloth—by women's labour.

8797. You think perhaps it would be a good thing if the Factory Department got the statistics to show the number of women employed?—Yes.

8798. They get particulars as to the number of persons employed, male and female, and they might, probably without very great difficulty, get additional particulars as to whether the women were married or unmarried?—Yes. Of course, everyone sees the women streaming out out of the mills, and there is also home work.

8799. We should then know what was the extent of the problem which we had to face?—Exactly so.

8800. With regard to this practice with which everyone is well acquainted, of working women paying an old woman or somebody to look after their babies, are you aware whether any attempt has ever been made to provide a licensed class of attendants?—There is a lady inspector on the Board of Guardians going round when children are boarded out, is there not?

8801. Yes.—But there is no inspection, so far as I know, of mere caretakers for a few hours.

8802. But has any attempt been made, within your knowledge, to provide women with any qualification or licence by any sanitary authority?—I do not think so.

8803. The tendency nowadays is strongly in that direction. We have had the registration of midwives recently secured, but do you not think it would be a good thing, if it were practicable, that the sanitary authorities should be enabled to grant licenses to women who show that they have qualifications up to a minimum standard?—Yes, it is possible, it might be done. I suppose the difficulty comes in for how long—that is, a mother may leave some one in charge of her baby for an hour or two, and then the woman who goes to work wants to be relieved from eight till eleven. Then she goes to see the baby in the middle of the day, and then goes to work till six o'clock again. There would be some practical difficulties in defining what was taking care of a baby and what was not; but I do not want to throw any difficulties in the way. It would be a good thing if it could be done.

8804. Baby-farming is under regulation?—Yes.

8805. And this is a form of baby-farming?—Yes. It is only when a woman takes charge of a baby for good that she is looked after; when she looks after it for an hour or two, or six or seven hours, it is much more difficult.

8806. The child is farmed out for that period?—Yes.

8807. You think it would be a good thing?—Yes, if it could be practically done.

8808. If something of that sort were secured, it might be possible to arrange that no married woman should be allowed to work unless she had her children in charge of a licensed person or sent to some such *crèche* as the Chairman was speaking of?—Yes. I think the *crèche*, if it could be done, would be better than the licensing of women—it would be more practicable.

8809. But you do not want all the children of the working class brought up in *crèches*. I am going to a wider question of statistics. We have had represented to us by several witnesses the great advantage of having a central sort of government bureau to collect statistics of an anthropometrical kind covering the country and affording data which would be prepared from period to period?—Yes.

8810. Do you think that would be an advantage?—Certainly, school children and so forth.

8811. School children and young persons. You have not, I suppose, at any time acted as a certifying surgeon?—No, I have not.

8812. In the course of their business they have to be constantly passing children and young persons, and it would be very easy for the certifying surgeons to do that?—Yes, it would be very good.

8813. Besides comparing the population at different periods you could compare the population of one district with another?—Yes, like the comparison between Edinburgh and Aberdeen which has been recently been done.

8814. And a textile with a non-textile district?—Yes, I think so. That is most interesting and important.

8815. It would also have this effect. It would enable the public conscience to be aroused in districts where these figures showed there was something wrong?—Yes, certainly. It would awaken anxiety locally.

8816. You come from Manchester; we have had a number of visitors from other localities where there is an active municipal spirit?—Yes.

8817. My business takes me all over the country, and I know some local authorities which require a charge of dynamite to stir them?—Yes.

8818. I mean they are sunk in a shameful state of apathy?—Yes.

8819. If the Government were suddenly to produce an effective survey of those districts, statistically established, these people would have to make an effort?—Yes, I quite agree; I think it would be splendid.

8820. Have you any special views as to what measurements there should be? One would like them to be as simple as possible?—Yes. My own impression is height, weight, and chest measurement, and maximum circumference of the head. These are all that are wanted. I have my doubts whether the angles and so on are necessary.

Dr. Ashby.

8821. You do attach importance to that last one—the circumference of the head?—I always do it in school children. It is of interest.

8822. Do you prefer the circumference of the head to other measurements of the head?—I generally take the circumference round the temples. I have not attempted anything else, partly because I was not anxious to try too much.

8823. (*Colonel Onslow.*) I take it you are of opinion that with regard to the local authorities, certainly in some cases it might be well for the Government to step in and insist upon better sanitary supervision of houses and so on?—Certainly.

8824. At present, to a great extent, there are classes of sanitary inspectors who are very much in the hands of the Corporation or the local body, and although they may see the facts they are inclined not to report them?—Yes. At any rate, they are unable to take the steps they ought to take.

8825. And that they would naturally wish to take?—Yes. There is the question of the rates going up.

8826. It really wants somebody above the local authority to insist upon its being done?—Yes, certainly.

8827. And with regard to flat feet, in reference to rickets, naturally, of course, rickets is one of the great causes of flat feet; in your opinion, are flat feet caused by the locality, the soil and so on?—No, I do not think so.

8828. A great many medical men have that opinion, I believe—men I have spoken to in different parts of the country?—I should not think so.

8829. In Lincolnshire, from the heavy land, flat feet are very common amongst the recruits presenting themselves and especially amongst young boys; you would attribute that not to the nature of the soil but to bad construction?—Yes, I should think so. I should class that with the story that Jews have flat feet because of their ancestor's forty years' wandering in the wilderness.

8830. There is no doubt we have a number of rejections from the two counties of Lincoln and Devonshire, each of which has heavy soil?—I should not have thought it was due to that; I should have thought it was due to nutritional disorder connected with the muscles and ligaments of the ankle. I can quite imagine that parents may have been foolish in allowing their children to go long expeditions and long walks when they were not fit to do so.

8831. And worked too young?—Yes. When the weakness is there, then too much resting of the weight of the body on the legs and too much fagging can intensify the deformity; instead of getting well it gets worse.

8832. Then with regard to the youngest child of a large number of children, what you have mentioned is a fact which is not confined to the lowest orders?—No.

8833. It is in all classes?—Yes. No doubt too severe child-bearing takes it out of the mother too much and she is unable to form the child as strongly as a healthy woman would. With regard to the first-born it happens in the same way. You might say that nature does not all at once adapt itself, and, consequently, things may not go easily.

8834. Very often, in the upper classes, the first-born is not quite the most intelligent of the family?—That is quite true. The woman has not adapted herself to the conditions of maternity.

8835. (*Mr. Struthers.*) Rickets is a disease of infancy, is it not?—Largely; it makes its start then.

8836. At what age do you detect its first appearance?—The earliest is the fifth or sixth month—sometimes not till a year later.

8837. You think it actually starts then?—Yes, in a number of instances. It may not start for nine or even twelve months, but in many cases, at least, it starts about the end of the first half year.

8838. On the other hand, is its development delayed till late?—Yes, it may be.

8839. How late may you have the first appearance of rickets?—It is very difficult to say. Some of the signs of rickets occur in children of four and five after a severe illness, but it is quite exceptional. The crooked bones and knock-knees seen so often in older children are the results of infantile rickets and not of the disease commencing at a late period.

8840. So that substantially any appearance of rickets, or diseases such as flat feet and dwarfishness in later life, are due to the way in which the child has been brought up?—Yes, that is a point I very strongly agree with.

8841. Between the ages of three months and four and five years old?—Yes.

8842. And what happens to the child or individual after that does not so much matter as far as that is concerned?—No, but of course the loose joints may be made worse by bad hygiene and overwork.

8843. I gather from you that the cause of the harm was not, in your opinion, the absence of lime in the water?—No.

8844. Can you tell us in general terms what is the cause? It practically amounts to this: when there is bad feeding, or when there is indigestion, the digestive process goes wrong, and certain toxins or deleterious substances are formed in the stomach and intestines and these are absorbed into the blood. Sweating is one of the first signs, later the formation of the bones and muscles are interfered with and nutrition generally. I do not mean to say all the gaps of knowledge have been filled, but I take it roughly that is the outline of it.

8845. Then it is due to defective digestion very often?—Yes, or, of course, improper feeding in some instances.

8846. It may act in two ways—the food may be deleterious in itself, or it may be be unsuited to the digestion of the child?—Yes. A child even if properly fed may get rickets if its digestion is weak, but only mildly.

8847. That is a point I was going to put to you. Have you ever found rickets in well-nourished children?—The slighter phenomena of rickets; but you never get severe rickets in children who have good digestions—healthy children. A child may be fat and yet rickety and unhealthy.

8848. And plenty of food to supply the digestive apparatus?—That is so.

8849. In the main it is a question of proper nourishment?—Yes.

8850. And for the children of the age we are discussing the proper nourishment is milk?—Yes. In the first instance the mother should nurse the child and, failing that, she should supplement it with suitable cows' milk properly diluted.

8851. You say that in Manchester fresh milk of a good character is not readily obtainable by the poorest classes: they buy milk by the pennyworth?—Yes.

8852. You also said that you would not favour such a scheme as that adopted in Liverpool or, at any rate, you had no strong opinion in favour of it—the supply of milk through the agency of the corporation?—That is rather a long story. Speaking generally, I am not in favour of Corporations becoming purveyors of milk.

8853. What I wanted to get at was this: On your view of the matter what steps do you think it is possible to take to make a larger supply of good milk available?—That is a very difficult point. I should trust mostly, I think, to regulating trade channels. Then I think that with proper precautions certain grants might be made perhaps by the corporation or, at any rate, by some philanthropic society, to superintend the sale and distribution of good milk for infants. Merely setting up a shop, and giving away or selling milk, would not make the slightest difference in infantile mortality. You have not only to get the milk to the poor, but you have to have the children looked after by the health visitors, to see that the milk is properly used and the infants looked after.

8854. Even if there was an ample supply of good milk sold in the shops in the densely populated parts of Manchester it would not be used by the poorer classes?—You would still want supervision of the mother.

8856. But, as a matter of fact, there is not in your opinion a sufficient supply of good milk?—No, I think that the milk supply of Manchester and all the large towns is still, in spite of all that has been done, in a poor condition. There is a lot of stale milk and contaminated milk which comes in.

8857. Have you any particular ideas as to what might be done to improve it ?—I think it can only be done by regulating it by corporations and, at the same time, to bring what influence one can upon farmers.

8858. The Corporation of Manchester, or the sanitary authority, has no power to inspect farms, has it ?—Oh, yes.

8859. They have a distinct power of inspection ?—Yes, I take it that they have—over every one that is within their district.

8860. But it comes to Manchester, I take it, from 50 miles or 100 miles away, perhaps, and there is no power to deal with the sources of supply there ?—Yes, they have power to examine the milk, and take samples at the stations, and if they find that the milk contains tuberculous germs, or if it is dirty milk, or contains disease germs, they have power to oblige that milk dealer to give the names of the farms where the milk comes from, and their inspector goes, no matter how far it is, and traces the milk to the cow, and I believe they can insist upon the cow being slaughtered if diseased.

8861. (*Dr. Tatham.*) As a matter of fact they do—whatever powers they have, that is what they do ?—Yes, they have done so, certainly.

8862. (*Mr. Struthers.*) They cannot act directly. They have to act through the local authority of the district ?—Directly—they do act directly.

8863. They call upon the farmer to have the tuberculous cow destroyed or, at any rate, that the milk shall not be used ?—Yes. It is slaughtered, I believe, in the presence of their own inspector.

8864. (*Dr. Tatham.*) The pressure is indirect ?—That may be so.

8865. They say to the farmer, "If you do not get rid of that cow from your herd you shall supply no more milk to Manchester."—Perhaps that is it.

8866. But it is very powerful ?—Yes.

8867. (*Mr. Lindsell.*) May I read a passage of the proposed Bill you have now before Parliament on the subject of milk: "When a sample of milk has been taken in transit, or otherwise, for bacteriological examination, the cowkeeper from whose milk the sample has been taken shall be forthwith notified by the medical officer of health that such sample has been taken, and it shall not be lawful for the cowkeeper thereafter to remove any cow from his farm until the result of the examination of such sample has been notified to him by the medical officer of health, unless he shall previously have submitted all his cows for clinical examination by the veterinary surgeon of the Corporation." That is with regard to tuberculosis ?—Yes.

8868. (*Mr. Struthers.*) Will that enable them to deal with a farm 100 miles off ?

8869. (*Mr. Lindsell.*) Certainly.

8870. (*Witness.*) I know cases of farms in Shropshire—mentioned in Dr. Niven's last report of 1902—where they did trace different cows that were suffering from diseased udders, not only tuberculous udders, but septic diseases—abscesses, and so on; they did actually track them, and found them out from bacteriological examination which they had made at the station. They succeeded in getting the names of the farmers, and if a farmer hid a cow they found the hidden cow.

8871. (*Mr. Struthers.*) This can only be done in the case of bacteriological examination if it disclosed *strepto cocci*, or something of that kind ?—I take it they would not do it unless they had strong evidence. Dirty milk they might wish to condemn, but perhaps they would only take the very strongest cases when proceeding in that way.

8872. They could not deal with a farm which was simply dirty ?—I do not think they have strong enough powers for that.

8873. At any rate, notwithstanding those powers you have told us about—which seem to be more extensive than I thought—there is still a difficulty in getting good milk in Manchester ?—Yes, the milk is not up to what it should be. So much of it comes in by train, and the people buy the afternoon's milk next morning, and it is kept in the house before using it.

8874. That is to say, there is too long a period between the time at which the milk is got from the cow and the time it is used ?—There is no proper means taken to cool the milk and keep it at low temperature.

8875. In your opinion, the most likely means of improving the health of these young children is the instruction of mothers ?—Yes—in education.

8876. And that, I gather, you think is best done by health visitors, people who actually go and see them at their homes ?—Yes, and I quite agree with continuation schools.

8877. You would lay stress upon the actual visiting of the mothers at the homes ?—Yes, coming actually in contact with them. It is all very well to give a printed slip away, but I do not think that is very efficacious.

8878. As regard school, if girls leave school at fourteen, it is very probable, is it not, that any little instruction they could have had on a subject of this kind may have disappeared before they could put it to practical use ?—Yes; one does not incline to the view that children should specialise too early, but I think the nurse who gives instruction in hygiene in Manchester does it very well. She has the girls in class, and they have infant feeding bottles and infant clothes to handle.

8879. This is in the actual class ?—Yes.

8880. This class you spoke of is in a day school ?—Yes, at a Board School under the Education Committee.

8881. Is instruction of that kind commonly given at the Board Schools in Manchester ?—There is one nurse in the employ of the Education Committee—only one at the present time—and she goes from school to school and teaches the eldest girls. I do not know what it is substituted for—perhaps some of the sewing or some class of that sort. She gives them a general idea of the home *régime*, the care of infants, and so on.

8882. It is done in school time ?—Yes.

8883. And in substitution for something else ?—Yes, I think so.

8884. (*Mr. Lindsell.*) Household management is a special subject now ?—It would come under that, probably. Of course, there is no additional time given. It is given in school-time.

8885. It is recognised now, and a grant is made for instruction in household management ?—Then it will come in under that. It is instead of sewing perhaps, which is household management.

8886. It is a distinct branch from needlework. Needlework is part of the regular instruction at school, but they may also teach household management and receive a grant ?—I understand.

8887. (*Mr. Struthers.*) Household management is distinguished from needlework and cookery ?—Yes.

8888. And laundry work, which is allied to it ?—Yes.

8889. The special point of this instruction in Manchester is that it is given not by the ordinary school teacher but by a specialist ?—Yes.

8890. And that, in your view, would be valuable ?—Yes; she does not do anything else.

8891. It is not theoretical instruction, but practical instruction ?—Yes.

8892. With, of course, the necessary explanations ?—Yes. She has the bottles of milk, and the clothes, and napkins, and so on.

8893. Even if girls have instruction of this kind in a day school you think it is important that instruction should be continued in the evening schools ?—Yes, most certainly. I should not rely upon the former only.

8894. I rather gather that you would go the length of favouring compulsory attendance in continuation classes between the ages of fourteen and sixteen and seventeen ?—I should, most certainly.

8895. And insist that the girls during that time should attend a couple of nights a week for instruction in domestic subjects ?—Yes.

8896. With certain exemptions ?—Yes.

8897. At the pleasure of the local authority ?—Yes.

8898. You think they should continue the instruction they receive at school to the age at which they begin to give it practical application ?—Yes, so many girls go to work as soon as school is over.

Dr. Ashby.

8899. That scheme is very attractive, but have you considered the possible difficulties?—There are difficulties. It was proposed the other day by Professor Sadler in one of his lectures, and he brought a swarm of hornets about him.

8900. Take the case of shop-girls, of whom there are large numbers, between fourteen and sixteen, in Manchester; would it be possible for those girls to attend evening classes twice a week for subjects of this kind under their present condition of work?—I suppose at most of the shops they would get off at six or seven o'clock.

8901. The class would have to begin at half-past seven if the girls were to get to bed in reasonable time?—No doubt there would be difficulties.

8902. Would you favour employers being called upon or obliged in some way to give the necessary facilities?—I should think so myself.

8903. That would be almost a necessary complement of your scheme of compulsory evening classes?—Yes.

8904. (*Chairman.*) You think twice a week would be sufficient?—Yes. It would not do to overdo it.

8905. (*Mr. Struthers.*) Have you thought of similar compulsory attendance for boys?—I do not know that I have. I was thinking more with regard to infant feeding and infant *régime*.

8906. (*Chairman.*) It would be good with regard to boys?—Yes.

8907. Do the Manchester mothers use those india-rubber nipples?—Yes.

8908. Do not your Health Society ladies try to prevent them from using those?—Yes.

8909. They are very pernicious?—Yes. You see it drops on the floor and then is taken up and put into the child's mouth straightway.

8910. Do not they also tend to contract the jaw when it is most flexible?—I think the worst harm is done by inoculation from the dust of the floors. In our Out-patient Department I see the "teat" drop on the floor, where the dust is full of tuberculous germs and all sorts of things, and then the mothers put it straight into the infant's mouth again.

8911. Does it have the effect of contracting the jaw?—One's own impression is that that is comparatively small. The worst effect is inoculation, making sore mouths and enlarged glands. Besides it is a bad habit for the child always to be sucking.

8912. I have here the text of the words which Professor Cunningham used: he said, "In other words these inferior bodily characters, which are the result of poverty and not vice, such as syphilis and alcoholism, and therefore acquired during the lifetime of the individual, are not transmissible from one generation to another"?—If a man loses a limb, his children are born with their limbs complete, mutilations and local diseases are, I believe, never transmitted. But I certainly think weakness, tendency to disease as well as general diseases, may be transmitted from parents to children. Then I do not doubt that the fœtus may suffer from imperfect nutrition in consequence of maternal weakness.

8913. (*Dr. Tatham.*) With regard to the infant mortality in Manchester that is very largely due to the effect of diarrhœa?—Yes.

8916. And you regard infantile diarrhœa as distinctly infectious?—Yes.

8917. Not simply a mere enteritis?—No. It undoubtedly spreads in hospitals. A child with diarrhœa comes in and infects others by inoculation. One does not doubt that the napkins are infected.

8918. And it is very often due to infected food?—No doubt. It comes through the milk or through the indiarubber nipple dropping on the floor and being put back into the mouth again.

8919. The milk itself becomes infected?—Undoubtedly. There is bad handling in the household, and the child may have diarrhœa from contamination.

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Dr. JOSEPH WIGLESWORTH, M.D., Lond., F.R.C.P., M.R.C.S., called; and Examined.

8920. (*Chairman.*) Will you state the character of the experience which enables you to give evidence on the points before us?—My experience has been practically twenty-four years in one of the largest asylums in the country.

8921. In Lancashire?—Yes—first as assistant, and then as superintendent of the Rainhill County Asylum. I have been head of the institution for the last fifteen years. The asylum has been increased very largely, and now contains over 2000 patients.

8922. You are inclined to think there has been a very considerable increase in the number of the insane?—There is no doubt about the whole increase. The question is whether it is due to accumulation, or how far it is due to that, and how far to increased incidence of insanity in the population at large.

8923. That is the more important aspect?—Yes; there is no question about the very large increase.

8924. But the question is whether it is an apparent or a real increase?—It is a real increase in a sense—that is to say, a great many people are sent to asylums that used not to be sent there.

8925. There are more insane people under treatment, but the question is whether relatively to population there are more?—Relatively to population they are largely increased.

8926. There is a larger number under treatment?—Relatively to population. Yes. The question is whether the incidence of insanity among the public is increasing. It is a difficult thing to decide, and I do not think anyone could tell you offhand whether it was so or not.

8927. Statistical information is incomplete?—Yes, and it depends upon how you read it and look at it. I will call attention to one or two points in connection with this. On the whole, I am rather inclined to think that the incidence is increasing, but I would like to express myself with reserve, because it is a question of great difficulty. I have worked out the statistics of Lancashire, having a personal experience of the matter, because it contains about one-eighth part of the population of England and Wales, and I think it is likely to furnish a reliable indication.

8928. How far do you think the statistics do bear out that there is an absolute increase?—I think they do bear it out, but it will be necessary to go through the evidence a little bit in detail. I have no doubt you are familiar with the report of the Commissioners in Lunacy upon the subject?

8929. Yes.—I think this question has to be decided, so far as it can be, by what are called pauper patients, because, I think, that private patients do not give reliable conclusions owing to the strong objection felt by many persons to having their relatives certified as insane. With regard to the paupers a good many patients are in the County Asylums who are not paupers in the ordinary acceptation of the term—that is to say, they would not be paupers for any ordinary illness. Insanity is one of the most expensive illnesses that a person can have, and many people have to seek the assistance of the rates who are quite in a respectable position. Many people pay rates for those in the asylums, but yet they are classified as paupers. Then—a proviso which ought to be considered with regard to the chief causes of increase—there is, first of all, the much greater tendency which now exists on the part of the unions to send to asylums cases of idiocy, imbecility, and senile weakmindedness which were formerly cared for in workhouses.

8930. They are collected under one head?—Yes. There is an interesting table here which illustrates that with reference to Lancashire—Table II.—which shows that the percentage in asylums has gone up, and the percentage in workhouses has gone down. If you take it back to 1862, you will find, first of all, those in the care of friends boarded out by the workhouse—that has decreased very much, from 11·79 per cent. of the total number of officially registered lunatics in the county in 1862, to 1·35 in 1902; and then 1·25 in 1903. That refers to those who are under the care of friends. It has gone down very largely. Then

if you will refer to those actually in the workhouse in 1862, the percentage was 41·70; in 1872 it had gone up rather to 44·73. Now comes an interesting point, that in the decennium between 1872 and 1882, when there was a Government grant per head for every lunatic maintained in an asylum, almost immediately the percentage drops to 38·88 in 1882, and then down to 23·68 in 1892. Then again there was a very slight increase in 1902, but that was entirely due to the fact that in the county of Lancashire during the latter years of that decennium there was a very great deficiency of accommodation, and the unions could not unburden themselves of all cases; they had to keep more in the workhouse. It is instructive that in the following year there was a fall. The Lancashire Asylum opened with 2,000 patients and in a single year the proportion maintained in the workhouse fell to 20·95. If you will follow the complementary returns for the asylums you will see that in 1862 the proportion maintained was 44·80; in 1872 it was 43·23—a slight drop in harmony with the slight increase in the number in the workhouses. In 1882 there was a big increase to 54·60, and in 1892 there was an enormous increase to 73·65. Between 1882 and 1892 large additions were made to the accommodation in all Lancashire asylums; practically there was plenty of room. All the unions sent all the cases they could. Then in 1902 there was a slight fall to 70·98, because there was not sufficient asylum accommodation. In the next year, when a new asylum was opened, it jumped up to 76·76. Whereas in 1862 the proportion in the asylums was 44·80, in 1903 it is 76·76. Many cases of senile weak-mindedness and slight forms of congenital weakness are sent now which would not formerly have been classified as lunatics at all; they were kept in the workhouses before, but they were kept there as ordinary patients.

8931. Does that affect the returns to any large extent?—It is impossible to say how far it will affect them. There is no doubt that the experience of the cases coming into the asylum shows that many cases are sent in which I consider it is unnecessary to send.

8932. Are there a larger number of recoveries from insanity owing to treatment now?—There is rather a smaller number owing to the fact that the curable cases are diluted down by these large numbers of incurable cases.

8933. Are there more absolutely cured?——I do not know that there are any more or less; I do not know that there are any less.

8934. Would many to any appreciable extent yield to modern methods of treatment?—Certainly. We send out from 30 to 40 per cent. every year cured. Many of those relapse, but not all. But that is like any other bodily disease. If a person has bronchitis, he is more liable to have it again in years to come. The same thing applies to the brain.

8935. But lunacy is more chronic in its characteristics?—Yes, undoubtedly. It is necessary to emphasise that point about so many cases now being certified as lunatics who used not to be so certified, because that accounts for the great increase in proportion to the population at least, to a certain extent. Lunacy has not only largely increased, but the percentage in proportion to the population has also gone up. That is partly accounted for in this way. These cases are poured in upon the unions in larger quantities than they used to be, owing to increased unwillingness or inability on the part of their relations to look after them at home, and very frequently they do not wish to enlarge the accommodation. Therefore they send the cases on to the asylum, which in former years they would not have done.

8936. Are they entitled to keep any cases they like at the workhouse, or is there an obligation to send them on?—There is a certain obligation, but under a magistrate's order they can keep a case for fourteen days. With regard to mild cases, they are under no obligation.

8937. (*Dr. Tatham.*) What do they do with cases of delirium tremens?—Those they always keep; we do not get any of those. They are invariably treated in the workhouse. We get a great deal of drink insanity, but they are cases of a more pronounced character.

8938. Some of the cases of delirium tremens are very troublesome?—Yes, but it is quite of a temporary nature. Very frequently four or five days or a week sees the whole thing through. Then there are two other causes which operate in the direction of diminished discharge rate from asylums and to a proportionate accumulation therein. First, there is diminution in the death rate caused by the improvement in the sanitary surroundings of the patients, which is an important matter, and then there is the diminution in the recovery rate. I have made an analysis—in fact, it is the only way to do this thing, to work it out, it does not do to trust to personal impressions. I have made analysis of two decennial periods which I think it is necessary to run through. In the decennium, 1882 to 1891, the annual average number of lunatics in Lancashire taken on January 1st of each succeeding year amounted to 8,247. I have taken the averages, of course it does not make much difference if you take the numbers on the 1st January of each decennium; but I have taken the average because it might be more correct. The average of each succeeding year amounted to 8,247, which is equivalent to a rate of 2·221 per thousand on the average population 3,712,422, for that period. *Dr. Wiglesworth.*

8939. These are individual years?—Yes, but I have taken the averages. I thought it was perhaps more correct to strike an average than to take the 1st January in each year. In the following decennium 1892 to 1901, the average population increased by 475,491, namely to 4,187,913, and the average lunacy rate rose to 2·562 per 1,000. On the 1st January 1902, it was 2·7, but I have taken the average for the decennium. If the average rate of lunacy per 1,000 which obtained in the first decennium remained constant in the second one, the annual average number of lunatics in the latter period, calculated of course on the increased population, would have been 9,301. As a matter of fact, the number amounted to 10,733, an average increase of 1,432 for the decennium, over and above what might have been anticipated from the increase in the population. How far can this increase be accounted for on the theory of accumulation? The chief thing to consider in connection with this point is the discharge rate from the asylums either by deaths or recoveries. Similar returns are unfortunately not available from the workhouses and hence a disturbing factor is introduced. I have no returns to show what it is in the workhouse, though of course the numbers in the asylums enormously preponderate.

8940. (*Chairman.*) It is certainly a fourth?—Yes, but I have no information on the point. The statistics are not published, so far as I know. For the decenniums 1882–1891, the annual average daily number of patients, resident in all the Lancashire asylums was 6278.5, and the total number of deaths in that decade was 6,453, giving a percentage of deaths on the average numbers resident of 10·27. In the following decennium 1892–1901 the average daily number of patients was 8331·9, the actual number of deaths was 7,413, and the percentage on the average numbers resident was 8·89. It will be observed, therefore, that a reduction to the extent of 1.38 per cent. had taken place in the death rate. In consequence of this diminished death rate therefore 1,149 fewer persons died in the asylums during the second decade than would have been the case had the higher death rate of the first named decade continued during the second one. In other words the lowered death rate accounts for an accumulation of 1,149 persons. Turning to the recoveries, however, we find this condition of things reversed, for, calculating the recoveries on the admissions, as is usually done in asylum reports, in harmony with the practice of the Commissioners in Lunacy, it is found that the second decennium gives a higher recovery rate than the first. The reason was that in the first decennium all cases indiscriminately were sent in and in the second decennium there was a restriction placed on the class of patients sent—they could not send so many of their incurable cases. That is a point which is important with regard to recoveries, because it is vital to the question. I have calculated them on the admissions, and I think that is the most correct way of looking at it because the great mass of the chronic insane, of whom the great bulk of the asylum population is composed, takes no part in recoveries. After a certain number of years they pass into a chronic condition and remain permanently insane.

8941. What proportion of cases are amenable to treatment?—The fair average is from 30 to 40 per cent. of recent cases, or even 50 per cent. Amongst the women

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especially we have sent out as many as 50 per cent. of recent acute cases. I refer to this question of calculating the recoveries because it really makes a great difference. That is the reason I think that it gives me a more correct result. I think the Registrar-General in the Report of the Commissioners in Lunacy has calculated it on the average numbers resident. If you do that it brings about an entirely different result, and therefore I wish to point that out to you.

8942. You wish to indicate that the Registrar-General's methods are vicious?—No, I am not a statistician. I do not make any claim to be so. In fact I am not fond of statistics, but it is necessary that one should point out this difference. The Registrar-General may be quite right. He does not say how he has calculated them, but I think he has done so in the way I have suggested. I will come to that in a moment. They are very much diluted down with all this mass of chronic insane which goes on accumulating, and I do not think it gives you a fairly correct result comparing the two decennia. If the recoveries took place like the deaths from the whole number of chronic insane I think it would be a correct method of calculation.

8943. Have you calculated what the difference would be?—Yes.

8944. Is it in your favour or against it?—In the decennium of 1882–1891 there were admitted into the asylums 19,605 cases, and of these 6,226 were discharged as recovered, giving a recovery rate on the total admission of 31.75, whilst in the decennium 1892–1901 there were admitted 17,766 cases, 6,375 of whom recovered, yielding a recovery rate of 35.88. The recovery rate therefore had improved to the extent of 4.13 per cent. Had the recovery rate of the second decennium been at the same low rate as in the first decennium, 735 fewer cases would have been discharged than was actually the fact. It must be pointed out, however, that these figures refer to cases and not persons, as the published statistics do not distinguish between recoveries from first attacks, and recoveries in those who have had previous attacks, and hence the same person may be counted more than once. Probably, however, a reduction of 10 per cent. from the above figures would give fairly accurately the number of persons as distinguished from cases. The comparison between the two decennia would not present much difference. Frequently cases come in many times over, and in the course of a decennium a case might come in several times. I have calculated the recoveries in the manner usually done. If, however, the basis of calculation be made upon the average numbers resident, the recovery rate in the second decennium would show a fall instead of a rise, owing to the fact that though the actual number recovered was slightly larger in the second decennium, the average numbers resident had largely increased. Considering, however, that the great mass of the chronic insane, of which every asylum population is largely composed, takes no part in the recoveries, the calculation upon the admissions appears to afford the most reliable indications. I do not profess to be an expert statistician; in fact, I am not one at all, I just point that out. The deaths and recoveries account for the immense majority of the cases discharged from asylums, and besides these the only cases that need to be considered are those which are sent out to workhouses and to the care of their friends. As regards the workhouses, since the figures in the tables deal with the whole of the pauper lunacy in the county, the mere transfer of cases from the asylums to the workhouses makes no difference in the total number. And as regards the patients discharged to their friends these are comparatively few in number, amounting only to a few hundreds in the course of a decennium, and the difference in the two decennia would be too small to affect the general result.

8946. There is a back-flow from the asylum to the workhouse?—Yes, cases which can be taken charge of in the workhouse. There are not many now because the workhouses object to receive them. It would appear, therefore, that the net gain by accumulation in the second decennium will not account for the whole of the increase in excess of the increase in population in the county of Lancaster, which has taken place during that period, upwards of 900 persons remaining unaccounted for by accumulation. Unfortunately, however, similar statistics are not available from the workhouses, which contain a considerable proportion of the total insane of the country. Were they so available it is possible that a modification would have to be made in the above figures. A diminution in the death-rate in workhouses, for instance, in harmony with that which took place in the asylums, if such has occurred, would reduce the number unaccounted for still further. Whether such a diminution took place or not, I cannot say, but it probably is in harmony with the generally improved conditions. But I cannot say whether it has happened or has not. If the recovery rate is worked out according to the average numbers resident there is not only no accumulation, but it means that there is a very large decrease in the incidence of insanity which does not seem likely at any rate. If that was so, it would mean that not only was the excess of lunacy over and above the population wiped out, but it would also wipe out what might be called the natural increase of lunacy in proportion to the population, and it would wipe out more besides. In other words, it would mean that there was a very large decrease in the incidence of insanity in the population. I think it would require a very robust faith in the virtue of figures to lead anybody who had to deal with the question of the insane, and the difficulty of providing accommodation for them, to believe that.

8947. Do you say that method of calculation has been adopted in this report?—He does not say how his figures are got, but I do not see how else they can be got.

8948. They do prove a decrease?—Yes, a slight decrease.

8949. You think it is an unreliable method?—I do not say it is unreliable.

8950. But you say it does not justify the conclusions which are drawn from it?—Taking these two decennia for Lancashire, it would mean that there was no increase but a very large decrease in the incidence of insanity in the population calculated according to the average numbers resident. My own view is that is not correct. I have no doubt the Registrar-General would simply take it that it was a discharge—whether it was a recovery or not he did not mind—it was a discharge from the asylum. I think sufficient notice has not been taken of the fact that the great mass of the insane take no part in the recoveries at all. They practically take place on the admissions. That is not absolutely correct, but taking it for the decennium it gives a fairly accurate account.

8951. In the course of the decennium the same person figures in a great number of recoveries?—That might be so. There are certain cases which would do so.

8952. You said a certain number of persons were admitted in a decennium; I presume they have recovered each time?—Yes. If you take off 10 per cent.—we cannot get it exactly—that would give you a very fair, accurate account. Then I formerly referred to the fact that a considerable increase in the number of the officially registered insane had taken place in the county owing to the fact that feeble-minded persons, cases of mild senile dementia, and others showing trivial mental defects were now sent to asylums with much greater frequency than used to be the case, and these cases, though always existent, not having formerly been classified as insane, would represent a definite increase in the number of officially registered lunatics, which would not correspond to any increase in the incidence of insanity in the population, but only to a difference in the interpretation of the degree of mental defect, rendering removal to an asylum for some reason or other desirable. Is there any evidence that such cases have been more largely sent to asylums during the second decennium than during the first? My own impression of the cases admitted under my care in Rainhill Asylum would lead me to think otherwise, but to settle the point I have analysed the cases of congenital and senile insanity (which constitute the great bulk of the above cases) which were admitted into the Lancashire asylums in the two decennia, and find that the proportion so admitted was really larger in the first decennium than in the second. Thus, in the decennium 1882–1891 the proportion of congenital cases upon the total admission into all the Lancashire asylums amounted to 5·55 per cent., whilst in the decennium, 1892–1901, the proportion was only 2·81 per cent. Again, as regards the senile cases (including under this term all patients of sixty years of age and upwards), the percentage of these cases admitted during the first of the above decennia was 9·63, whilst

in the second of the two it was only 8·95. Fewer patients of the above classes in proportion to the total admissions were, therefore, admitted during the second decennium than during the first. This did not imply any change in the practice of the unions, but was simply due to the fact that whilst the decennium 1882–1891 was a period in which, owing to large additions having been made to all the Lancashire asylums there was ample asylum accommodation, of which the different unions availed themselves to the utmost, in the following decennium the reverse of these conditions obtained; in the latter years of this decennium, especially, the deficiency in asylum accommodation became acute, in consequence of which restrictions were placed on the class of cases sent to asylums, and the unions were unable to unburden themselves of all cases indiscriminately. That this was the true explanation is clearly shown by the fact that in the year 1902, on the opening of an additional Lancashire asylum, these cases were poured into the asylums with greater frequency than ever, the percentage of the congenital cases on the total admissions during that year alone amounting to no less than 10·40, and of the senile cases to 11·38. The practical point in connection with this is that the increase in the insane in the decennium 1892–1901 was therefore obtained in spite of the fact that the asylum accommodation was deficient, and that many cases were not certified as lunatics and sent to asylums who would have been so sent had opposite conditions prevailed. It must be pointed out, however, that the numbers in the workhouses increased during this decennium. In a question of such complexity one would wish to express oneself with reserve, especially as all the data upon which an opinion should be based are not available; but the facts and figures above adduced seem to point to the conclusion that an actual increase in the incidence of insanity in the population of the county of Lancaster has taken place during the latter of the two decennia above analysed. Then I give you the analyses of the preceding decennia, 1872–1881 and 1881–1891. I may say in that case it happens to be the reverse of the latter one. There were more deaths and fewer recoveries. There were about 400 cases unaccounted for by accumulation, but during the latter of those two decennia there were a great many more congenitals and senile cases in the workhouses, which may have accounted for a good many of them. I cannot say to what extent. It is possible that there was no increase in that period. At any rate if there was an increase in the incidence of insanity, I should think it was slight.

8953. Table III. would show it has been in accordance with the population rather—the more densely populated unions produce the more insane people?—That is what it does show.

8954. That is the general result of the tables you have given?—Yes, but I do not think it has been worked out before.

8955. These tables are very useful, and we will treat them as being put in. That is the general conclusion you draw, that it is the more closely aggregated centres of population that are the forcing beds of lunacy?—Yes, of course there are exceptions. I will just run over these. Table IV shows the different unions classified according to the relative incidence of insanity. In Table V the same unions are classified according to the density of the population as aggregated in towns of different sizes; it is not, of course, implied in this table that the different unions contain only one town of the size indicated, as the larger towns have usually smaller towns grouped around them at varying distances; the classification adopted, however, gives, I think, a very fair idea of the density with which the population is aggregated in the district treated of. Industrialism is, of course, a leading feature of the majority of the towns. A comparison of these two tables brings out clearly the fact that the low lunacy rate corresponds with the smaller aggregations of population, and the higher lunacy rate with the larger ones. There are, of course, exceptions, some of which probably admit of explanation, but the broad fact is as stated. Of the thirteen unions comprised in the first column of Table V which do not contain a town exceeding 50,000 inhabitants, no less than ten have a low lunacy rate, viz., less than two per thousand. Of the remaining three, Stockport is only an apparent exception as this union is mainly in Cheshire, and the aggregate populations of the Lancashire and Cheshire portions comprise a town of over 50,000 inhabitants, and if the district could have been considered as a whole instead of as artificially divided into two unions in separate counties it would have come under the second column in Table V. There remain, therefore, the two unions, Ulverston and Lunesdale, which are both mainly country districts containing comparatively small aggregates of population, but which both have a high lunacy rate (over three per thousand); both of these unions are in the north of the county, and Ulverston belongs geographically to Cumberland and Westmorland. Both are mainly rural and agricultural, but in Ulverston iron mining and iron working are carried on in two centres. Whether that iron mining leads to any large proportion of drink-insanity I cannot say, but it is possible that it might have an influence. Lunesdale is quite small; there are only twenty-three or twenty-four lunatics there. It is significant, however, that both of these unions have declined in population since the Census of 1891, for, speaking generally, there appears to be some relation between a declining population and a high lunacy rate. Then on the other hand three unions with low lunacy rates are included in the larger aggregates of population, viz., Barrow-in-Furness, Prestwick, and Warrington. Those are low lunacy rates, and yet come under the column of a town of over 50,000 inhabitants. Of these the town of Barrow-in-Furness contains about 55,000 inhabitants, so that it is only just excluded from the first column in Table V. Prestwich, however, is one of the larger aggregates comprising a large part of the city of Manchester, and yet shows a very low lunacy rate. It must be pointed out, however, that the population of this union has increased very largely during the last decade, pointing to a large influx of new population—presumably a healthy and vigorous population. This union is also mainly residential, and though containing a large amount of small property comprises also good class residential areas.

8956. That is a suburb of Manchester?—Yes. Of course there is a lot of small property. That, no doubt, largely accounts for it. The only other exception, Warrington, though mainly urban and industrial, comprises also a large rural district. Warrington is very industrial. I alluded just now to an apparent relation between a high lunacy rate and a declining population. This is strikingly illustrated by the parish of Liverpool and the township of Manchester.

8957. Ireland is a case in point?—I am coming to that. Both the parish of Liverpool and the township of Manchester, as will be seen by a reference to Table III., have undergone a large and steady decline in population, the causes of which are indicated in Table V., and a corresponding large and steady rise in the lunacy rate which is now considerably higher than that of any other Lancashire union, the rate in Liverpool being phenomenally so. Take Liverpool—you will see a very large decrease. It has gone down from 269,000 to 147,000, and it has been a steady decrease in each decade. At each decade the lunacy rate has mounted very high. It is 5·9 per thousand, The area comprises a parallelogram of about three square miles in the heart of the city of Liverpool. I give you the particulars in the last table of all. The population has undergone a considerable and steady decline owing to the demolition of residential property, and the substitution of works and public buildings of various kinds, also the opening up of new and wide thoroughfares, and the clearing away on sanitary grounds of many of the more densely populated districts. The extension of the dock system towards the north, outside the parish, has also exercised considerable influence. Hence there has been a shifting of large numbers of the labouring classes outwards into the surrounding districts. It has been a question of larger ships. They have had to get larger docks there to the northward, and the population migrated to the north. The most numerous body of labourers is employed at the docks where the work is to a large extent casual and intermittent. A similar condition of things is well illustrated by the Returns of Lunacy for Ireland as set forth in the report of the Inspectors of Lunatics for Ireland for 1903, which I put in. It is an interesting table showing a steady decrease from 5,202,648 in 1880, to 4,432,287 in 1902, and a rise in the proportion per 100,000 of estimated population from 250 in 1880 to 499 in 1902.

8958. We shall have some evidence on that point from Ireland?—It is a most important matter.

8959. How do you account for it here in Liverpool?—

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I account for it in the same way as in Ireland. The explanation of this phenomenon is probably to be sought in the fact that when a population is declining it is, on the whole, the younger, more active and more vigorous, members who comprise the bulk of those who emigrate, whilst the older and less vigorous members remain, and thus the social average tends to a lower plane.

8960. Can you draw a parallel between the shifting of population within an urban area and the removal of large classes of the population to the United States?—I think so. In an urban area it would be the more active members who would go outside.

8961. You say that the diminution of the population in the area under discussion is largely due to the great clearances, the removal of people?—Partly that, and partly in the case of Liverpool the extension of the dock system; the better class labourers apparently move away to the north and leave the more casual ones there. It is the casual labourers they get now in the parish of Liverpool.

8962. If there have been large clearances of houses and so on there must be more open spaces, and one would think that the conditions of health in that area would have been better?—One would think so.

8963. The population has been reduced from 269,000 to 147,000 in a parallelogram of that size, and one would have thought the conditions were made more healthy?—It must be so; there is no question of that. It tends to make it healthy.

8964. (*Mr. Struthers.*) Do you know whether the death rate has fallen or risen?—I am afraid I cannot give you that. I think it is sure to have fallen.

8965. (*Colonel Onslow.*) Do you mean the docks have gone away from Liverpool?—No, but on account of the larger steamers—they have had to go further north.

8966. How about that particular area?—They have had to build these large docks towards the north, and the population has shifted, following the large docks, but there are still smaller docks in the parish of Liverpool, and they are still used, but it is more intermittent labour.

8967. It has left the poorer and more feckless of the population behind?—That is the only explanation I can offer. When industries are flourishing, and the population increasing, there is a constant immigration into such districts of vigorous individuals from other centres where the conditions are less favourable, and thus the vigour of the community is maintained not merely by the actual fresh arrivals themselves but by the new blood thus infused into the population by marriage. I think there is a double agency there—the new blood coming in and taking the place of those dying off, and the inclusion by marriage of the newer members with the older ones. When industries, however, begin to decline and emigration takes place from a district, the loss is doubly felt, not merely by the departure of young and active members of the community, but also by the absence of infusion of new blood. In many country districts close intermarriage is rather a prominent feature of the community, and when such community begins to lose its younger and more vigorous members the evil effects of such intermarriage will tend more quickly to assert themselves. Whether any such explanations will account for the higher lunacy rates of Ulverston and Lunesdale I am unable to say, in the absence of sufficient information concerning these districts, but the point is worth enquiry. I know in Cumberland and Westmoreland, in the Dales there, there is a good deal of intermarriage, and as these districts geographically are very nearly allied—it is possible that may be so—the removal of even a few members will make a difference. I throw that out merely as a suggestion. There may be an entirely different reason.

8968. That is purely speculative?—Yes. I cannot consider it to be a scientific fact. I am endeavouring to account for this remarkable phenomenon.

8969. Is there any direct evidence that the migration from this area has been such as you describe—that the best have gone?—I know nothing of it. I have simply presented these facts, and have to make an explanation, which may be true or not true. This is what I think is the most reasonable. From the foregoing analysis of the lunacy statistics for the county of Lancaster the following conclusions may be tentatively drawn:—(1) That whilst the large and steady increase which has taken place is mainly due to accumulation, there appears to be evidence that the incidence of insanity in the population has also increased of late years. (2) The low lunacy rates tend to follow the small aggregations of population, whilst the higher ones are more generally found in the large aggregations, which are mainly industrial in character. (3) There appears to be a relation between an exceptionally high lunacy rate and a declining population.

8970. (*Chairman.*) As to the relation of insanity and physical deterioration you are not prepared to establish any direct connection between them?—The two things are really due to the same causes. As a cause of physical deterioration, I think insanity is very slight.

8971. May not insanity be the effect of physical deterioration to some extent?—Do I understand you properly? You mean that the causes which produce physical deterioration act on the brain, and therefore may act on the body as well?

8972. I suppose brain disease is largely due to depressed nervous conditions is it not?—That is perhaps not quite the way to look at it.

8973. I mean nervous elements and nervous maladies tend to produce lunacy in certain cases?—It really is the condition of the brain. They are really symptoms of a disorder of the brain.

8974. Of a morbid condition of the brain?—Yes, it may go on or not to actual insanity.

8975. May not those morbid conditions of brain be associated in the relation of effect to cause with certain tendencies which make for deterioration?—Yes, certainly. Of course even temporary bad health—if a person is at all disposed to it—may tend to produce nervous disorder. But if you look at it from a broad point of view, I think the point is that they really work together—the physical and mental are really part and parcel of brain defects or brain disorders.

8976. You would expect to find an increase of insanity coincident with an increase of physical deterioration?—I think so, certainly. The brain is only a part of the body—it is a mere organ of the body.

8977. Are you inclined to think that granting there is an increase of insanity, there must necessarily be an increase of physical deterioration?—That is not quite the way I should put it.

8978. Put it in your own way?—I want to be clear on the matter. I would expect the two to go together. The same causes which lead to brain disease very often lead to other diseases and defects.

8979. I suppose to some extent an increase of lunacy is a result of civilisation, of over civilising processes?—What do you mean by civilisation? Do you mean the general conditions prevailing in large towns? Do you call that civilisation?

8980. That is one of the effects of civilisation, the aggregation of people in large towns for industrial and general purposes?—Yes.

8981. And, of course, the wear and tear on the system generally?—Yes, no doubt that is so in a general way. Amongst many of the lower classes I do not think they get the same mental strain as people in a higher social position.

8982. Then you attribute the increase of lunacy in some degree to certain special causes, such as alcohol?—Alcohol is an extremely potent cause of lunacy.

8983. Have you any special information on that point?—I can give you statistics on the subject, because I worked this out recently for a different purpose. I recently submitted to a careful analysis all the cases of alcoholic insanity admitted into Rainhill Asylum during a period of eleven years—1891 to 1901 inclusive. These were worked out. Each individual case was carefully reviewed, and in doubtful cases, even if drink was said to be the cause, that was not put down. I was anxious to get at the thing exactly, without any exaggeration. During this period 4,261 persons were admitted, and in no less than 1,248 of these there was clear evidence that the insanity was due wholly or in part to the toxic effects of alcohol. These figures give a percentage of drink cases on the whole number of cases admitted of 29.28. Of course in many of these cases the alcohol merely renders actual a defect potentially existent in the organ-

ism, but it is not by any means always so, for alcohol is quite capable of inducing insanity in persons who shows no hereditary tendency thereto. In 688 of the above total of drink cases—16.14 per cent.—alcohol was the only cause that could be ascertained for the patient's insanity, whereas in the remaining 560 cases—13.14 per cent.—other factors, such as heredity, assisted to bring about the result. Many cases of drink insanity recover and relapse even several times in succession, but in the above figures no person has been counted more than once. These figures give some slight idea of the frightful havoc wrought by alcohol on the nervous system. There is reason to believe also, from the great frequency with which a history of gross parental intemperance is found in the antecedents of persons who become insane, that a habit of excessive drinking tends in some cases to a poisoning of the germ cells of the parent by means of the alcohol circulating in the blood, and a consequent tendency on the part of these germ cells to develop into an organism with an unstable or badly developed brain. This may probably result even if the sperm cells of the father are alone affected.

8984. The effects on the offspring are much worse from a drunken mother?—Yes. You might say it is not proved scientifically, because it is difficult to prove a thing of that kind, but those of us who have seen a great many of these cases have all come to that conclusion, that a very large proportion indeed of cases of insanity have intemperate parents. I worked it out that a sixth part of all the cases had an history of alcoholic intemperance in the parents. That was excluding all cases in which there was any hereditary tendency. It was necessary to exclude those. It is my opinion that the sperm cells of the fathers get so injured by the alcohol that the union of the sperm cell and the germ cell will produce unstable offspring. Of course the mother might be healthy and counteract it and so on—it does not necessarily follow. We know that perfectly healthy children are born of drunken parents, but in many cases it does operate. There is no question with regard to drunken mothers that alcohol exerts an extremely pernicious influence on the young, and poisons the nerve centres when the child is in a very susceptible condition.

8985. That is the time when women do take to drink, because of the depressing effect of pregnancy?—They often do there is no doubt. One must go back to the question of the original constitution of the germ in these cases, that is to say, the hereditary influence is very important indeed. The different stresses of life—whether it is alcohol or anything else—which people are subjected to of course act with greater effect on people who have a tendency to certain conditions. It does not follow necessarily; there may be an actual tendency as reflected in the family history. We know frequently there is a union between germ and sperm cells which produces an unstable offspring for some reason we do not know. Then again there is this special cause, the actual poisoning of the germ cells. I think it is very important to look at the development of insanity from the point of view of the development from the germ. There is no question that amongst exciting causes alcohol is one of the most frequent.

8986. (*Dr. Tatham.*) You have consented to put in the notes you have made?—Yes.

8987. I gather that you said just now that the returns of lunacy are probably less reliable than they might be, because of the difficulty of the definition of what is lunacy?—I did not quite say that. The returns are reliable enough as far as they go. What I said was that the Union now send a good many more cases such as mild senile dementia for instance, where an old person has lost all memory, and therefore is not able to take care of himself or herself properly. They might be looked after in the workhouse, but if they have not room they will often certify the cases to be insane and send them to the asylum. That is what I mean.

8988. I suppose the discharge rate varies very much according to the nature of the nervous disease from which the patient is suffering?—Very largely so—in some cases of a curable character and in some cases of general paralysis it is quite the reverse.

8989. What do you consider the morbid conditions which you would class as insanity? There is by no means an agreement on the subject?—No, of course it depends upon what you mean by the word insanity; do you mean any form of mental trouble? *Dr. Wiglesworth.*

8990. I am asking you if you will define what in your opinion should be included by the term insanity.—You can only say any form of mental trouble that was not due definitely to such causes as fever or anything of that kind. You would exclude them because they are due to the toxin of the fever circulating in the blood. I should take any form of mental disturbance, because I think you can make no distinction which will not embrace all forms of mental disturbance of any kind.

8991. Would you not get more valuable statistics with regard to insanity if you could get a thousand cases of one definite form of insanity and calculate the percentage of discharges for that class, and then take another equally definite but entirely different class of insanity and also calculate the percentage of discharges from that; would not that be the better way to get true statistics?—It would of course assist you as regards a particular type of insanity to see how far that was recoverable or not, but I think in the general run you would not find much difference. I think it would not make much difference in the result. Of course congenital cases are quite strictly classified as insanity. Idiocy represents a more profound degeneration of the brain than cases of mania occurring in people otherwise quite healthy and who may get well in a week or two. I think for purposes of statistics it is rather difficult to do other than embrace all cases.

8992. When you said that the percentage of discharges was something like 30 and 40 per cent., I suppose you meant cases of acute insanity?—Yes, with a fair sprinkling of others. If we took nothing but acute insanity we should have a higher percentage.

8993. General paralysis?—That is fatal.

8995. You are speaking of acute insanity?—Yes. There is mania and melancholia which are curable. If you take nothing but those you would get a higher recovery rate; you would get 40 or 50 per cent.

8996. It was these cases that you were referring to when you said you got a discharge rate of 30 or 40 per cent. was it not?—No, it was all cases together. 35 per cent. was our last decennial discharge rate. That was taking all cases.

8997. The percentage of discharge would be very much higher if you limited your calculations to the so-called curable cases?—Yes.

8998. (*Chairman.*) Have you anything further to add?—Yes. I should like to say something with regard to the influence of syphilis on general paralysis—that is practically speaking a fatal disease. There is a large body of evidence which connects this disease with the occurrence of a previous attack of syphilis and some authorities indeed go so far as to say that without syphilis there would be no general paralysis. Although, however, the evidence at present available does not justify so sweeping an assertion, there can I think be no doubt that syphilis is the most important factor in causing the development of this disease.

8999. Transmitted or acquired syphilis?—Acquired or, very rarely, transmitted. Transmitted syphilis is in but a few cases of juvenile general paralysis; in the great mass of cases it is acquired. The frequency of general paralysis may be gathered from the fact that in a period of fifteen years, 1889 to 1903, there were admitted into Rainhill Asylum, under my care, 7,084 cases of insanity, and out of these no less than 992 were examples of general paralysis—a percentage on the total admissions of 14·00. That, I think, however, is higher than the general rate. We draw a large number of our cases from Liverpool, a seaport town, but that is our actual rate. The importance of this disease in connection with the incidence of insanity is emphasised by the fact that general paralysis cannot be considered as a disease of degeneration. A large number of our cases are purely examples of degeneration, and if they did not get insanity they would be very useless to the community. General paralysis cannot, however, be considered as a disease of degeneration. On the contrary, it attacks very frequently persons of exceptional mental and physical energy, who are valuable members of the community, and though an inherited predisposition to insanity has an influence in causing the development of

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the disease, it is, nevertheless, less hereditary than other forms of insanity. The causes of general paralysis act more readily if there is a tendency by heredity, but at the same time it is a more strictly acquired disease than any other form of insanity.

9000. (*Colonel Onslow.*) You mentioned just now the intermarriage in certain counties as affecting the condition: do you happen to know anything of the Channel Islands?—Not from that point of view.

9001. Intermarriage has been very common there, especially in former days?—Yes.

9002. It is a rare thing for a Guernsey man to marry anyone but a Guernsey woman, and probably very nearly connected with her?—Yes.

9003. You do not know the statistics?—No.

9004. It is, I believe, very marked, not only in regard to insanity, but also in defects of all sorts?—Physical defects generally?

9005. Yes. They are a very small race, and the number of deformed people and blind people, and so on, are enormous?—I am acquainted with a good many of the wild portions of the British Isles, which are a good deal isolated, and I have noted that point in other places.

9006. Where intermarriage takes place?—Yes, a great deal. I was surprised not to find such a healthy, vigorous stock as I expected to find. I think that has a great deal to do with it. Of course there are exceptional cases. It is not a question to be treated off-hand. I think intermarriage does have a great effect, and if these people are subject to strain they cannot stand it. As long as they go on in their quiet country district, without any mental strain, they manage all right, but when you remove them to positions of mental stress they break down.

Miss Garnett.

Miss M. GARNETT, called; and Examined.

9009. (*Chairman.*) You have lived for some time in the Potteries district?—Five years.

9010. During that time you have exercised a general sort of supervision over the health conditions of the district?—I have come very much in contact with them—with boys and girls, and men and women at large classes, as well as in visiting.

9011. They are all engaged in the staple industry of the district?—Yes, they nearly all are.

9012. Fenton House is the name of your settlement?—Yes, the settlement of ladies for working amongst the poor.

9013. How many ladies have you?—There are ten ladies; we have a branch at Stoke as well.

9014. Where is Fenton House?—It is in Fenton, which is the town between Stoke and Longton; it contains 17,000 people.

9015. Among the causes of deterioration which you have noticed what would you mention as the principal ones?—The married women's labour; it is really the root of all.

9016. Do you think that is increasing?—Yes, I think it is. I think they are taking the part of the men in some parts.

9017. Owing to the removal of the male population?—No; rather that the manufacturers can get the women at a cheaper rate.

9018. What do the men do?—They hang about the streets. That is particularly the case at Longton, because that is the home of the china industry, not the earthenware—the trade is lighter.

9019. More suitable to women?—Yes, a little more.

9020. Is it an occupation that you would be disposed to say was unsuitable to women?—Yes, some departments of the work which they are called upon to do, such as carrying heavy weights in the warehouse.

9021. The manufacturers employ the women deliberately because their work is cheaper?—Yes, in some cases, but their work is not always so skilled.

9022. Do not the men resent that?—They seem to be quite willing to stay at home.

9023. We were told only this morning that in Manchester and its neighbourhood there is a strong feeling on the part of the men that women should not be permitted to work in factories at all—that their function was to remain at home and look after the children?—I cannot say what the men really think about it.

9024. They acquiesce in this state of things?—Yes, I think so very much.

9025. What are the results which flow from this condition of things, as far as your observation goes?—The results are the children are born very weakly, and, of course, they are improperly fed; they are put out to be taken care of by incapable people.

9026. That is the provision for them?—Yes; elderly and infirm people take charge of them. We have one woman semi-paralysed who had four children sitting round her on a stone floor

9027. The women are not brought into the house to look after the children?—No, they are all put out. It is a common thing to see a baby in long clothes taken out.

9028. These women have no qualifications?—No, they cannot work in the factory, and they live in that way.

9029. Are they paid exorbitantly?—No, they are paid so little that the food the children get is very little.

9030. What are they paid?—Something like 2s. 6d. a week.

9031. If that 2s. 6d. was devoted to a *crèche* for keeping children, organised on proper lines, it might be almost sufficient?—That was tried. It did not answer, because it was said by the working people that it was taking the bread out of the mouths of the elderly people. It was tried in Fenton—it was before my time.

9032. It had to be given up in consequence?—Yes, they would not send their children there.

9033. Is the prevailing sentiment so foolish still?—I suppose so, because there are no crèches in the potteries district.

9034. It has never been revived?—No. That is some six years ago.

9035. Is the rate of infant mortality abnormally high?—Yes, it is.

9036. I mean compared with other districts where it is high?—I believe it is higher in the potteries than in Yorkshire.

9037. Have you any idea what the exact figure is for the potteries?—No, I have not. I have this statement written out for Fenton—for the last ten years and for last January also.

9038. What is the proportion?—Thirteen in one month out of 34 deaths in January, 1904. That is one-third—and one-third in Longton also. It was made out by the medical officer of health.

9039. None of these cases reach anything like a third. That is in January; in certain periods of the year it is higher?—Yes; Fenton and Longton have the highest rate of infant mortality of the pottery towns.

9040. You find it higher in the winter, but as a rule it is summer that it is highest, when they suffer from infantile diarrhœa?—It is the cold, I think.

9041. They are imperfectly clothed, I suppose?—Yes.

9042. Will you describe how it is that the children are so badly nourished?—The mothers go out about six o'clock to work and very often do not work in their own town, but in a distant factory. That means they leave the children's breakfasts and dinners ready for them, and it is nearly always cold food—bread and jam—insufficiently nourishing food. The teachers say that the children who come from those homes have less stamina, and are less able to do their morning's work.

9043. Has any attempt been made to organise a system of school dinners by the payment of a proper fee?—No, I do not know of any organised scheme. Occasionally they give a free supper.

9044. I am not suggesting a free dinner, but payment. Would it be possible to introduce a system which might be almost self-supporting, to meet the case of this class of child whose mother, owing to the conditions of her employment, cannot look after it?—I think in some schools they arrange to give dinner on a payment of 2d.,

but they do not find many avail themselves of the privilege—the mothers look at the pennies.

9045. We are told that 1½d. a head is quite sufficient with which to provide dinners, with a margin of profit ?—Yes, if you get the numbers.

9046. But nothing of the sort is done ?—No, nothing that I know of—not on a large scale.

9047. Do you think that your organisation could do anything towards suggesting it ?—Yes, I think it might do so.

9048. I fancy you would discover it could be done for that if you had a sufficient number of children to avail themselves of it ?—Yes.

9049. You do not think the amendment of the Factory Act by which the employers are prohibited from employing a woman within a month after her confinement, has been allowed to operate fairly ?—Not fairly. Every one I consulted said it was evaded.

9050. Do you mean the cases are not taken any notice of ?—They have to pass the doctor, and I suppose they tell a falsehood to him ; he does not investigate the matter properly.

9051. Have there been any prosecutions of manufacturers for employment of women in such circumstances ?—No, the doctor passes them and he is supposed to be responsible.

9052. Is it the factory surgeon ?—Yes. I think it is the factory surgeon they have to pass.

9053. You think women are indisposed to stay at home longer than they can help ?—They like to do the factory work. They have no domestic tastes. The children are a mere accident in their lives. They like to get them put out so that they can return and gossip at the factory.

9054. There is no sense of parental obligation ?—No, there is no home life.

9055. Do you think that that provision in the Factory Act is sufficiently stringent, or would you be disposed to extend it ?—I should extend it to three months.

9056. After child-birth ?—Yes.

9057. Would you make it wrong to employ a woman previous to child-birth for that time too ?—I should like to make it so, but I do not see any way in which it could be done.

9058. It would be difficult to enforce ?—Yes, but I have known cases where they have worked quite up to the time. Of course, the child has suffered and the mother too. That is frequently done. They will not give up the work till the last moment.

9059. A great deal of the work is not of itself of a very exhausting character ?—No, not exhausting, but some of it is unhealthy—the conditions are unhealthy.

9060. You attribute some of the deterioration which exists to the early age at which children enter the factories ?—Yes. Evidence was not unanimous on that point. I went to the poorest school in Longton, in a place known as the Devil's Nook, the streets there are so bad that one policeman cannot go along them alone, they always go in pairs. I went there because I thought the children would be drawn from the poorest class, and the master who had been master for several years, said, in his opinion, his children improved after they went to work, and he thought the reason for that was that they had such very poor food owing to their bad homes and bad parents that when they earned a little money for themselves they were able to get better food.

9061. They supplemented it by things they bought themselves ?—Yes, or they contributed to their support and had better food. But in the parts that I went to I think there was a general opinion that they were dwarfed—smaller than they should be ; they did not grow. In our very large classes, in the boy's clubs and women's classes, they seem to be distinctly under the size and height that you would expect.

9062. Do you think it would be possible with a view to equipping those girls between fourteen and seventeen for their duties when they become mothers, to insist that during that period they should attend at any rate for two hours a week continuation classes which should be mainly devoted to domestic subjects, house management, attention to children, and so on ?—I think it would be an excellent thing if it could be done.

9063. Would you say the work they are called upon to do is of such a character that it would be placing an undue strain upon them physically to attend classes twice a week for that purpose ?—We have a few of the better class girls who do attend evening classes.

9064. Do you think it would involve hardship to any large extent to make it—compulsory ? I think it would on some, perhaps. The hours are long enough—seven to six.

9065. Such instruction as I describe would not be of a severe kind, it would not require any very great amount of mental concentration, and it would be to some extent a change of occupation, and recreative. So far as you have been able to observe, has the physical type of the children got worse within the last few years ?—There seems to be an idea that during the last year or two there has been a slight improvement in the physique, but the conditions of labour are greatly improved and there is not the improvement in physique you would expect considering the way that things are improved for them.

9066. Has there been time for these things to affect the rising generation ?—I think the chief Factory Acts date from some time back.

9067. I understand the Factory Act of 1901 has made perhaps greater improvements in the conditions under which factory operatives work, almost than any other ?—Yes, it has, I think.

9068. There has not been time yet to see the effects. The provisions for ventilation for instance are so much more stringent than have been hitherto known ?—Yes. They lay down rules, but they are not carried out, I am afraid

9069. One must expect some time to elapse before everything can be done. Are the conditions of labour in the pottery district specially injurious to health?—Some are ; for instance, what they call the scourers, or those who fettle the ware, who chip off the little bits that will not be smoothed off ; that process brings flint dust, and it is said to affect the eyesight. And also the workers in colour—the blowers of the colour, and the manufacturers of the majolica ware—their employment is also bad ; that affects the throat and the lungs.

9070. You mention injuries to the teeth ; what do those arise from ?—That is supposed to arise from the breathing in of the lead. Lead in the system shows first in the gums and teeth.

9071. That affects the gums too ?—Yes ; the teeth are extremely bad, even in young girls of fourteen or fifteen.

9072. Is that not probably due to improper feeding when young, and want of cleanliness ?—Yes, partly.

9073. I suppose no attempt is ever made to clean the teeth ?—No, I am afraid not ; they are not taught that.

9074. We have been told in this room that, to some extent, smoking is an antidote to bad teeth. You don't find smoking among children of that age ?—No.

9075. There is not much smoking among the girls, is there ?—No, but quite little boys will smoke.

9076. Are the cigarettes given them ?—I think they ask for a penny round about the stations and tramways, and then they get the cigarettes.

9077. You would agree that the sale of cigarettes to young children should be prohibited ?—Yes, if it could be done it would be a very good thing.

9078. Cigarettes are often sold in sweetstuff shops ?—Yes, they go there and get them.

9079. Is intemperance on the increase ?—Yes, especially amongst the women.

9080. That has a very bad effect upon the offspring ?—Yes.

9081. The child of a drunken mother is probably born disabled ?—Yes.

9082. And is it so with the girls too ?—I think so.

9083. As the cares of maternity come upon them ?—Yes ; I think drink among girls is due to the drink clubs. They are called "Footings" in some places, but in the Potteries I think they are called "Drink Clubs." They are in almost every workshop. They are supposed to contribute something. Then they have a sort of jollification. I think that is how the young girls learn to like the drink.

Miss Garnett.

9084. Are there not any countervailing influences in the Potteries in the shape of clubs based upon more rational and decent principles?—There seem to be very few clubs.

9085. Is not that a branch of usefulness which your Association could take up?—We have one in Fenton; we have about eighty to 100 girls who have joined.

9086. Has not that acted as a model?—There are organisations working for temperance, especially in Hanley, and quiet efforts are made, but I do not think that any efforts have been made to bring it before the manufacturers. These things are carried on in workshops.

9087. I suppose the conditions under which a great number of these people live in their own homes are very adverse to physical well-being?—Yes. You hardly ever find in the Potteries more than two bedrooms, and sometimes you have eight adults. It is extraordinary the number who will be in one house. The relieving officer, and my own experience, told me it was no use having three bedrooms, because they have not the furniture for three bedrooms; they have never more than furniture for two. One object is that if they slip away without paying their rent too much furniture is an obstacle—they are constantly flitting from street to street.

9088. May I ask if the local authorities in the Potteries pay any attention to improving the conditions under which the people live?—No, very little; I should think the local authority in the Potteries was as inefficient as you could find anywhere.

9089. You are aware the local authorities have very stringent powers, if they care to exercise them, for dealing with overcrowding and insanitary premises?—Yes.

9090. But they make no effort?—Very little.

9091. Are there not such people as medical officers of health?—Yes.

9092. Do they pay no attention to the evils they see around them?—I do not know whether they pay the attention they ought to.

9093. Does your organisation deem it its duty to call the attention of the local authority to it?—Yes, when we find any bad cases we do.

9094. Do they take any action?—Very inadequate action, I think.

9095. Have you ever reported them to the Local Government Board for neglecting to do their duty?—No, I never have. Things have been better in Burslem and Longton since there was a lady factory inspector.

9096. I suppose you agree that until you have succeeded in awakening the local authorities to some kind of conception of their duty these matters are almost hopeless?—I am afraid the local authorities in the Potteries own most of the bad houses. That is especially true of Longton, and I believe of Hanley. I think that is the case with the sanitary inspectors—they are in awe of the local authority; they do not carry out their duty as they ought to do.

9097. They hold their appointments subject to the caprice or the vindictiveness of the local authorities?—Yes. I had an example of that at the Settlement. I called in the sanitary inspector to see about the drainage there. He was very alert at first, but he was in awe of the agents who managed the property, so he tailed off, and made a very inadequate report. I was not satisfied, and I had a man from Birmingham, and his report showed that the whole state of things was wrong, and that report was acted upon—the whole of that drainage system was put right. This was the very house where our Settlement is.

9099. There has been no attempt whatever to deal with overcrowding in the Potteries area?—I do not think so. A man of great experience in Hanley told me that it was not more houses that were wanted—there were 400 unoccupied workmen's houses in Hanley—but it was that the people would migrate to the slum part, where they paid less rent.

9100. I suppose the people whom you describe are quite indifferent to the filthy conditions under which they live?—Wholly indifferent.

9101. They probably enjoy them?—They seem never to rise to anything better. The Potteries themselves are very dirty; the dirt is very great.

9102. Do you think no improvement is being effected in the habits of the people? Do you think that the younger generation show a preference for some slightly higher standard of comfort?—I cannot say that I think they do.

9103. You do not see any indication of that?—I do not see any indication of that.

9104. You do not think the work done in elementary schools affects that?—It does not seem to have touched the home life.

9105. It has not done anything towards its improvement?—No, I do not think so. I think it is taught as a science, and they leave it behind them in the schools, and do not take it home. We had a health lecturer in the Settlement, to teach them the care of babies. They showed a knowledge of the terms of physiology and so on, but they did not seem to understand anything practical.

9106. Have these lectures been well attended?—Yes, we have about forty girls.

9107. Do you attempt to bring home to young mothers the principles of attending to children?—Yes, by house to house visitation.

9108. And distributing leaflets?—Yes, telling them about the feeding of babies and so on.

9109. Has that had a good effect?—Yes, but we never know how long they will attend.

9110. No interest has been awakened?—No. One of my ladies went into a house last week. The baby was very ailing. She said, "What have you been giving that child?" The woman said, "Well, you see they said the tinned salmon was not very good, but Bob would give the baby a bit, and a boy gave him some orange juice." Tinned salmon and orange juice at eleven months' old had disastrous effects. That is the sort of thing—an absolute lack of knowledge of what the children can digest.

9111. You have formed some opinion as to the causes of the anæmic condition of the population which is not perhaps generally admitted?—Yes.

9112. You think you have good evidence on that point?—I have the evidence of a chemist and of a doctor, and I also have the evidence of a very good chemist who is now dead. He told me that when he came into the potteries he found in the practice which he had taken over half the receipts came from the selling of certain drugs, and he was horrified.

9113. Do you think that is very general?—I was told by several that they believed it was very general; they believed people got these things very easily.

9114. It is generally winked at?—Yes. There is only one case of prosecution. There was a prosecution in Stoke some years ago. It is the only one known for the actual sale of the things.

9115. Are illegitimate births very frequent in the potteries?—Yes, very. That is so in all factory districts, is it not?

9116. It is diminishing throughout the country, and I believe the factory districts share in the diminution. Now we come to the remedies you suggest. You have already mentioned your wish that the period at which the women should not return to work after confinement should be extended to three months?—Yes, I should like to see it; people who have worked for forty years in factories have said, "Do you think it could be extended to six months?"

9117. You do not think three months is too much?—No, I do not. I think that would answer the purpose of giving the infants a chance at any rate.

9118. You would not suggest the prohibition of the labour of married women in factories?—Yes, I would, but I do not think it could come yet. That would strike at the very root of the whole evil.

9119. You think as a counsel of perfection it might hereafter be found practicable?—Yes. If it came I think everyone would admit that it would strike at the very root of the evil.

9120. What do you say to a prohibition preventing the mothers working in factories unless they take the precaution to place their children during the period they are at work in the hands of some duly certificated person, or in a crèche organised for the purpose, which would provide a

guarantee that the child in its mother's absence should be well looked after?—I think that would be a most admirable thing.

9121. You think under those conditions the labour of married women in factories might still be permitted?—Yes. There is still the question of course that the home is left quite neglected.

9122. But you do provide some kind of efficient substitute for home life so far as infants are concerned?—Yes. I do not think that would affect the case of the food of the older children.

9123. That must be dealt with by the school authorities I think. With regard to the suggestions you have to make for children at school age, you attach some importance to measurements of children being made from time to time?—Yes, I think you would get some valuable information.

9124. That is in your opinion the only efficient way of recording accurate information?—Yes. I think that would be very valuable. You get from time to time the different facts of each standard.

9125. That might be a means of tracing parental neglect?—Yes. I had these children asked the question as to whether their mothers were at work and what kind of food they had by the mistress of the girls' school. We found in nearly every case where the child was deficient in brain it was owing to the mothers being at work and to the lack of proper food.

9126. You think more attention should be paid to physical exercises than is the case now?—I think twenty minutes every alternate day is not enough. I was told that weakly children who had not had much breakfast fell out—five in one morning fell out.

9127. You would have to pay attention to individual cases, for which purpose I suppose you would be inclined to advocate the medical inspection of schools so that the teachers' knowledge of such subjects, which is generally limited, might be reinforced by reference to a doctor in all cases of doubt?—Yes. I should think that would be admirable. The pressure of the inspectors is so great on other subjects that sometimes even this hour a week is not given.

9128. There is no reason why these domestic subjects should not take the place of some of the present subjects?—That is the universal opinion, in place of some of the subjects which are no use to them in after life.

9129. With regard to the enforcement of the Factory Acts, do you believe that in the small workshops there is a great deal of abuse of the proper conditions of labour, which has a very bad effect upon the population?—Yes, I do think so. I think the smaller manufacturers—the men who have risen quickly and got a little capital and want to get their work done on small wages—do abuse the conditions of labour.

9130. Is that rather in workshops than in factories?—By "workshop" I simply mean the departments of a factory.

9131. You know the provisions of the new Act with regard to its application to domestic factories and workshops?—Yes.

9132. Do you think the changes which that Act has introduced will bring about a better state of things?—Yes, I do think so, in time.

9133. Several of these provisions are specially applicable to these smaller manufacturers, to those who let out work to be done in what are really private houses, which for the purposes of the Act become factories?—There are very few of those in the potteries.

9134. Would you suggest a restriction of the sale of cigarettes? Children under twelve is rather too low, is it not?—It would be better if it could be under fourteen.

9135. Or even fifteen—at any rate during school age?—Yes, I think it is fair to say that the workpeople themselves require to be watched about using the precautions, because they do evade them, and I think the poor manufacturers get blamed for the illhealth of the people who will not use the precautions. A girl said to me, "If you work in a factory you would not want to use a respirator," and I must say it was very stuffy, and I do not think I should have liked it. They do evade these things. They come home in overalls which ought never to be brought back—they ought to be left in the workshop.

9136. You suggest that the sanitary inspectors should be the servants of the Government or the County Councils. That might be necessary in a district like the Potteries, but you are aware that in a great many big towns the Medical Officers of Health are the pioneers of sanitary improvements?—Yes.

9137. And are backed up by very intelligent and very zealous authorities?—Yes. I cannot say that I think that is the case in the Potteries.

9138. You say the Potteries are very bad?—Yes.

9139. At any rate you would be disposed to make the Medical Officer of Health independent of the local authority?—Yes.

9140. So that if he took a strong line of which they disapproved they could not punish him by dismissing him?—I think so far as the housing accommodation, and all these other things are concerned, that would strike at the very root of the matter.

9141. When once appointed he should be independent, and hold security of tenure as against his employers?—Yes.

9142. You think some further knowledge should be published as to who are the owners of slum property?—Yes, I think that would be an admirable thing if it could be done.

9143. What would you describe as slum property—all property which is insanitary or over-crowded?—Yes.

9144. Slum property is a very useful term in general parlance, but when you come to define it, what would you mean by it? Would you include all property where unhealthy conditions prevail?—Where strikingly unhealthy conditions prevail. We have a part in Fenton, Terrace Buildings, which is not fit for anybody to live in, where all the lowest people live.

9145. To what authority would you entrust the definition of what should come under that registration law, if adopted? Would it be the local authority? You say the *personnel* of the local authority very often are themselves interested in the property?—Yes. I do not think the local authority would ever go to the root of it.

9146. There is a difficulty at the outset in doing that?—There is a great difficulty in finding out who owns this property. We had a great difficulty in finding out who owned Terrace Buildings.

9147. The registration of owners would meet that point, and then you would know who owned it?—Yes, if accessible to the public, if it could be seen, then people would know who owned the bad houses.

9148. (*Mr. Struthers.*) It is known to whom the rents are paid?—The rent collectors know. A rent collector said to me: "Of course we know;" but that is different from the public generally knowing.

9149. (*Chairman.*) Mr. Booth recommends the employment of sympathetic women as rent collectors?—I know all about Miss Octavia Hill's work. That is admirable in London. There is nothing like that in the Potteries. There are no lady collectors or anything of that sort.

9150. The collector is interested in concealing as much as possible the bad condition of things that exist?—I am afraid so, or in some cases he feels it useless to protest.

9151. There is power under the existing Public Health Acts in dealing with dirty houses, is there not?—When it can be shown to affect the health of the children, there is. But I do not think they report every house in a thoroughly filthy condition only. I think since the lady sanitary inspector went to Longton, she has reported one or two. It has never been done before. I had a rent collector who told me that. He thought it would be a most excellent thing if the houses were in a wretched, dirty condition, that they should be reported.

9153. Then you mention these chemists and herbalists who are, in your opinion, in the habit of dispensing drugs for improper purposes?—Yes. I suggest there should be some restriction.

9154. Surely the existing law is strong enough if it can only be brought into operation?—Yes.

Miss Garnett.

9155. If the whole district is in a conspiracy for this thing to go on there is the difficulty?—Yes. I believe they come under the first schedule of poisons, and anybody buying them ought to sign her name, but I do not think that is done at all.

9156. How would you bring about the formation of a standard of character, to which, no doubt, you attach very great weight, in every factory; I suppose the standard of morals in a factory very largely represents the standard of morals outside it?—Yes, I think so. I think if the manufacturers and managers when choosing their foremen and forewomen chose upright men and women it would be a very great help in keeping down the bad conditions in the workshops.

9157. As the general result of your evidence, in your opinion manufacturers in the potteries are just as indifferent to the moral degradation of the people as they are to their physical conditions?—I would not make it so sweeping as that, but some are; there are some good factories.

9158. But they do not represent the general state of things?—I do not think they do. If you take the small works, the men who have risen to a little power with a small capital, they employ people whom such firms as Minton & Copeland, would not employ; those firms have a standard of character.

9159. To insist on a proper standard of character does not add to the expenses of production?—No, but the small manufacturers are getting women at lower wages because they cannot get work with the others.

9160. And they are perfectly careless about their character?—Yes. A big manufacturer said to me "I employ 600 people. How can I tell their moral character." I said "If you understand the moral character of the fifty who are over the workshops that would be something."

9161. (*Dr. Tatham.*) Is it not true that the owners of factories live somewhere outside in the country?—Yes.

9162. And leave the poor people to take care of themselves?—Yes.

9163. Practically, with very few exceptions, they do not live in the potteries?—No, and many of the big ones do not even drive in; they leave it entirely to be managed by others.

9164. Do you attribute to that fact the general neglect in which the poor people have to live?—I think so.

9165. That is one of the contributing facts?—Yes. I think the managers know that the heads do not often come in contact with the workpeople.

9166. And it is under those circumstances that your excellent settlement has been established right in the midst of one of the most crowded districts?—Yes, that was the idea.

9167. Close to the church?—Yes.

9168. I think I am correct in saying that the vicar of Fenton has been recently engaged in a crusade against the immoral conditions of which you have spoken as existing in the potteries?—Yes.

9169. I believe he has been persecuted in the local press for his action in the matter?—Yes. To a great extent he has, but good has resulted and is resulting. A Social Service Committee is about to be formed, in fact it is in the act of formation now, which will have the power to look into things and deal with some of these things.

9170. It is your opinion that if the owners of factories were careful to employ managers and manageresses of high character that would tend to improve the moral condition of the workpeople?—Yes, it would go a very long way towards it I feel sure.

9171. Do you think that amongst the girls employed in factories there is a great deal of secret drinking?—Yes, I am afraid so—amongst women, generally, I think.

9172. And it even extends to very young girls, does it not?—Yes, it does. During the last year I have seen young girls of sixteen or seventeen drunk at mid-day in the streets, in the dinner hour.

9173. Wages are high in the potteries, comparatively speaking, are they not?—The wages brought in by one family may be high, because so many are working. I do not think the average wage is high.

9174. You do not think the neglect of children is really the result of poverty so much as other things?—Not so much as drink and thriftlessness.

9175. A good many parents neglect their children, because they spend their money in drink?—Yes, I think so. There was a case the other day. A child was found in the cradle, wrapped in a newspaper. All its clothes had been pawned. I thought perhaps the newspaper was better than the rags.

9176. With regard to the housing of the people, you have spoken of a difficulty which is experienced of making landlords keep their property in decent condition. It is due to a great extent, I believe, to the fact that much of the property is owned by members of the town council?—Yes, I think so.

9177. The inspectors and other officers of the council are removable by the local authority?—I imagine so.

9178. That is so, I know. Is that also the case with the officers of the county council?—I was told it would be a great deal better if they were under the county council.

9179. I may tell you, as a matter of fact, that the superior officers of the county council are not removable, and therefore they have a free hand, and it is possible for them, at any rate, to bring pressure to bear upon the local authority, by which I mean the town council, to see they do their duty?—Yes.

9180. You know that under the sanitary law there is an obligation, on the certificate of the medical officer of health, to give notice to an owner or occupier of a filthy house to whitewash and purify it, and if he does not the local authority can do it, and charge the cost to the owner. Did you know that was the law?—I do not think I did, but I am quite sure it is not enforced.

9181. For the reason you have mentioned?—Yes.

9182. It means the expenditure of money and the owner does not choose to expend it?—That is so. If they go into a clean house, in six weeks it is a sort of pig sty, and therefore the landlords get tired of doing these things. The people have really filthy habits.

9183. Are most of the houses dwellings with only two rooms?—The majority have two bedrooms.

9184. Built back to back, without through ventilation?—Yes, in some cases.

9185. Scarcely fit for human habitation, you think?—I would not go so far as that, but it is a rare thing to find a bedroom window opening at the top.

9186. At any rate they are much less healthy than they ought to be?—Yes, considering the numbers who sleep there.

9187. Is consumption prevalent there?—Yes; they call it potter's asthma and potter's rot there.

9188. Is there hospital accommodation?—It is very inadequate.

9189. Is it resorted to?—Chiefly for infectious diseases In North Staffordshire the big infirmary is so full, very often, that they discharge a man before they ought to, because they have not enough beds for severe cases.

9190. There is no hospital provision for cases of consumption as yet, I think?—No.

9191. Do you think that would be advisable?—Yes.

9192. It is a question of money, is it not?—Yes.

9193. You speak of the recent appointment of a lady at Longton. Is she a sanitary inspector or a factory inspector?—A lady sanitary inspector. There is no factory inspector. There is a lady sent down by the Home Office to look after things a little.

9194. This lady is employed as a sanitary inspector?—Yes. I think the only other one is at Burslem. It was a success there.

9195. Has she a staff under her?—No. I never heard of a staff.

9196. She has to visit practically the whole of Longton—it is a large town, is it not?—Yes, larger than Fenton. Fenton has 17,000 inhabitants; I suppose Longton would be about 20,000.

9197. With regard to the sale of noxious drugs for im-

proper purposes do you think that extends to the sale of drugs to drug children?—They use soothing syrups to an enormous extent.

9198. And paregoric and other dangerous drugs?—Yes.

9199. To any great extent?—Yes. I think the women who take charge of the children get tired of the wailing of the babies, and have something to keep them quiet. It is natural that it should be so.

9200. Is it your experience that the children of the working classes get much milk?—No, very little milk.

9201. What kind of milk is it they get—is it tinned milk?—Sometimes. The ordinary milk is very rarely given.

9202. It is generally tinned milk?—Yes.

9203. Of the kind which is called separated milk?—Yes, I think, they do not even give their babies that—I think it is a sort of water gruel, and bread soaked in water.

9204. Which, of course, the young children cannot digest?—They do not realise that that cannot be digested by infants under ten months old at any rate. That is one of the things we are always teaching.

9205. Is any attempt made by domiciliary visits or otherwise to persuade these poor people that irritant food not only gives no nourishment but is practically poison?—All the Settlement workers keep that in view, but I know of no other body of people who do.

9206. There is nothing corresponding to the Ladies Health Society of Leeds and Manchester, except your own Settlement?—None that I know of. There is no residential leisured class. They are all working people. We are the only body of ladies I know of living in the Potteries at all.

9207. Does your visit extend to other towns in the Potteries besides Fenton?—Yes, Hanley, Tunstall, Stoke, Longton, Fenton, and a part of Burslem known as Sneyd.

9208. Do mothers nurse their children much?—No.

9209. The tendency is to feed them by hand as soon as possible?—Yes.

9210. That is one of the causes of high mortality?—Yes. We thought with three months they would be able to give the proper motherly attention.

9211. Are feeding bottles with indiarubber nipples much used?—Yes.

9212. Very filthy things and utterly unfit for the purpose?—Yes.

9213. They are condemned by every medical man, I think?—Yes.

9214. They are largely used?—I think so.

9215. Do you think that, to any great extent, children are sent to school half starved because of the negligence of their mothers to provide them with proper breakfast?—I asked that question of the schools I went to inspect. They would not say to a large extent, but it occurred in almost every standard. There were some who were badly nourished in almost every standard.

9216. Obviously the children are unfit to acquire knowledge under those circumstances?—Yes.

9217. Is there any arrangement to provide those cases with food?—No. The teachers in various cases sometimes provide both clothes and food, and give them some breakfast at their own homes, if they know that they have not had any, but there is nothing on a large scale.

9218. Would you think it would be desirable that they should have food given?—Yes. Of course it is taking the responsibility off the parents, who ought to do it.

9219. But even that would be better?—It would be better for the children, of course. I came upon a case where the school mistress told me the mother had come to her about a very nice child and said, "Will you punish her for stealing?" She said, "Stealing! I have had her under me for some time, and she is a most upright girl. What does she steal?" The answer was, "She steals food!" The child was asked why she did it, and she said, "Mother does not leave us enough, and we take some of father's supper." The mother was out all day.

9220. We had evidence that in one town in England at any rate, the children had really acquired a distaste for milk, because they had been fed on whatever the family happened to be feeding on at the time; they have actually got to prefer all sorts of improper food to milk. Do you think that is the case to any extent in the Potteries?—I think it might be the case. I noticed when I gave milk puddings they were looked upon as luxuries, because milk is very hard to get. They live chiefly on fried fish and potato chips. *Miss Garnett.*

9221. The children?—The girls—the people generally. That is the favourite food, it is so easily procured.

9222. The food is seldom cooked at home, I presume?—Very rarely.

9223. I do not remember whether the Chairman asked you the question, but may I ask you whether you think it would be desirable that young girls from fourteen to sixteen years of age should have some course of cookery lessons at a school, or lessons in general housewifery at a school, instead of some of their ordinary book work?—They have cookery centres.

9224. That is so?—Yes. I should have had cookery lessons at the Settlement, but I found that it was done at the schools, and I thought there was no object in it. The cooking is done by a gas stove, and there is every convenience, which, of course, they do not get at their own homes. It is taught scientifically. I am afraid they do not drink it in and use it in their own homes.

9225. Do you think there is room for improvement?—Yes, it should be taught in some simple way.

9226. What do you say with regard to mending clothes—the ordinary duties of a labouring man's wife?—We had a girls' club, and taught them how to make their own clothes. They are most inefficient. Everything is ready-made which they buy; they do not make their own things.

9227. (*Mr. Lindsell.*) Is there much half-time employment in the factories?—Very little now, I think.

9228. I suppose no child goes to the factory before thirteen years of age now?—No, I think not.

9229. And if they go at thirteen they go as young persons?—Yes, they are apprenticed.

9230. I mean they have left school?—Yes.

9231. There is no going partly to school?—No. I enquired whether there were any half-timers, and they say there are very few indeed. I think the pottery trade does not lend itself to that.

9232. Do you think that thirteen years of age is too young for this sort of work?—I think it would be better if it were a little later on, of course.

9233. You do not think there is conclusive evidence that it injures the development of their health?—Not when they have good health and good food, and are of fairly average strength.

9234. There is not any extreme poverty in this district is there?—Yes, there is extreme poverty.

9235. From want of employment?—I think it is through drink and thriftlessness, but trade is very bad just now, and there is a great want of trade. Trade is extremely bad in the potteries now.

9236. Have you yourself visited the elementary schools?—Yes, I have.

9237. Are they good schools in the pottery district?—Yes, I think most of those I have seen are. Of course they would bear some improvement. There is one thing I wish to mention—a man who had had forty years' experience told me he was sure that the bad eyesight had something to do with the cross light in the schools; there was a conflict of light in the schools, and he thought that was very bad. Whether that was his own fad or not I do not know.

9238. The question of the proper lighting of schools is a matter to which the rules of the Board of Education are particularly directed?—He said that if the light came from the back and the top it would be better than having the light in front. In almost all schools the light is in the front and on either side.

9239. Have you seen the way in which the principal class rooms are lighted?—They were all lighted like that where I have been I think. It is a very good light of course, but almost a glare of light.

9240. Do they attempt the teaching of domestic subjects?—Yes.

Miss Garnett.

9241. Cookery?—Yes.

9242. Is that pretty universal?—I think so.

9243. And the laws of hygiene?—Yes. It is taught in a very scientific manner; I do not think it sinks in at all.

9244. Do you not think it gets rather difficult in a school to do otherwise than teach the theory—the practice must come afterwards?—The practice does not come afterwards in this case because they have no home really to practice what they learn in the school as regards domestic subjects. There is no domesticity.

9245. Are there no efforts made to supplement the school teaching when girls get older?—Not in the way of teaching health.

9246. No health lectures?—There is a course of health lectures going on now in Longton. I think the better class attend—not those who would really benefit by it.

9247. There is no attempt to do it by means of social evenings?—Yes. We have done that in the settlement. We have had health lectures and simple teaching and made them write a few papers about it.

9248. Did not it strike you that the girls who already had some scientific teaching at school showed greater aptitude for picking up the practical side of it than the others?—I think perhaps so.

9249. You would be in favour of extending the amount of physical drill in the schools?—Yes. Twenty minutes every other day does not seem very much.

9250. The school hours are somewhat limited and there are a large number of subjects?—Yes. There is a pressure of other subjects which does not leave much time.

9251. In addition to physical drill they also get ten minutes' interval in the playground for recreation?—Yes, they do.

9252. You say the pressure of the inspectors is so great that there is little time for health subjects; what do you understand by that?—I asked whether they always had this drill, and I was told, "Well, you see the pressure is so great sometimes that we have to let something go"—rather intimating that these health subjects were not so important, or looked upon as so important by the inspectors as the mere brain knowledge.

9253. You know, of course, the curriculum of the school rests not with the inspector, but with the managers and teacher?—Yes. I suppose it is the managers, probably, but they are very anxious to please the inspectors.

9254. They are also now anxious to please the local authority?—Yes.

9255. You say that public baths should be provided free for young children under fifteen?—I found they had been giving free baths to children in Burslem, and children had been taken by the teachers to baths; and I think it would be a good thing if it could be extended. That is the only place where that takes place that I know of.

9256. The local authority have power under the Baths and Washhouses Act to provide public baths and swimming baths?—They have to pay for them.

9257. You mean the rates have to pay?—No, I mean they are not free.

9258. I think they can provide free baths—they have the power, I believe?—They do not use that power much.

9259. You know swimming is allowed to be taught?—Yes. In Fenton there are no baths of any kind, although there are 17,000 people. There are only baths in Longton or Stoke for people to go to.

9260. (*Dr. Tatham.*) They use the canal pretty much, do they not?—Yes.

9261. (*Mr. Lindsell.*) With regard to this question of smoking, have you noticed a very serious increase in it of late years?—Yes, I never used to observe it. I do observe it frequently, and so do those who take boys' clubs and mix very much with the children.

9262. How far does your experience go that it is very deleterious to the children's health; have you any actual evidence on that point?—The head of the school in Longton took out the boys who persistently smoked and said, "Look what poor little things they are—how small they are." I think he was going to take a photograph of these children and others who did not smoke at the same age; he said that it would be interesting.

9263. Did the difference strike you?—They did strike me as being very poor little things. I expect they came from drinking homes as well. There were probably other causes besides the smoking.

9264. In the experience of that particular teacher there was a distinct inferiority on the part of the children who smoked?—Yes; he was very strong on that subject; it was his pet subject, I think.

9265. Are the children sent to school clean and tidy?—Oh, no. I saw some last week who were anything but that. It can hardly be expected; the mother has gone out of the house before the children go.

9266. They came from homes where both parents were in employment?—Yes.

9267. It was not merely due to temporary want of work?—No, I do not think so. I think they would be what you would call merely neglected homes. The teachers told me that sometimes it was insufferable. They had to send a child out for a little time.

9268. It is a common occurrence that both parents are away from home?—Yes, or the man will be a miner, and although he has good wages the woman will still work in the factory, though his wages ought to be sufficient to keep the family going.

9269. What time do the parents go away to the factory?—Generally about seven, but if they work in a distant town they leave soon after six. If they live some distance off they do not go back at all.

9270. How are the children kept?—The children from six to ten or eleven years old will take whatever they can find—anything that is left for them. The infants will be sent out.

9271. The food is always cold?—I think it must be always cold; I do not think there is any method of warming it. I do not think they have hot food in the middle of the day. I should doubt if they had hot food at breakfast.

9272. The Potteries is a district in which an attempt to establish some form of school breakfasts and dinners might be very advantageously tried?—I should think so, especially in the poor districts.

9273. If the father and mother are both away the child cannot be properly looked after in the way of food?—That is so. Of course, I did not go to any of the National schools—there is a big National school at Fenton—because these children are from the tradesmen class, and they are all pretty well nourished children. I went to the lower class schools.

9274. The children who come from those homes where the father and mother have gone to work?—Yes.

9275. Has there been any talk of attempting to provide meals for these children at the school—I do not mean gratuitously?—I think there has been for dinners, but I doubt about breakfasts.

9276. Breakfasts would be almost as valuable as dinners?—Yes. They have a spasmodic free dinner given by the Town Council during the time when trade is very bad, but there is nothing systematic done.

9277. Free—it is not self-supporting?—No.

9278. That was merely done to meet a special stress?—That is so as far as I know. I do not know that I asked that question in Tunstall.

9279. Have you heard of a benevolent institution treating that themselves?—We are very poor in such associations. There is nothing like those in London, such as the Charity Organisation Society or the Factory Workers' Union.

9280. It might be done if cookery centres were established?—It would mean an extra room, would it not?

9281. You say the girls are learning cookery?—Yes.

9282. It would be more practical if they cooked such things as their own class wanted?—Yes.

9283. But food might be supplied to the children themselves at a small payment?—Yes.

9284. (*Mr. Legge.*) You seem to think there are a large number of married women employed in the Potteries?—Yes, I think so, especially in Longton.

9285. Is there any special branch of the trade there?—Chiefly china, not earthenware. In the earthenware trade they have to employ men more because it is a very heavy trade.

9286. Are these women employed in the glazing process principally ?—No, I should not say principally in the glazing.

9287. You are aware that according to the Factory Department's statistics lead-poisoning has decreased ?—Yes, and I think from my own observations I should say so too. We do not get so many cases.

9288. You spoke of a Social Service Committee being in process of formation ?—Yes.

9289. Is that a voluntary or municipal enterprise ?—Purely voluntary; they are trying to get some of the heads of the factories on that social service committee.

9290. Is there any representation from local authorities ?—They are going to try, I fancy, but it is very difficult to get it.

9291. One or two mayors I noticed wrote very violent letters denouncing a clergyman who described the Pottery district as a sort of hell on earth. Have they been invited to join ?—I could not say whether they had or not.

9292. Now you expressed to the Chairman your assent to the policy of the local authority stepping in and carrying out certain sanitary improvements, charging the cost to the owner; do you agree that that is a sound policy ?—That the local authority should step in—yes.

9293. Would you go further than that and approve of a system under which the Central Government could do work which ought to be done by the local authority which has been neglected and then charge the local authority with the expense ?—If it would force the local authority to do their duty.

9294. Supposing the local authority did not do its duty, and the Central Government became aware of that fact, would you approve of power being given to the Central Government to step in and do the work, charging the cost to the local authority ?—Yes, I think I should.

9295. The Chairman put to you the question whether you did not agree that it would be a good thing to get some regular physical census of the population, and you agreed ?—Yes.

9296. Supposing such physical census showed that the physical condition of the people in a particular area was extraordinarily below that of any other district under even most similar conditions in other parts of the country, that would be a ground for an inquiry by the Central Government into the cause in this particular district of this physical disparity ?—Yes, I imagine so.

9297. Following on that, the Central Government might call upon that local authority to carry out certain improvements, and in default do them itself ?—Yes.

9298. I am giving that as a practical illustration ?—Yes.

9299. You would agree with that ?—I think I should.

9300. (*Colonel Onslow.*) Is there anything in the nature of the work in which these women are engaged which incites them to drink ?—Yes, I think the stuffy nature of the factory work does.

9301. There is a considerable amount of dust ?—Yes, it brings a sort of thirst upon them There is an enormous amount of beer drunk.

9302. Not worse drinks than beer, not spirits ?—Yes There are out-door beer houses in the potteries where they must drink off the premises. There are heaps of those besides the big public houses.

9304. What is the population of Fenton ?—About 17,000.

9305. Has it a corporation ?—It has an urban district council. There is no mayor.

9306. And it is in that place that you have noticed very bad housing ?—Not only there, but in Hanley and Longton.

9307. I know Hanley is very bad, but is Fenton as bad ?—No, I do not think it is as bad. I do not think there is so much slum property in Fenton as in other towns. I should say Longton is as bad, but I do not know the exact population of that place.

9308. Has that a mayor and corporation ?—Yes.

9309. Are the houses back to back houses in small slum areas ?—I believe there is a good deal of slum property in Longton. The bedroom accommodation is very small.

9310. And the accusation that you made against the sanitary authorities is common to all those places ?—I think so. I think that is borne out by the evidence.

9311. The sanitary inspectors are not doing their work ?—They are in awe.

9312. They are afraid to do their work ?—Yes.

9313. However much they may be willing to do so ?—Yes, I think so.

9314. You say there is a lady sanitary inspector ?—Yes, only quite recently appointed—only two or three months ago.

9315. There are factory inspectors, are there not ?—There are men factory inspectors.

9316. For the factories themselves ?—Yes. Of course when they come it is known at once; a bell is rung in the factory, and everything is put right as far as possible.

9317. There are no lady factory inspectors there ?—No.

9318. Although there are a very large number of women employed in the work ?—Yes.

9319. Where a lady factory inspector is more needed than in most cases ?—Yes.

9320. (*Mr. Legge.*) It is the fact that a considerable amount of the lady factory inspectors' time has been spent in the Potteries district ?—There is one now.

9321. Are you in a position to speak to that, or not ?—I had one who was sent down by the Home Office to see me the other day. They have been sent down from time to time.

9322. Are you not aware of long reports by lady factory inspectors ?—Yes.

9323. Surely those reports indicate the expenditure of a lot of time, not by one, but by more than one factory inspector ?—I do not think the evidence would be so good as from one in residence in the place, because no adequate knowledge of the conditions of labour can be attained without a knowledge of the conditions of life and the habits of the people.

9324. The place has not been forgotten by the Home Office in connection with lady factory inspectors ?—No. I think they devoted themselves to the lead question rather than to the other questions.

9325. You mean other factory questions ?—Yes.

9326. What other big factory question do you think there is in that district ?—I think they might have devoted themselves to the moral question to some extent—the character of those in charge.

9327. I do not know that that comes within the purview of the Act. They might have gone into the question of sanitary conveniences, and so on, you mean ?—Yes.

9328. (*Mr. Struthers.*) What is your idea of slum property; how do you distinguish it from other property in the Potteries ?—Where the doors are beneath the street, and the water almost runs in, and where the people live in cellars beneath the ground. They call them cellar-houses.

9329. Are there many of them ?—Not very many, but there are some, I know.

9330. You do not class the two-roomed houses you spoke of as slum property ?—I should not call them slum property, because the majority of the houses have two bedrooms.

9331. Does that mean they have a living room besides ?—Yes.

9332. Three rooms ?—Yes, they have two bedrooms upstairs.

9333. What is there downstairs ?—Downstairs there is a room into which the door opens, and a little back kitchen, and then a yard at the back.

9334. Is there any bed in the room on the ground floor ?—Only when there is a case of illness. It is generally the room where they put the best bits of furniture they have in, and which they do not use.

9335. Of course it depends on the number of people living in the house, but for a moderate sized family that might be a good enough house ?—Quite.

Miss Garnett.

9336. Apparently you say that even if the landlord did improve them a great deal, the habits of the people are such that they would bring them down to a very low level again?—Yes, that was the evidence of the relieving officers and rent collectors.

9337. So that more improvement in the sanitation by the authorities would not do much unless you got a change in the habits of the people as well?—If cleanliness could be enforced under a penalty, or something of that sort, there would be an improvement.

9338. It is not simply a question of sanitary regulations?—Not only that, I think.

9339. Manufacturers are not residents, as a rule?—No.

9340. And there is an absence of the middle class?—Yes.

9341. But there are some middle class?—They would be the tradespeople, I should consider.

9342. Now with regard to the pottery workers themselves, you speak of some people who might send their children profitably to the factory at thirteen, because they have good homes and good food?—Yes.

9343. Those are factory people?—Yes, decent factory people, who care for their children, and see that the conditions of their life are good.

9344. Among those people does the mother work in the factories?—In some cases, but not in the majority of cases. In our national school at Fenton the majority of the mothers are at home; they come from the better class. I enquired whether there were many under-fed children there, and I was told only rare cases.

9345. As a rule the other class of factory workers work at the factory?—Yes.

9346. And their children are left at home all day?—Yes.

9347. With nobody to look after them?—In some cases, when the mother works within a reasonable distance she returns in the middle of the day, and then they have better food.

9348. Is there any necessity for these women working in the potteries?—Of course certain departments of the trade perhaps, are done better by women, for instance, the painting—that is done better by women than by men. I should think there would always be women employed in the trade.

9349. Would there not be a sufficient supply of unmarried women?—Yes, and the men could have sufficient work then.

9350. You think to a certain extent the women are cutting the men out of employment at present?—Yes.

9351. Quite apart from work which might be done by unmarried women, without trenching on the married women at all, do you think they are cutting the men out of a certain amount of work?—I think so, because the women's wage is cheaper. One man was asked why he employed a woman, and he said, "She will do it for 8s., and if I have a lad I must pay him 12s."

9352. Very frequently the man does nothing?—Yes.

9353. Does he live on his wife's earnings?—Yes, he looks after the children in a certain way, but he hangs about the street. In Longton there are whole crowds of men about the station. There are a large number of men out of work.

9354. Are there many cases in which the man stays at home while the woman goes out to work?—Yes, in Longton. I attribute that to the fact that women are mostly employed in the china trade, and the employers can get them to do it at less wages.

9355. Do the men who stay at home look after the children and prepare food for them?—I do not think they do much.

9356. You do not know Dundee, I suppose?—No.

9357. I am told a similar state of things prevails there—that women are employed by preference in the factory, and there is no work for men, and there is a very large class of men who make it their business to marry a woman who is in good employment, who is a good worker, and who earns a good wage. You think there is something of the same class down here?—Yes. You must remember the work in the pits has been bad of late, and therefore a good many men are out of work—men who are not potters.

9358. The real cure for the condition of this district would be to get the married women out of the factories?—Yes, that would do more than anything else for the homes, and for the whole of the conditions.

9359. More than sanitary regulations or education?—More than anything.

9360. Do you see any practical way of bringing that about as a practical measure—the lessening of the number of married women employed in the factories?—I think an extension of the time from one month to three months after child-birth would be the beginning of it. Everyone whom I have consulted has said the radical thing would be to do away with married women labour. But it may be thirty years before it will come; they are not ready for it yet.

9361. In the great majority of cases there is no necessity for it on the ground of want of income in the home.—I think not.

9362. And on the other hand there is no necessity for it because the amount of woman work in the potteries could be done by unmarried women?—Yes.

9363. I refer to the special class of work which could be better done by women than men?—Yes. I think Minton & Copeland do employ more girls than married women. When you go through their workshops you see young women.

9364. What is wanted is the creation of a strong public feeling on the subject?—Yes.

9365. Which would have the support of the leading manufacturers straight away?—Yes.

9366. And might influence the others?—Yes. I believe that one clergyman stated in his sermon that married women's labour was at the root of the evil, and there was a great outcry by people who spoke of men talking of what they did not understand, and venturing to interfere with the conditions of labour.

9367. You will always have to face that in any social reform?—Yes, I think there will always be that.

Mr. Shirley Forster Murphy, M.R.C.S., called; and Examined.

Mr. Murphy.

9368. (*Chairman.*) How long have you been in the public health department of the London County Council?—Fifteen years.

9369. You are now at the head of it?—Yes. I have so acted throughout the whole period as Medical Officer of Health.

9370. And therefore you have had exceptional means of forming an opinion upon the problem of the physical condition of the people?—I have seen a great deal of the people.

9371. What general conclusion have you arrived at as to whether there has been deterioration or not so far as the data are available?—The data I have are vital statistics, and they indicate an improvement.

9372. I suppose you must accept them with some reserve, because I suppose improved vital statistics mean a diminution in the elimination of the unfit?—Probably.

9373. That is to be set against it?—I should anticipate that would be compensated for by the lessening of sickness amongst the population generally.

9374. There has been a very notable diminution of the London death-rate in the last fifty years?—Yes.

9375. From twenty-four in the year ending 1850 to fifteen during the last year?—Yes.

9376. The expectation of life in certain decennia tells the same tale?—Yes; the expectation of life has improved.

9377. You are further in a position to show how that expectation of life varies in two typical districts in London?—Yes, between Hampstead and Southwark.

9378. Very largely in favour of Hampstead?—Yes.

9379. And a comparison of the condition of the people inhabiting certain classes of tenements is also confirmatory of the same view, is it not?—Yes, the people having better accommodation have had lower death-rates from

all causes and from certain diseases than those inhabiting the small accommodation.

9380. Should you say that the proportion is altering in favour of the more wholesome class of tenement, that is to say the larger proportion of the people are occupying a wholesome class of tenement rather than the reverse?—Yes, there are fewer occupations of one-room tenements than there were. There have been two censuses which have given particulars as to the occupation of tenements of less than five rooms, and the Registrar-General has called attention to the diminution in the use of one-roomed tenements in the country. It is very marked in London.

9381. I have here some figures. In London the diminution of one-room tenements inhabited by more than two persons was from 56,622 in 1891 to 40,762 in 1901, but the diminution is not so striking in regard to the next class, that is two-room tenements with more than four persons; they have only diminished from 54,872 to 50,304; and the decrease is still less marked in the next class, three-room tenements occupied by more than six persons, from 24,524 to 23,979. That is not a very marked decrease in those classes?—No. But the direction is distinctly towards diminution. The persons inhabiting one-room tenements have migrated into two rooms. There has been a general improvement all along the scale.

9382. Do you think the time is getting nearly ripe to deal more or less drastically with this condition of overcrowded tenements. Would you see your way in the course of, perhaps, a year or two, to fix a time limit at the expiry of which no one-room tenement should be permitted with more than two occupants, and no two-room tenement with more than four, and no three room tenement with more than six, or any scale you choose to adopt which you think necessary to secure the proper condition of health in the inmates?—I think it would be very difficult to enforce such a requirement at any near time. The difficulty at the present time is to get the law in relation to overcrowding sufficiently enforced on the present basis.

9383. What is the present basis? Do you not regard the occupation of a two-roomed tenement by more than four persons overcrowding?—The overcrowding with which the sanitary authority deals is not the overcrowding given in those figures. These figures take no cognisance of the size of the room. The London sanitary authorities mostly proceed on the standard laid down in bye-laws which they make for houses let in lodgings, under Section 94 of the Public Health (London) Act.

9384. Do they prescribe the number of inhabitants a house can accommodate?—They prescribe the number of cubic feet which each individual should have. It differs in the case of a room occupied by night only and a room occupied by day and night.

9385. Are those conditions laid down and enforced?—They are laid down and partially enforced.

9386. Are they specially careful in the case of houses occupied by children?—I do not think so.

9387. Do you not think it should be so?—That standard, I think, should be rigidly enforced throughout London.

9388. If adults choose to herd themselves like pigs it is their own look out, but in the case of young children it is mortgaging the future?—I think it is more important in the case of young children. I am sure that the standard of 300 cubic feet for a room occupied at night only, and 400 cubic feet for a room occupied by day and night, is so low that it ought to be enforced rigidly throughout London.

9389. Possibly it might be raised?—If we could manage to enforce that first we might hope for something better later on, but until that is enforced we cannot.

9390. Are you aiming at the enforcement of that?—The enforcement of these bye-laws in London is in the hands of the Borough Councils and not of the County Council.

9391. Do they enforce them?—They are enforced in different degrees in different districts. There has been very great difficulty in getting the bye-laws for houses let in lodgings enforced. The London County Council has been making very considerable endeavours for a number of years to get these bye-laws properly enforced throughout London. The Council has always attached great importance to their enforcement.

9392. I suppose you would admit that no standard of domestic decency can be maintained when a lot of people herd together in one room?—Most certainly.

9393. I suppose it is prejudicial to health under any circumstances?—No doubt.

9394. The County Council have done a great deal towards the provision of dwellings?—Yes. They have provided for a considerable number of persons. A recent Return shewed that there were some 22,000 persons living in their buildings.

9395. In the heart of London, or the outskirts?—A great many in the heart of London—in different parts of London.

9396. Do they find much difficulty to get the ground?—A great many of the sites have been acquired under the Housing of the Working Classes Act where improvement schemes have been carried out.

9397. Where insanitary areas have been cleared?—Yes; and that has determined the situation of many of the dwellings which have been erected.

9398. Is there any great difficulty in getting sites?—Yes, very great difficulty, especially in view of the price of land, and it is difficult to provide accommodation for the working classes at rents which they can pay without such accommodation entailing a charge upon the rates.

9399. I suppose the tendency is to place the working classes to a large extent on the outskirts of London, or outside the area of the county of London?—Yes.

9400. And provide for their coming into work by trams or cheap trains?—Yes.

9401. Tottenham and Hornsey, and so on, are full of the working class population, and also West Ham?—Yes, the London County Council has estates on the periphery of the county, and outside.

9402. Are they developed now?—They are being developed at the present time.

9403. Is there any corresponding tendency on the part of manufacturers in the heart of London to move out?—I cannot speak with any precise knowledge of the subject, but I know, as a matter of fact, that there are migrations of certain people—for instance, I have seen myself on the Great Northern line the way in which printers' establishments have grown up outside London.

9404. I suppose you think it a desirable thing that manufacturers who are established in the heart of London should go out?—Undoubtedly.

9405. Are you among those who think that an alteration in the law of rating would assist that materially?—It is not a matter which I think I should be competent to express an opinion upon.

9406. I do not mean what is called the taxation of ground values, but the proposal in the minority report of the Royal Commission on local taxation, which advocated the substitution of site value for the value of buildings as the basis of assessment?—I know of it but I do not think I should be competent to express an opinion worth having upon that.

9407. As tested by the death-rate, I suppose there are certain areas in London which are still very insanitary?—There are undoubtedly insanitary areas.

9408. And you have noted a peculiar exception in connection with the Jewish population who, I believe, live more closely packed than their Christian fellow citizens?—They are certainly as closely packed, but there are counteracting causes which diminish the evil effect, which I think are most important in connection with the high death-rates and diseases among poor persons.

9409. In regard to the additional care they bestow upon their children?—I think that is a very important element in the question, and their temperance is another factor.

9410. They treat themselves better?—Yes.

9411. They do not waste so much money in drink?—No, and they have more money available for wholesome food. Their general care of their lives is, I think, on a higher standard than that of the ordinary population of the same class.

9412. Have you any figures which would compare the infant mortality among the Jewish population in the East

Mr. Murphy.

End with the general rates?—I think with regard to one or two Jewish areas, where the populations were not very large, I could give the mortality among young children.

9413. It would be interesting to have those?—There are some figures I gave to the Royal Commission on Alien Immigration which bear a little on this. They show that in parts of Stepney, where alien immigration occurs very largely, there has been an actual falling in the infant mortality.

9414. We should like to see those?—They are in the Commission's Report.

9415. The general infant death-rate in London has not diminished—it might almost be said to have increased in the last fifty years?—It has been undoubtedly maintained.

9416. Notwithstanding the fact, I suppose, that certain of the conditions affecting infant life have improved?—Yes; I think there have been improvements in the conditions affecting the population as a whole.

9417. Which, of course, would react to some extent?—Yes, either they have not touched the conditions which affect the mortality of infants or there have been counteracting influences prejudicial to infant life which have increased.

9418. How would you suggest that attention to personal hygiene should be brought home to the people at large?—I think a good deal may be done by educational methods.

9419. But not limited to the child's period of school life?—No.

9420. I suppose at that early age such lessons as they do get in these subjects are apt to be forgotten unless their knowledge and interest are maintained?—I think it would be likely, but it would be well to use that opportunity so far as it goes.

9421. To establish a ground work?—To establish a ground work.

9422. What would you say to compelling all girls during the period after they leave school from fourteen to approaching adolescence to attend continuation classes which should be devoted mainly, if not solely, to all the subjects touching domestic hygiene, including attention to infants, household management and cookery, and so on?—I think it would be an excellent thing if during that period of life they were taught those subjects.

9423. Would there be great difficulty about it? Looking to the fact that this class is now taught entirely at the public expense during the years of school life, do not you think that the State has some right to say to them after they leave school: "We will see that, at any rate, during the period intervening between the date of your leaving school and growing up, you shall still continue to learn something which will fit you to undertake the important duties of maternity"?—I quite recognise the right of the State, and if it could be done I think it would be an excellent thing.

9424. Why should it not be done?—I would only suggest twice a week; that would probably be enough, would it not?—I should think that would do.

9425. And it would be a means of keeping some sort of hold over those girls during the critical period of life, and perhaps save them from a great deal of physical and moral contamination?—I should think it would probably be useful in that way.

9426. Is there any other expedient which you would suggest as an alternative?—Not necessarily as an alternative.

9427. Or as supplementary?—I think it might be supplemented by such teaching as could be given by public health officials who have to visit the homes of these people.

9428. That would only touch the mothers; many of these girls are at work during the day. You think that domiciliary visits to the young mothers would be a good thing?—It would not touch the age of which you were speaking.

9429. I am seeking to obviate the risk of the loss of the foundation which is laid down in schools between the expiration of school age and the period of maternity?—I think it would be very valuable if it could be done.

9430. I should say corresponding compulsion should be put upon boys to make them look after their physical condition, to make them attend a physical education class twice a week, unless they produced evidence that they were members of a brigade or a boy's club in the scheme of which physical training took a considerable part?—I think it would be most valuable if the boys could be taught that and kept under supervision.

9431. With regard to influence upon young mothers and the employment of district health visitors for the purpose, that is a thing which might very properly be organised partly by the local authority and partly by charitable agencies, might it not?—Yes, I think so.

9432. Rather on the model of the system in Manchester, which I understand has worked very satisfactorily?—Yes.

9433. And is being copied in other towns?—Yes.

9434. You would not suggest the introduction of the Elberfeld system, where the municipality is entitled to call upon any citizen to give his time to sanitary work?—I do not think it would be necessary. I think voluntary aid would be available. That work could be supplemented by the action of the local authorities who have the right to expend the ratepayers' money for that purpose.

9435. The agents of the Charity Organisation Society could do something—or would not they think that part of their business?—I do not know whether it would come quite within their purview, but I think there would be a great deal of voluntary aid given to work of this sort if it were understood to be necessary.

9436. Do you believe in the value of distributing printed information?—I think it is useful in a degree, undoubtedly.

9437. You think the Midwives' Act may give an opportunity of dealing to some extent with mothers in their obligations to young children?—I think so. The midwives, of course, come into such direct relation with mothers, and if the midwives were properly taught good would be done.

9438. They will be women of some training and some education when the Act comes into full operation?—Yes, and they can be specially trained for this purpose.

9439. As you know, the local authority is the supervisory authority?—Yes.

9440. It is their duty under the Act to see that the midwife gives full directions for securing the comfort and proper dieting of the mother and child during the lying-in period?—I have not looked at their powers in this respect, but if that is so it would meet the requirements of the case. It is an opportunity that ought not to be lost.

9441. I hope you will bring that to the notice of the authority you serve. Then, of course, the condition of the milk supply is a very important element in this problem, and that, I suppose, can be improved?—It leaves much to be desired at the present time.

9442. There have been some sporadic efforts in London to municipalise that supply?—One district has provided a milk depôt for sterilised milk—Battersea.

9443. And with good results, we are told?—The published results were hopeful, but I do not know the results during the last few months.

9444. I think we were told that if if it became a little more general it would become self-supporting?—I think that is very likely to be the case and of course it is very desirable that there should be no charge upon the rates. The whole question of the proper way to feed an infant is being much discussed at the present time.

9445. You doctors do not agree?—There are different views expressed. In Paris, Professor Budin has had results in children's feeding which are very interesting, and from which it would appear that the advantages of a public supply are very great and would be especially great if accompanied by some system of observation of children, that is to say, weighing them and taking stock of the results obtained.

9446. That might also be adopted during the period of school life or later?—As the condition of their receiving milk from a public supply, they should be prepared to bring their children and have observations made as to their progress.

9447. The children's hospitals might do something in that way?—Yes, there is a hospital at the present time which I know has the supply of milk in contemplation.

9448. Do you know Dr. Eustace Smith?—Yes.

9449. He is connected with a hospital in the East End?—Yes.

9450. I think he mentioned some such system is adopted there or about to be?—The question came before me in connection with the point as to whether the hospital was a dairy which came under the regulations of the County Council.

9451. If the hospitals could cover the ground it might be preferable that they should undertake it rather that the municipality?—I think there would be no necessity for the municipality to do it if the ground were covered.

9452. Which do you think would be preferable?—There would be advantage in the hospitals undertaking the work on account of the medical staffs attached to them.

9453. As the case at present stands, I suppose a very small proportion of children get milk at all, and very often in a very indifferent condition?—I think so. I should imagine—and, I think, these figures rather justify it—that infants, on the whole, are worse off than they used to be; they are, probably, less breast fed, and the arrangements for providing them with suitable cow's milk have not made sufficient progress to compensate for that, if it can be compensated for.

9454. You look to some improvements in these respects by the concentration of educational functions in the hands of the County Council?—I do, because the child when it reaches the school age will in future be under the observation of an authority which is not only concerned with education, but which has already important health functions.

9455. It will bring education to bear on the conditions touching the health of the people generally?—Yes.

9456. It will illustrate and emphasise the close connection there is between the two?—Yes.

9457. And it may, very possibly, lead to the more practical training of teachers for work of this kind which would, of course, re-act on the children when taught?—Yes.

9458. The teachers, themselves, are extremely ignorant of the conditions of health?—No doubt they have to be taught as well as the rest of the population.

9459. I suppose you would enforce a system of this sort by the medical inspection of schools?—I think it is most important.

9460. In the last resort I mean?—It seems to me the children should be generally under medical inspection, using the observation of teachers very largely.

9461. If the teachers were very much interested and understood that it was part of their obligation, you would leave it to them to call the attention of the medical officer of health to such abnormal cases or such sickly cases as come under their notice?—Not entirely, but they would play an important part in the matter.

9462. You think there is a great deficiency in personal cleanliness among the children of the poor?—I am sure the question of personal cleanliness is very much bound up with their health, and there is an urgent need for some systematic effort being made for teaching personal cleanliness.

9463. Not only in reference to the teeth but the whole body?—Yes, the whole body.

9464. I suppose the amount of dental caries which we heard of is very largely due to want of personal cleanliness?—I should think it is in part due to that cause. Of course a dentist would tell you better about it than I should.

9465. Of course there are other causes?—Yes,

9466. In regard to verminous children, surely the school authorities do not admit them into the school—they insist upon the parents sending them to school clean, and it is known where the parent is who sends the child?—I think if the educational authority at once excluded all such children from school it would make a considerable difference to the attendance at some schools. The London School Board has, however, recently taken some action in the matter.

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9467. Are there powers possessed now by the county council for the cleansing of dwelling houses?—There are general powers possessed by sanitary authorities for the cleansing of houses which are so dirty as to be a nuisance, but it is very doubtful whether technically vermin constitutes such a nuisance as is defined under the Public Health Act.

9468. The question has never been tested?—Very often the two things are associated, but not always. If there are dirty conditions the sanitary authority can serve notice requiring the cleansing of the house, and that is useful not only for the condition of the walls but for the other conditions.

9469. There is a Cleansing of Persons Act in operation, is there not?—Yes, which empowers sanitary authorities to provide for the cleansing of persons who make application to them for that purpose and for the disinfection of their clothing during the time they are being personally cleansed. It has been very little used in London.

9470. I suppose these dirty persons do not see the point of being clean?—I do not think so altogether, because in Marylebone where provision of this sort has been made, and where there is a large Salvation Army shelter, great numbers of these people have gone there for cleansing operations, so that I am hopeful that people of that class would avail themselves of opportunities if they were really given.

9471. You do not wish to see authorities armed with power to hunt out these persons and apply their powers?—I would like to see some power for the purpose. May I give an illustration in connection with the common lodging houses Some persons among that class will not be received into a common lodging if recognised, because they bring verminous conditions into the house. The inmates who are regular lodgers, people who live for long periods in these houses, very often have rooms allotted to them, so as to prevent association with a newcomer, who may be verminous. It is a condition which is recognised by these people, and is objected to by them, and my impression is that if the sanitary authorities do provide proper opportunities for cleansing, and if there were a power to require that a particularly dirty person should cleanse himself, it would be very useful, and would also meet the approval of the particular class concerned. Of course it would have to be done very carefully, because a power of that sort might be used to the annoyance of individuals, but I think it ought to be in the power of the draughtsman to frame a clause which would answer the purpose.

9472. I understand that the Board of Education have had urged upon them the importance of giving elementary instruction on health subjects?—Yes, and temperance.

9473. I suppose this might take the place of a good deal that is now obligatory in the Department—you could not go on piling up subjects?—There is no doubt there is a limit to the amount of time which can be devoted to education.

9474. Would you say it would be much more useful that education in health subjects should be substituted for grammar, and would be equally good for the mind?—I think I would put health teaching in the forefront. That is one thing there should be no option about. Without health you are nowhere, and even if it has to be done at the sacrifice of some other subjects I think it should be done.

9475. And of course you would attach importance, not only to physical training at the period of school age but after?—Yes, I think it is very important, if it could be managed.

9476. And wherever possible it should be given in the open air, and so you want a sufficient quantity of open spaces and playgrounds?—Yes.

9477. Does the London County Council provide those?—It provides open spaces for the public.

9478. Does it permit them to be the theatre of games?—Yes, and provides gymnasia, and so on. There is one question I should like to speak about, and that is the very strong desire I have to see weekly washing encouraged in the school. Such a system exists on the Continent.

9479. Would you have a bath at every school, or would the ordinary lavatory suffice?—In Christiania and some of the Northern cities, certainly in Berlin and, I think, in Copenhagen—I found some years ago that the basements of some of the schools had been fitted up

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with spray baths, hot and cold water, and I was told that the children were encouraged ito take their clothes off one day a week, and have a weekly wash. I spoke to the teachers about this, and asked if there were any difficulties. They said at the beginning that it was looked upon as an innovation and an intrusion upon the liberty of the parent, and it was not altogether approved. But the children tried and liked it; then others wanted it: and in a short time the whole class were regularly washed. I attach very much importance to the periodical cleansing, to the sense of cleanliness and dignity which it gives, and because it inculcates the habit of cleanliness. It seems to me that the educational authorities here might learn what is happening on the Continent, and imitate them.

9480. That is done in a special department for the purpose?—It was really done in the basement rooms, which are partially used for the stoves which heat the hot water pipes, which warm the rooms up above.

9481. The fitting up of the rooms would not cost much?—No. They found they could spare the accommodation which they had below for that purpose.

9482. (*Dr. Tatham.*) We have had an opinion expressed here that although in the population generally it cannot be said that there is any progressive physical deterioration, still amongst certain sections of the population very probably there is very considerable deterioration: Is that in accordance with your experience in London?—I do not quite understand what is in your mind when you speak of "certain sections of the population."

9483. The very poorest, the dock population, costers, and people of that kind—people of the very lowest grade?—I do not know that I should say that those people have deteriorated. That is if you compare them with the same class of a number of years ago. I have worked nearly all my life in London; I began in the year 1866, and I became very intimately connected with the poor of St. Giles in connection with the cholera outbreak of that year, and my impression is that on the whole there has been an improvement in that class. One sees less evidence, I think, of starvation, and certainly people are better clothed than they were.

9484. You will admit that amongst the very lowest class of the population the conditions are sadly inferior to what they ought to be?—Undoubtedly; I have no question about that.

9485. What is your opinion with regard to the connection of intemperance with that?—I think it is a very large cause of the deterioration of the people. In the common lodging-houses of London where people live perhaps as hard and close as you will find anywhere, one finds frequently men who have begun life in decent social circumstances and are brought down by intemperance, and the careless life which grows out of intemperance, men living from hand to mouth, getting daily only a few pence to pay for their night's lodging and their food. I have some Tables here which I thought might interest the Committee, showing the death rates of persons in common lodging-houses as compared with the death rates of the total population of London. These figures were based upon a population of 21,555, and I think may be trusted to give some indication of the direction in which the great mortality lies. I will put in this Table. (*The document was handed to the Chairman.*) It gives the death-rate from all causes at several ages. At twenty-five years of age the death-rate of London in 1901 was 6·74; in the common lodging-houses of London it was 15·24 in 1903. At age thirty-five the death-rate in London was 12·76, and in the common lodging-house population 22·62; at age forty-five the death-rate in London was 21·79, and in the common lodging-house population 42·56. At age fifty-five in London it was 37·82, and in the common lodging-houses 66·30, at age sixty-five and upwards in London it was 70·42, and in the common lodging-houses 144·30. These differences, of course, are very striking. Then the same thing is observable if the death rates from phthisis are shown and also those from alcoholism. At each age the death rate from alcoholism in the common lodging-house population was very greatly in excess of the death rate in the total London population.

9486. Then you have another Table showing for London and the population residing in common lodging-houses the number of deaths from certain causes, and the total deaths from all causes?—Yes. I put that in because the common lodging-house population is a varying one. This number I have mentioned here was the result of a census taken on the night of the 14th November, a period of the year when the common lodging-houses are rather full. In the summer months there are much fewer people in those houses, because at that time people are in the country hop-picking and so on, and it is very difficult therefore to get any population from which to calculate the death rate. I think those figures I have given rather understate the death-rate in common lodging-houses so far as the mean resident population is concerned.

9487. But it points somewhat in the same direction?—Yes. Therefore I put in the other Table which shows the proportion of deaths from different diseases in 1,000 deaths.

9488. These two Tables relate to males?—Yes. The number of females in common lodging houses is not sufficiently large to enable trustworthy results to be obtained.

9489. The figures for one year are not enough?—No.

9490. (*Chairman.*) This comparison is not between the deaths in the same year of two classes but in different years—one year may have been a little more prejudicial to life than the other?—As a matter of fact 1903 has a low death-rate, so that the comparison made would tend to minimise the difference between the two rather than to exaggerate them.

9491. (*Dr. Tatham.*) You have also given a Table here which I am sure the Committee will consider very interesting, showing the proportion of total population living more than two in one room in tenements of fewer than five rooms according to the last census, and you give in subsequent columns the death-rate per 1,000 living, in three separate years, first from all causes, and then from phthisis?—Yes.

9492. And you give several classes?—Yes. Class 1 comprises a group of districts having from 0 to 7½ per cent. of the total population living more than two in a room in tenements of less than five rooms; Class 2, a group of districts having 7½ to 10 per cent.; Class 3, from 10 to 12½ per cent.; Class 4, from 12½ to 15 per cent; Class 5, from 15 to 20 per cent.; Class 6, from 20 to 25 per cent.; Class 7, from 25 per cent. and upwards.

9493. And as regards the mortality of those classes respectively?—As regards the mortality, perhaps I had better read them in order for each year:—1901, all causes 13·2, 15·2, 16·6, 15·4, 18·1, 19·0, 20·9. 1902, 13·5, 15·3, 16·3, 15·7, 18·1, 19·5, 21·0. 1903, 12·0, 13·3, 14·4, 13·8, 16·2, 16·9, 18·6.

9494. So that from Classes 1 to 7 you have in each case a reduction of the death rate, but comparing Class 1 with Class 7 you have an enormously increased death-rate in all the three years?—Yes.

9495. Then as regards phthisis?—As regards phthisis, the same lesson is taught that the death-rate increased with the proportion of persons in the total of population living more than two in a room in tenements of less than five rooms.

9496. I thought it necessary to ask you to emphasise this question because so far as I know your statistics on this point are exceptional. I know of no others like them. They are very interesting in this connection. Then the next Table you have shows the proportion of the population living in tenements of more than one or two rooms giving like percentages of six classes and also showing the death-rate per 1,000 from all causes and from phthisis?—Yes, that shows that what is true for districts classified on the basis of overcrowded rooms is also true for groups of districts classified on the basis of the number of tenements of one and two rooms irrespective of overcrowding. All causes and phthisis behave in the same way as they did in the districts grouped on the basis of overcrowded tenements.

9497. Then as regards infant mortality, which forms the subject of your next Table, you have the proportion of total population living more than two in a room in tenements of less than five rooms—districts with under 10 per cent., from 10 per cent. to 15 per cent., 15 per cent. to 20 per cent., 20 per cent. to 25 per cent., 25 per cent. to 30 per cent., 30 per cent. to 35 per cent., and over 35 per cent., and then you have the comparative death rates per 1,000 living?—In the seven groups of districts increasing with the amount of population living in overcrowded tenements the infant death rate has followed

the increase, that is to say in districts under 10 per cent. of the population living under those conditions the death-rate was 142, and then as the proportion of population living in those tenements increases so does the infant death-rate, going from 180 to 196 and then to 193, and then going on to 210, 222 and 223.

9498. It is almost steady ?—Yes, there is very little interruption to the increase.

9499. Then the last Table to which I would like to draw special attention is the Table relating to persons resident in the artisans' dwellings of the London County Council. That shows the death rates of the working-class population living under favourable circumstances ?—Yes.

9500. Have you anything to say on that ?—This table enables a comparison to be made between the death-rates of persons living in County Council dwellings and the whole of London during the year 1903. The population dealt with in this table is nearly 13,000. From all causes in the Council's dwellings the death-rate was 11·8; in London, 15·2. At each age, the difference is markedly always in favour of the Council's tenants.

9501. (*Chairman.*) Can it be said to be marked in the case of children under one year old ? It is hardly perceptible ?—I ought to have made an exception there. The rates are 149·7 and 152·6—practically the same. At the older ages the difference is much more conspicuous, under five years of age, 37·2 and 49·5; five to twenty years, 1·2 and 2·6; above twenty years, 9·9 and 14·9. The principal epidemic diseases, 1·64 and 1·75; phthisis, 1·48 and 1·55. That is a little in favour of the dwellings. Then tuberculous diseases, other than phthisis, 0·55 and 0·60; bronchitis, 0·55 and 1·13; pneumonia, 1·25 and 1·28. I may say that the all causes death-rates, at "all ages," have been corrected for differences in age and sex distribution of the population, so as to make them as comparable as they can be made.

9502. (*Mr. Struthers.*) Seeing you succeeded so well in reducing the death-rate in these buildings, have you any idea as to how you have failed with the children under one year of age ?—The view I take of it is that here we have a good class population, having the ability to take care of themselves, but so far as the figures for a single year can be relied upon the infant mortality in this population does not appear to be much below the London average. There is a great deal to be learnt about the means of preventing infant mortality, and even such knowledge as is available has not reached all people having the care of infants.

9503. They do not know enough about it ?—No.

9504. Even in classes which are otherwise well-to-do ?—Yes. *Mr. Murphy.*

9505. Are these people in the model lodging-houses more ignorant about the care of infants than, say, the working men of Hampstead—the well-to-do working class ?—I cannot say that. I have never discussed this question with them. But these people are of the respectable working class, and I should think they would probably be of the same class you would have in your mind in connection with those at Hampstead.

9506. (*Chairman.*) Earning from 30s. to 35s. a week ?—I think I could supply you with information as to their average wages; I think they are in the possession of the County Council.

9507. (*Mr. Struthers.*) To put it shortly, do you think the infant mortality in these County Council's houses could be diminished if the parents were better instructed ?—I think that there is a good prospect that infant mortality could be reduced in that class of the population as well as in other classes.

9508. And there is no other cause which you think accounts for it ?—The subject of infant feeding is probably the most important. Dr. Budin thinks the mortality of infants in the first year of life could be reduced to 90 or 100 in the 1,000.

9509. What does he feed them on ?—He fed his children on whole milk, which I think he sterilised, and this was, in a large number of cases, used to supplement the supply derived from the mother.

9510. (*Dr. Tatham.*) The general teaching of the table seems to be, leaving out the question of infants, that it is at the ages of from five to twenty that the chief saving of life takes place ?—Yes, and I think in connection with that it is important to recollect how much cheaper food has got in some respects—for instance, meat. Meat food is much more largely within the reach of the poor than it was in former years. It is to be purchased really at much lower prices. What is wanted, however, is the teaching of the economic expenditure of money on wholesome food.

9511. (*Mr. Struthers.*) We have a medical man coming here who will tell us that increased consumption of flesh food makes against health rather than for it ?—I can quite imagine that some people eat too much meat, but I look upon the improved food supply of the population as one of the large causes of the reduction of mortality. I know that babies who would not have shared in this have not materially improved, although their general hygienic surroundings are better than they were a number of years ago.

SEVENTEENTH DAY.

Monday, 14th March, 1904.

PRESENT.

Mr. ALMERIC W. FITZ ROY (*in the Chair*).

Colonel G. M. FOX.
Mr. J. G. LEGGE.
Mr. H. M. LINDSELL.
Colonel GEORGE T. ONSLOW.
Mr. JOHN STRUTHERS.
DR. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary*).

Dr. ALEXANDER HAIG, M.A., M.D. Oxon., F.R.C.P., called; and Examined.

Dr. Haig.

9512. (*Chairman.*) You are a physican in general practice?—I am a physician. I only do physician's work.

9513. Are you connected with any hospital in particular?—Yes, the Metropolitan Hospital in Kingsland Road, N.E., it used to be the Metropolitan Free Hospital; also the Royal Hospital for Children and Women, Waterloo Bridge Road.

9514. What led you to think that a large number of people were suffering from food poisoning?—My own experience. I was myself suffering, and should have died if I had not found out the cause.

9515. Up to the date of this discovery you ate the same as other people, I suppose?—Yes. I was a great meat eater.

9516. You suffered from the deleterious effects of the uric acid which is found in all flesh food and other things?—Yes.

9517. How do you attribute to the presence of this poison the physical deterioration which you believe to exist?—Because the poison controls the circulation. It controls the rate of the circulation and the colour of the blood.

9518. It retards the circulation, you think?—It retards the circulation and alters the colour of the blood. Here is a card showing the colour of the gums. It gives an approximate estimate of the blood decimal. Anyone who takes poison never reaches that top colour, and in my book I offer a reward for anyone who takes meat and tea, and has a colour and circulation equal to my own. No one has claimed the reward.

9519. (*Colonel Fox.*) Which do you call the anæmic colour?—The palest colour.

9520. (*Dr. Tatham.*) Is it a question of red corpuscles?—It is a blood decimal or blood fraction.

9521. You say the blood decimal is obtained by dividing the percentage of hæmoglobin by the percentage of cells?—Yes, you get a fraction which is constant and it does not vary with the dilution of the blood.

9522. (*Chairman.*) I suppose there is a certain quantity of uric acid in the human system?—There is in every body. I have to deal with ten grains myself, and on meat and tea I used to have to deal with twenty or twenty-two grains.

9523. Ten grains is not an excessive quantity?—Everybody must have about that.

9526. (*Colonel Fox.*) Is ten grains normal?—It is for me.

9527. (*Chairman.*) It varies in different persons, I suppose?—It bears a certain relation to body weight. The circulation is shown in this way (*explaining the working of an instrument*). Mine was about two and a half seconds—four or five half seconds is normal, and in cases of disease it is even twenty and thirty seconds. The man whose writings drew my attention to it found cases going up to thirty seconds, that is sixty half-seconds. I felt sure that the disease he wrote about was due to uric acid, and that therefore in slighter conditions we should get corresponding variations. This (*showing a diagram*) is the daily fluctuation in everybody's circulation. Everybody's circulation is slower in the morning and quicker in the evening. It varies in everybody. Thus eight half seconds in the morning would be about five or six in the evening.

9532. (*Mr. Struthers.*) What is your own?—My own averages five—being six in the morning and below five in the evening.

9533. (*Chairman.*) This is the variation?—The daily variation, and I can make that anything I please by controlling the uric acid.

9534. The greater the consumption of flesh foods and certain other things the greater the amount of uric acid?—Well, that is the fluctuation shown there. It is due to uric acid, of which there is more in the blood in the morning and less in the evening.

9535. (*Colonel Fox.*) Has a large eater of meat more uric acid in his system than a vegetarian?—Not a vegetarian. I am not a vegetarian. A vegetarian will take poisonous things, such as peas and beans and lentils, and may have more uric acid in his blood than a meat eater. I call my diet the uric-acid-free diet.

9536. (*Chairman.*) It rests more or less upon a vegetable diet?—Vegetable diet is the basis, but as it is taken by the vegetarians it is wrong.

9537. You exclude milk and eggs?—I do not exclude milk. Milk and cheese may be taken.

9538. And butter?—No, butter is all right. Those are the things given at the bottom of my scheme for alteration of diet.

9539. (*Dr. Tatham.*) Do you exclude nitrogen?—No, I rely upon nitrogen, and regulate the quantity of albumen in relation to body weight, and I put people on to it gently by a process like that (*exhibiting scheme*).

9540. (*Chairman.*) Well, then, you attribute to these poisons two chief groups of effects which used to be called diseases you say, but are they not still?—They are the effects of the poison.

9542. But they are produced by the morbid conditions of the body?—Yes, but I have ceased to take the poisons, and my circulation is quicker and my colour is better than it used to be, and my body cannot produce disease.

9543. Will you expain how this affects, say, phthisis?—They are merely the results of things which you have already seen. If you have a circulation constantly under difficulties that body is deteriorating. If you have a body with a defective circulation you will have a deterioration from defective nourishment of all the structures of that body, and that being carried on for twenty or thirty years means disease, as we used to call it, and the degeneration of everything, mind and body.

9544. Of course you attach great weight to anything which controls the circulation?—Certainly, the circulation is the life of the tissues.

9545. Do you think it has more effect in the early stages of human life than later ?—Yes.

9546. Do you think this is of special value in the case of the young and growing ?—Yes, because it is better to grow on foods and not to grow upon poisons. Youth doubles the importance of nutrition, for both growth and nutrition are imperfect.

9547. Amongst which classes do you think there is most abuse of what you conceive to be these unwholesome articles of diet ?—Undoubtedly in the rich.

9548. Well, that is rather remote from the point that we have to bear in mind in the course of this investigation. It is not among the rich that deterioration is supposed to exist to any large extent. At any rate it is not so injurious ?—But of course one sees it among hospital patients very largely.

9549. But the dietary of the poor, of the industrial classes, does not include any excessive quantity of meat ?—Very often in special trades, butchers for instance. My point would be that meat has been increasingly consumed during the last twenty or thirty years.

9550. Do you think that the masses of the people, the poorest of all, get more meat than they did ?—Far more, and they suffer from disease. One of my patients in the out-patients room said to me of the time when she was a young woman (and she was speaking of her daughter who was very pale), "When I was young we never used to see that sort of thing." Thirty years before there was not the same amount of meat taken by that class, which was about the time that she was speaking of, and her daughter's colour was the lowest on that card. Labourers in London eat meat twice a day. When I was a boy in the country they had it once a week on market day, and not always then.

9551. I suppose it is the effect of drinking tea that that class would probably suffer most from ?—Yes, I think that they take tea because they take meat.

9552. That is not altogether the case, because a great deal of the evidence that we have had is that tea is taken in great quantities and in great strength, and they eat extremely little meat ?—But they have eaten it before, probably when they were better off.

9553. Not from what we have heard ?—They may take tea as well.

9554. Have you given any special attention to the effects of tea drinking in bringing uric acid into the system ?—Tea is uric acid. They are simply swallowing uric acid.

9555. Is there a large proportion of uric acid in a cup of tea ?—From a grain to a grain and a half.

9556. Tea of the ordinary strength ?—Yes.

9557. We understand that the poorer classes have tea of very abnormal strength which has stood a very long time, and there would be a still larger amount of this uric acid in it I suppose ?—You could calculate it by the amount contained in a pound of tea. There are 175 grains of heine in a pound of tea.

9558. It depends upon the preparation of the tea as to the quantity you get, does not it ?—Yes, that could be calculated from what is left afterwards. But a person gets about half of what there is in the tea.

9559. (*Colonel Fox.*) When it is only an infusion they do not get much theine ?—Yes; theine is the stimulant for which tea is taken.

9560. But is there more theine in quickly brewed tea than there is in stewed, bottled-up tea ?—There is much more in the stewed and boiled. If it is cooked for a long time there would be a larger quantity than if quickly infused

9561. (*Mr. Struthers.*) Of theine, not of tannin ?—Yes.

9562. (*Chairman.*) And you think that coffee is just as bad ?—Caffeine is uric acid also practically; and theobromine is the same; all those alkaloids are equivalent to uric acid.

9563. What is the model drink for the constitution if you do not drink water ?—Well, of course, wine is not very harmful.

9564. (*Colonel Fox.*) What about beer ?—Beer is about a grain to the pint, but these facts are all published.

9565. Say a pint of beer: would it contain more uric acid than a large cup of tea ?—Just about the same. Beer contains less than tea, and a cup of tea would be half a pint.

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9566. (*Chairman.*) You include peas, beans, and lentils within the scope of condemnation ?—They are twice as poisonous as meat.

9567. We have been told that they are of excellent dietetic value ?—That is certainly not my experience. Their dietetic or nourishment value and their containing poison are two separate matters.

9568. And there is no means of separating one from the other ?—Yes. Most of the poison is in the husk, and you get, say, four-fifths away by taking off the husk. Bean meal contains comparatively little. But still I do not look upon it as a good food, because it still contains some. It would be possible to extract it from meat. You can can get most of it out by boiling if you throw away the soup.

9569. Beef tea is much more unwholesome than the meat, you think ?—Certainly; it contains all the extract.

9570. Are you not somewhat singular in expounding this doctrine ? I mean the profession do not generally attribute it to these causes ?—I think that my profession see physical deterioration increasing. Dr. Jones, my fellow student, asserted that physical degeneration was going on and his experience of life is the same as mine. He was reported as saying that the physique of the nation was deteriorating. He attributed it to different causes from me, because he has not had my experience.

9571. In the course of your professional training you were not struck by any of those facts ?—I knew nothing about them.

9572. Would you mind stating what your training has been and what your degrees were ?—I am Master of Arts of Oxford and Doctor of Medicine of Oxford, and I am a Fellow of the Royal College of Physicians.

9575. (*Mr. Legge.*) Have you studied the question of ventilation much, and the effect of bad ventilation on the blood ?—No, I have not studied it specially; I had to study hygiene for my degree.

9576. Your attention has been specially devoted to food ?—This food question actually controls the blood from morning to evening, and from year's end to year's end, and the other causes are so very much less important that I have not recently given time to them at all. I am perfectly certain that ventilation and crowding have comparatively small effect as compared with diet. The man is what he eats much more than what he breathes. But by all means get as much fresh air as possible. Food, however, is very much more important. I can live in the centre of London and work as hard as most men and be perfectly healthy, simply because I continue to take proper food.

9577. There is nothing corresponding, I suppose, to uric acid in the air ?—No, I think not.

9578. I mean it gives off no gas ?—No, it is a very indestructible substance.

9579. (*Mr. Struthers.*) As to the poison in tea, what you call poison is in the theine and not the tannin ?—Oh, no, not in the tannin.

9580. The tannin may have a harmful effect on the digestion, but it has not the harmful effect of tea, would you say ?—Quite so.

9581. So that fresh-brewed tea is equally bad with stewed tea ?—No, you get more theine in the long-standing tea.

9582. But theine is an alkaloid, and not uric acid ?—It is an alkaloid, but differs from uric acid by one atom of oxygen, and when it gets into the body it is converted into uric acid. All that I can say is that when you swallow theine you excrete uric acid, and I can swallow three grains with my luncheon, and you could see that circulation of mine slowed this evening, and the circulation would be at least one to two half-seconds slower as that tea was going through the blood.

9583. The effect of taking these poisons in flesh foods or tea shows itself immediately, you think ?—Within three or four hours, but it would not show in the average person.

9584. Why ?—Because the person who takes tea is not kept awake, but if he leaves the tea off for six months and then takes it again it shows its full effects. It is the same with all poisons; if you take them for a length of

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time, you do not feel the effects of them so quickly. A man may learn to take laudanum out of a wineglass or tumbler, but let him leave it off for a year, then a wineglass full will kill him.

9585. What is the explanation of that?—Because it has less and less effect upon the man as he goes on with it. Hence uric acid will show its effect on me in a few hours. This is used by both myself and my pupils, and they can tell how much uric acid there is in in the food by the slowing of the circulation. A patient came to me a few days ago, and said, "If I take peas and beans with the shell on I find the circulation slowed much more than with the husks removed."

9586. But that would be taking the uric acid under different conditions from the average person?—But we are told—it is as if we bring the candle into a lighted room, you do not see it, but if you bring it into a dark room you do. A little uric acid will produce an effect in those who are free from it, not in those who are full of it.

9587. But, substantially, your assertion that there is uric acid in tea depends upon the physiological effect?—it depends upon the slowing effect of the uric acid?—It depends upon the chemical composition: theine differs from uric acid merely by one atom of oxygen.

9588. But the difference of one atom may be important?—Yes, one atom of oxygen is replaced in the body. If I swallow theine to-morrow, I shall excrete just exactly so many grains of uric acid as I swallowed theine.

9589. It is a physiological experiment and not a chemical one?—Yes.

9590. And does what you have said as to uric acid in flesh food rest upon your experience, or is it the result of chemical analysis?—The result of both.

9591. But it is a wider term than uric acid?—People have spoken of this group of poisons under various names. I consider that it is xanthine when you swallow it, but it becomes uric acid. If I swallow theine or theobromine I get the same slowing in the circulation and the same effect upon my blood.

9592. Take those pulses which you exclude from the "uric acid free diet," those chemically do not contain xanthine?—I imagine that they do. That has been shown by German chemists.

9593. I rather gather from your own book that on chemical evidence you have not got xanthines?—Is that a recent edition you have got?

9594. It is the fifth edition?—Ah! But there is a sixth edition, it was brought out last year.

9595. Do you think that there are actual xanthines?—There is no doubt that it is so.

9596. But you rest the evidence of there being uric acid poison in pulses upon the result of your physiological experience?—I do not know; physiology is the most accurate test possible, but it can be found by chemical means also.

9597. On the other hand, alcohol does not contain it?—None.

9598. Though beer may?—Beer does.

9599. I believe that these liquors in your opinion are deleterious for another reason, namely, because of the acid?—That is the effect of the acid on the uric acid when it is in excess in the body. That is, it would do harm to people whose blood is full of uric acid.

9600. But all ordinary persons have their body full of uric acid?—Yes, certainly.

9601. So that the taking of beer or any malt liquor would retain the uric acid in the body, and prevent it being excreted, you think?—That is so.

9602. Does that apply to all liquor?—Yes, to all acid liquors, whether made from malt or acid vegetables or fruit.

9603. Beer is an acid drink?—Yes.

9604. All wines?—Yes.

9605. Whiskey?—No.

9606. Whiskey is not acid?—No.

9607. So that it does not have the effect of producing uric acid?—The whiskey drinkers in Scotland are not affected by it and do not get gout, but if they drink beer in England they do.

9608. Is oatmeal free from uric acid?—It is not.

9609. So that it is a dangerous substance?—It has only a small quantity. Xanthine is really the uric acid of the vegetable, and it is present in all vegetables, more or less.

9610. As a matter of fact, in the ordinary process of digesting food a certain amount of nitrogenous substances are converted into uric acid by the body itself?—Yes.

9611. So that, no matter what source you get the nitrogenous food from you are bound to produce uric acid?—Yes.

9612. What is the importance of excluding it when the body manufactures it from any food?—It means in the ordinary man twenty-two grains a day or more, and in other cases by excluding these things there may be only ten grains a day, to be dealt with.

9613. But if the kidneys are capable of dealing with twenty-one grains, what matters it?—It is not a matter of the kidneys but of the solubility of uric acid in the blood. The acid remains in the body instead of passing out, and from this there results slow circulation and pale colour, as you see.

9614. On your theory, if we propose to feed children at school in any way it would be harmful to give them meats or soups made from meat?—Yes.

9615. Indeed, it would be better to leave them alone rather than to give them a meal of that kind—I mean to let them trust to such meat as they get at home?—Almost I prefer temporary starvation to taking poison.

9616. But is not that rather a loose way of using the word "poison," to call a thing like a cup of tea poison?—I see no reason to apply it to opium and refuse it to xanthine.

9617. I see in your notes you speak of the poisons in tea and flesh meat, but you only call alcohol and opium stimulants?—They have a stimulant effect, but opium has another effect.

9618. In the ordinary use of those words people consider a stimulant much less harmful than a poison; but you seem to think that fish and meat is poison, and the opium only a stimulant—I am speaking of the ordinary use of the word poison?—Yes, I have not any very strong opinion on the point. I group poisons and stimulants together. Uric acid is a stimulant and also a poison. If I were to swallow uric acid or to administer to you uric acid, you would ask what tonic I had given you.

9619. I mean in the ordinary use of the word poison it means something whose harmful effects are very soon visible from comparatively small quantities, does it not?—I have pointed out in "The Practitioner" last July that if any of my professional brethren were to take uric acid in certain conditions, that to go beyond a certain point is very distinctly dangerous, and I advised them not to partake freely of it.

9620. Then you say that you think that the evil effect is increasing because of taking quantities of those poisons, and this is one of the chief causes of the deterioration of the people?—Yes, because the poisons control the circulation, any organ that is constantly working with a bad circulation must be deteriorating.

9621. But that applies equally to the well-to-do classes as to the poor?—It will affect the circulation more markedly in the poor and under-fed. It would get into the blood sooner, because their blood is in a better condition for dissolving and receiving it. The better classes will not be affected in that way, but they will get gout.

9622. But if the population has been taking more and more poisons then there ought to be an increase in the death rate?—Other things may have had a diminishing effect upon the death rate. So far as I know, as I pointed out in the last edition of my book, certain diseases due to uric acid have increased, as is shown by statistics of insurance offices, which I quote.

9623. Then the diminution of the death rate must be due to the decline of other diseases?—It may have been.

9624. There is no doubt about the fact that there has been a decline in the death rate in spite of this increasing consumption of flesh and tea?—That may be, but other things may account for that. In the statistics that I quote it is not so. All these uric acid diseases have been increasing in fatality.

9625. You wrote an article in the special number of *The Practitioner* in July, 1903, on the subject?—Yes.

9626. But the same subject was treated by many other writers at the same time who were distinguished medical men?—Yes.

9627. Do you find on the whole that their views coincide with yours or are they radically opposed to yours?—They had not had my experience.

9628. But they are different?—Very different at present.

9629. (*Colonel Fox.*) If what you have told us be correct, then the people have very little left to eat. You would like to leave out of their meals tea, meat, bacon and fish. Now fish is one of their principal articles of food and tea is their usual drink. It seems to leave so little for the poorer classes to get nourishment from?—I myself live chiefly on bread, biscuits, and breadstuffs, rice, macaroni, etc.

9630. But do you say leave out meat and bacon?—Yes, and live on bread.

9631. And fish?—I say leave out all these. I live chiefly on bread.

9632. But fish is one of the principal things the poor can get cheap to eat, and especially fried fish?—I am of opinion that they get disease along with it. It is the cheapening of these foods that is the cause of the deterioration.

9633. You would encourage them to drink beer, I see?—No, but I say they may continue it for a time.

9634. "Beer, wine and spirits may be continued"—but they must not touch tea?—As a matter of fact no one who lives on non-uric acid diet for eighteen months or two years will ever take a stimulant again. They never want it. That has been borne out by Mr. Miles, the well-known athlete, who has lived on plain diet. He lived on my diet and he became a very much better athlete and he had a great tendency to take excess of stimulants and he has thrown them up, and now he says "I feel so very well and so improved that I do not even want a glass of stimulant." I know that if they take my diet they can give up those stimulants, therefore I do not think it necessary to cut them off at first.

9635. Is not excessive uric acid in the blood caused by an accumulation as a rule?—Excess of uric acid is due to the accumulation of that which you swallow. When I was a meat eater I had twenty-two grains to deal with every day, and I accumulated sufficient uric acid to cause a very serious illness indeed; to-day I have only to deal with ten grains and am rarely ill, on twenty-two grains I was never well.

9636. Would not a very hard-working man eliminate that by sweating from the skin?—No. I do not think that there is any working man whose blood and circulation is equal to mine, because if it were passing through his blood it would cause anæmia and slow circulation.

9637. I thought that the cause of uric acid was the sedentary life where the skin does not act freely?—I am afraid not. That was what I was told when I was a junior. I used to be treated by other people in that way and they could not cure me, and they said, "Go and cure yourself," and I found that by leaving off meat I was better. Anæmia and slow circulation are universal among the people who take those things.

9638. Are not there three safety valves for the elimination of uric acid, namely, the kidneys, the lungs and the skin?—The kidney is the most important one. But it is not a matter of passing by the kidneys so much as solubility in the blood. But no one swallows uric acid with impunity. All who take it suffer from it either in the blood or in the joints, and you can see when it is in the blood and feel it when it is in the joints.

9639. (*Dr. Tatham.*) You have spoken here of your system. I have no doubt that in your book that system is set forth very thoroughly in detail?—Yes.

9640. But would it be possible in a few words such as we might print in your evidence that you could give a short statement of your system?—My system is simply to leave out all uric acid from the food and swallow none instead of taking twelve or more grains a day. It is included in my private notes which I give to patients and it is also in my book. It simply means swallowing none instead of swallowing twelve grains a day, as most meat and tea takers are doing.

9643. I want to place myself in the position of the man in the street and be able to gather, for instance, from your evidence before this Committee what your system is in detail and what it would be practicable to do?—My system in detail is simply taking those foods which can be shown chemically to contain no xanthine or uric acid, and the chief of these foods are mentioned in these papers as bread fruit, nuts, macaroni, rice, all cereal foods, cheese and milk. *Dr. Haig.*

9644. (*Mr. Struthers.*) Perhaps you would give a short account of the theory on which you base this system—this physiological theory of yours?—Well, the physiological or pathological theory is that uric acid gets into the blood, and that it blocks the small capillary vessels, and that accounts for the difference in the circulation which you have seen, that it is a mechanical blocking of the vessels by small particles of uric acid floating in the blood. That has two effects—it raises the blood pressure and it prevents the nutrition of all the tissues of the body. The trouble from which I used to suffer was high blood pressure headache. That was due to the blocking of the small vessels by uric acid, the heart was trying to shove the blood through the small vessels and unable to do so, and the pressure arose between the heart and the small vessels. The rise of pressure caused pressure in my skull which caused the pain in my head. That is one side of the question, namely, the effect of uric acid on the vessels. The other side of the question is when you clear the uric acid out of the blood or drive it out by a pint of beer, it then goes into the knee or the big toe or the thumb and produces what is known as gout or rheumatism, and it produces a local irritation and those are the two great groups of so-called diseases—the circulation group and the local or arthritic group. My treatment, of course, is simply prevention. I do not swallow the poison, and I do not suffer. I could swallow that poison any day, and you would see by the slowing of the circulation that it is passing through the blood, and I could show the hours by those curves of which I showed you specimens.

9645. (*Mr. Legge.*) You said that the removal of the husk of beans &c., took away a considerable amount of poison?—Yes.

9646. Would you say the more refined flour was the better food?—Yes.

9647. And white bread is better than brown bread?—Yes, I always say white bread and biscuits and not brown.

9648. We have heard that a great deal of the salvation of society depends upon eating brown bread?—I think that white bread might be made better than it is, but brown bread contains poison.

9649. But the white bread, so long as it is due only to the refining of the flour, is less poisonous?—There would be less uric acid in it.

9650. Is there any uric acid in sugar?—I am not aware of there being any.

9651. (*Chairman.*) I take it that you do not mean to imply that there is anything special at the present day in these dietetic conditions which are unfavourable to health, I mean, one must not look to any special degeneration in the present day from the things you evidence, because they have always been a principal part of human dietary?—The poison I am speaking of has been taken in increasing quantities in the last thirty years, and in those thirty years my observation coincides with that of others that there has also been an increase of deterioration.

9652. But I should certainly think, as regards the classes that habitually consume meat, less meat is consumed in bulk now than used to be the case—that meat was consumed in greater and grosser quantities fifty and sixty and 100 years ago than now?—Surely the meat per head of the population has increased, because a larger number of the population eat meat? It has enormously increased.

9653. That may be so?—And you must remember that in the case of the upper classes you reckon as meat such things as soup and meat extracts and jellies and things of that kind. It may not be meat. I often get people who say that they do not eat much meat, but when I come to their diet I find that they are taking these other things, which are quite as bad. One of my medical friends told me that he had a patient who was suffering very obviously from uric acid poisoning, and when he went into the diet he said he could not understand where it came from, because he lived almost entirely upon my diet. Later on, however, the patient, who was an hotel keeper, said, "I take a good deal of beef tea; in fact, my house is famed for beef tea."

9654. That was the worst poison he could take?—Yes.

Dr. C. R. Browne, M.D., B.C., Univ. Dublin, M.R.I.A., called; and Examined.

Dr. Browne.

9655. (*Chairman.*) What has been the extent of your medical experience?—I have been in practice for the past thirteen or fourteen years in Dublin.

9656. In connection with any special hospital?—Well, part of the time, for three years, I was attached to the staff of a military hospital as Civil Surgeon; I was surgeon to one of the hospitals, and part of the time I was at the Adelaide Hospital in Dublin, out patients' department.

9657. And therefore you have had considerable experience as to the condition of the classes amongst which physical deterioration is alleged to exist?—Yes, but my main experience and the classes to which I have given most attention is that of the rural population.

9658. Have you formed any opinion as to whether the rural population of Ireland is suffering from deterioration?—Well, I think, while there is no direct evidence upon the subject, there are reasons from which we may infer that there is a certain amount of decline in it, very slight I think—not so much in the rural as in the urban population. Still I think there is a slight deterioration in the rural population.

9659. Are there actual measurements or data of a kind which would justify that conclusion?—The only measurements are my own, and those of the Anthropometrical Committee. The Anthropometrical Committee's were only 277 cases in all. My own are something under 1,000, and I am afraid that those are hardly sufficient to draw any definite results from. Besides we have no former standard to go upon.

9660. What do you hold to be the indirect evidence of deterioration, or the causes from which a certain amount of deterioration may be assumed?—Well, the principal and main cause is, I think, emigration. The sound and the healthy—the young men and young women—from the rural districts emigrate to America in tremendous numbers, and it is only the more enterprising and the more active that go, as a rule.

9661. That would mean that the less able-bodied are left to reproduce themselves?—They are left to reproduce themselves, and carry on the race.

9662. I suppose the withdrawal from Ireland of a certain section of the population leaves those that remain with more opportunities for employment and advancement within their own country, does it not?—To a slight extent, but on the whole, it is a very slight extent. There are no industries, you see, except in the north.

9663. Has not Sir Horace Plunkett's organisation introduced some industries?—That is just beginning to act; the effect of that has not yet become noticeable.

9664. Have you any means of testing whether it is the case that the people left behind are weak and unsound to any large extent?—The only things that we can look at are certain diseases—deficiencies—which have increased. I do not know that I can get a word to express my meaning—there has been an increase of insanity.

9665. That is very noticeable, indeed?—Yes.

9666. And the present ratio has reached now, what?—One in 173 of the population.

9667. Whereas fifty years ago it was one in 600?—One in 730, or something like that.

9668. That is rather an appalling condition of affairs?—Yes, it has been ascribed to a great many things.

9669. You must make some allowance for some kinds of insanity being better classified now, than they were formerly?—That is the case to a certain extent, but even allowing for that it is greater.

9670. What is now classed as insanity was merely treated as senile decay, was it not, thirty or forty years ago, and no attention paid to it at all?—Yes, but taking all these things into account, that increase of insanity is not only relative, but there is an actual increase in the country.

9671. Is it insanity of a bad or incurable type?—Generally, it takes a religious form amongst the country people, and very often it is very violent.

9672. Have you tested the increase in insanity by the number of admissions or how—on what basis is it established?—It is taken from the Lunacy Returns.

9673. The number of admissions?—The number of admissions.

9674. May it not be the case that a great many of those people admitted undergo remedial treatment, and go out, and are readmitted?—Yes, but I do not think that they, on the whole, would amount to a very large proportion.

9675. It does not explain the very large amount of increase?—No.

9676. Have you come to any idea as to what the increase of lunacy in Ireland is due to, besides what you say of the drain of the better types of the population?—It has been ascribed to a great many things, but I have never been able to satisfy myself as to any real cause. Some of it is ascribed to an increase of alcoholism. I do not think there is an increase of that in Ireland by any means, from what I have noticed during the past twenty years. The Lunacy Commissioners ascribe some of it to the excessive quantity of tea-drinking.

9677. Should you say that there has been a greater increase in the consumption of tea than of spirits?—I should think so. It is very marked the increase of consumption in districts, where the people took comparatively little a few years ago, and the amount taken now is something tremendous. Only the other day in Queen's County I found that in every cottage for some distance round the place where I was they took it at all meals, and it was generally kept in brew on the hob and taken in sups all day.

9678. The Irish peasant takes very little meat?—Very little.

9679. So that if you take the view of the last witness they are taking uric acid all day?—Solely in the shape of tea—a little fish on Fridays and a little bacon or fresh meat on Sundays. In the western populations, among the people on whom myethnographic surveys have been made, the staple of their diet is fish, round the coast-line and inland it is simply potatoes and tea, instead of barley-meal and oatmeal, which they used to consume in large quantities. That has been banished, and the barley-meal is now used for the cattle mostly.

9680. You have noticed an increase in pulmonary consumption in Ireland?—Yes, a very considerable increase.

9681. The Registrar-General's Returns prove that?—Yes.

9682. You are aware that it has diminished in this country?—Yes; but at the same time it is increasing in Ireland.

9683. You think on the whole there are reasons for suspecting the decline of national stamina?—Yes. I do not know that there is any reason to believe that there has been a decrease in the stature which you hear so commonly alleged. I have not seen that. My own observations, so far as they have gone, do not seem to have borne that out.

9684. On the whole, you would think that this decline in stamina is probably due to the change of diet not being beneficial?—To some extent, added to what I have before mentioned.

9686. Is anything done in Ireland to bring home to the people what dietary is best for their physical development in the schools or by any means?—I do not think so.

9687. They are left to the light of nature?—A few efforts have been made by the Dublin Health Society in Dublin and its neighbourhood, but beyond that I do not think so. With the bulk of the rural population in Ireland the question is to get food at all. I think in a very large part of the country that is so.

9688. What do you say generally upon the physique of the Irish population?—I think on the whole that their physique compares very favourably with that of the other parts of the three Kingdoms.

9689. Would you mind giving us that in greater detail ?—As regards the physique of the rural population of Ireland, taken as a whole, it certainly appears to be far superior to that of the working classes in the towns. The evil influences of town life on the physique of the people have been well established, the effects of squalor, bad ventilation and overcrowding being the stunting of the growth and the blunting of some of the faculties. Another factor which plays an important part in the acknowledged decline in the physique of the town dweller is insufficient nutrition in childhood. The parents are often insufficiently fed, which reacts on their offspring, and even when earning enough to support the family they often find the temptations of the public house so great, that a very insufficient margin is left for food and clothing for themselves and their children.

9690. Do carelessness and intemperance account for more than poverty ?—Carelessness and intemperance do, in my opinion, account for more than poverty, but I may be wrong. Then too especially in the manufacturing towns—I specially refer to Belfast in this connection—the custom of bottle-feeding infants and the use of patent foods, which began with the richer classes, has now spread to the working people. The working mother has no time to suckle her infant, which is generally fed from the old long-tubed feeding bottle, which, being difficult to clean, becomes foul and causes disorders of digestion. As the child grows older it is fed in many cases with insufficient and improper food. Under these circumstances it is not to be wondered at that rickets and delayed dentition become common and that the teeth are of poor quality. Poor teeth decay early, and their loss must have an adverse effect on the growth and development of a young person by causing digestive disturbances and interfering with nutrition.

9691. Should you say that the condition of the urban population of Belfast and Dublin was worse than the large manufacturing centres in England ?—I have not had any experience of large English manufacturing towns, and I carefully left them out. From what I have seen of recruits, however, I should think the conditions are very much about the same.

9693. Would you continue what you were saying about the evil effects of town life ?—Town life, too, has an adverse effect on some of the faculties, the crowded and noisy streets, workshops, and factories giving little range for vision and dulling the hearing. The decrease of the powers of vision and observation have become so noticeable that an Army Order has been recently issued directing attention to the matter and instituting a system of training of the sight designed to improve keenness of vision and powers of observation. The fishermen and small farmers, on whom most of my observations have been made while on my ethnographical surveys, for the most part have astonishingly keen sight and powers of observation due to their mode of life and training from childhood.

The difference in physique between the men of the farming class and the working people of the towns is very striking. The contrast may be noticed especially on the occasion of large political processions in which bands or lodges of farmers and of city artisans are to be seen side by side, when the greater stature and bulk of the farmer are at once noticeable.

9694. Are the Irish population tempted to migrate into the towns to a large extent ?—Not to a large extent, except from Antrim and Down into Belfast and from Donegal and Londonderry into Derry and, to some extent, from the southern towns into Dublin. The other towns, with the exception perhaps of Dundalk, are declining.

9695. What do you take to be the main factor governing the case ?—I take the main factor of the decline in the town populations to be deficient nutrition.

9696. And environment during childhood and youth, you say ?—Yes, and environment.

9697. But you think notwithstanding the superiority of the Irish rural population that there are signs of deterioration, as far as physical character is concerned ?—Well, there is a general opinion to that effect. I have not been able—as I have said in the opening paragraph of my *précis*, to find definite proofs of this. But I have fully satisfied myself that this is the general opinion everywhere.

9698. But still you have evidence the other way ?—That seems to bear it out.

9699. You have the evidence drawn from the constabulary ?—Well, the Constabulary and the Metropolitan police are mainly drawn from classes and parts of the country which are more or less on the decline in numbers. They are drawn, not from the labouring classes, but from the farming classes of Tipperary and Limerick and Mayo, and those large pastoral counties, but they come from the farming classes, not from the labouring classes. This difference is quite noticeable even to the man in the street.

9700. That class is not deteriorating ?—No, I do not think that it is. It is better fed, and they live a healthy open air life. Milk forms their staple diet in childhood.

9701. Does the Irish peasant get much milk ?—The Irish labourer gets, now that the creamery movement has been established, not so much as he used to, as it is sent to the English and Irish towns and the labourer does not get much. The skimmed milk is largely given to the calves. I happen to know in Queen's County and Tipperary that the farming classes get plenty of milk, as they do everywhere.

9702. They do ?—Yes, except in the extreme west where the small cotter farmer gets comparatively little.

9703. According to your observations has the stature of the Irish peasant materially diminished ?—We have no standard to go back to.

9704. But from observation what would you say ?—I do not think there is any proof that the stature has diminished. I see nothing to indicate that in the past twenty years.

9705. Have their physical characters suffered ?—I think so.

9706. You think that the Irish tenant is not so broad-chested, not so much bulk in proportion to height ?—There is more anæmia about.

9707. That you trace to insufficient diet, or would it be to uric acid as the last witness said ?—I do not know whether he would agree with me there. But there are two districts in County Mayo, where I happen to have stayed, and side by side they contain, one a pastoral population living mainly on vegetable food, and another engaged in fishing. The two districts are the Mullet, North Erriss, containing the town of Belmullet, where the staple food of the people is—potatoes and fish; in Ballycroy district, although the people live in a sea-coast region, they do no fishing at all, they are a separate colony, and they live on tea and Indian meal and potatoes. The potatoes do not in a bad year last beyond Christmas, and then the Indian meal supply has to be fallen back upon, and with the change from the potatoes to the Indian meal there is generally an epidemic of diarrhœa through the whole district.

9708. Their digestions are upset ?—Yes, but the Ballycroy women are noticeable for anæmia, at least a very large proportion of them, while that is not so in the case of the people of the Mullet of Erris.

9709. Who live largely on fish ?—Yes.

9710. (*Mr. Struthers.*) But the Ballycroy people take tea ?—They all take tea at meals to a very large extent.

9711. In excess ?—Yes.

9712. And that might outweigh any difference in other respects ?—Both people take tea.

9713. (*Chairman.*) You attach great importance to the value of an anthropometric survey ?—I do, as the only means of getting at how we actually stand.

9714. You would agree that existing data are wholly insufficient ?—It is wholly insufficient.

9715. Will you describe what you have to say with regard to the value of existing data ? I think it would be useful ?—Certainly. The only existing data are first, the recruiting statistics, second those of the British Association Anthropometric Committee, and our own statistics from the Dublin laboratory.

9716. Which have been intermittent and sporadic ?—Yes, and of certain selected districts which have not covered the country as a whole.

9717. What about the recruiting statistics ?—They are wholly and completely unreliable. They deal only

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with a certain class, and that class is subject to variation according to the state of the labour market. Then again the recruiting standards vary tremendously, and there could be no comparison between men now and fifty years ago, owing to this variation of standard. You cannot get back to a certain date and say that the minimum standard was such and such on a certain date and it is so and so now, therefore there must be a decline, because the standard will depend a good deal upon demand and supply. If the establishment of the Army is small and the state of the recruiting is brisk they can afford to fix a higher standard, whereas in time of war when there is a big demand the standard must fall.

9718. As to the anthropometric investigations carried out in the country, you think that they are quite insufficient ?—Quite insufficient. The British Association only had 270 Irishmen and on that they base their standard of five feet eight and a half inches—the Irish average standard. My own statistics covering only certain districts —the Western and the Northern Districts—not those from which the notoriously big men of the country come, amount to about, roughly speaking, a little over 400 men, and their average runs about five feet seven and a half inches. But I would not like to base on that although they are fair samples of the different districts. The average stature ranges in various districts from five feet eight and a half inches to five feet six inches. It is a racial question, and also one of nutrition. We have absolutely no standard—nothing to fall back upon from the past, and we do not really know where we are at the present time. My other observations have been made on students and the professional classes, and of course they do not come within the view of this inquiry.

9719. Would you just outline your scheme for a thorough and complete anthropometric survey of the nation ? —My scheme is hardly worthy of the name of a scheme. It is a mere rough outline. I should think that as complete a survey as possible should be made, and then it should be repeated again after a term of years, so that then we could really have a chart and watch the increase or decline of the different physical characters.

9720. It might be continuous taking certain parts of the country from year to year ?—Yes, my idea would be to take a county, then let the surveying party move to the next county, and so on, to work up completely for Ireland ; for instance, have the country mapped into the present four divisions roughly—taking the four provinces, and then by the time that one province has been completely finished it will be pretty nearly time to go over it again and get a second series. The whole country might be covered in that way in the course of five or ten years. In Ireland there would be special difficulties that would not be found in England, but I do not think that they are at all insuperable.

9721. Is it the repugnance of the people to submit themselves to examination ?—Yes, and I generally find that a little patience and a little tact would overcome the difficulties.

9722. You would connect the whole work with the central bureau, which should organise it and carry it out ?—Yes, and taking into consideration the differences of local circumstances it would be better to carry it out separately in each of the three Kingdoms, but on an entirely similar basis and under a head office in London.

9723. You would make your observations, I suppose, on school children ?—On school children and adults.

9724. When they have just reached the full period of adolescence ?—About twenty to twenty-one years of age.

9725. Twenty to twenty-five, I suppose. Then with regard to school children, once or twice in the course of the school career would be sufficient, would it not, to make notes of them ?—Annually, if possible.

9726. You do not think less often would be sufficient ? —That is so.

9727. You admit that valuable results would be obtained ?—Yes.

9728. But it should be annual, if possible ?—Annually, if possible. That would be governed by other considerations.

9729. Have you formed any opinion as to what data should be collected ?—Yes, I think that stature, weight, if possible, chest measurement—both after a full inspiration and expiration ; and the cranial measurements might be taken too with advantage. Length, breadth and height of the auricular radius from a line connecting the two external auditory meati. And then sight and hearing—the sight is important.

9730. Do you attach much value to pigmentation ?— That is more a racial question. From my own point of view I would attach value to it.

9732 Racial facts may be good for correcting erroneous impressions ?—Yes, from that point of view. And another point, with children there might be a difficulty, and with adults, an occasional inspection of the teeth would be of value.

9733. That is a different question. Do you think that the school teachers might be utilised to any extent ?— I think they might, for observations upon the pupils.

9734. Could they be trusted to make the measurements and report them to the surveyors ?—Well, some of the rougher measurements they might. But for the finer measurements not only would they require careful training but constant inspection to see that they keep right. If I were not in constant practice, I would rather distrust my own results.

9735. Of course you realise the more easily a scheme of this sort can be carried out the more chance there is of it being accepted ?—Yes.

9736. One does not want to magnify the difficulties at the outset ?—The best results would be got from an itinerant staff : and this staff could be easily got. They would not require a very high rate of pay. There are plenty of men available, men of a class such as pensioners of the Constabulary, or ex-sergeants major or staff sergeants of the R.A.M.C., who have had a certain amount of training in measuring recruits and on the physical characters of men and who are accustomed to keep accounts and registers accurately.

9737. In drawing up your scheme, did you form any estimate of the cost so far as it is applicable to Ireland ?— No, in drawing it up the only way in which cost came into my mind was to see that it should not be too expensive a scheme.

9738. That was in your mind ?—Yes.

9739. You were associated with Professor Cunningham in some of his investigations carried on in Ireland ?— The laboratory in which I have worked for him for the past ten years or more was under Professor Cunningham and I worked with him in it.

9740. Have you seen the scheme of Professor Cunningham ?—Yes, since I have sent this memorandum in I have.

9741. May I take it that you are in general concurrence with him ?—Yes.

9742. Your scheme is very much the same as his ?— We have often discussed the question of whether, if such a thing was adopted, looking upon it as a purely visionary thing, what it should be.

9743 You mean a counsel of perfection ?—Yes, we have spoken of our ideals upon the subject.

9744. You are in agreement with Professor Cunningham both as to the value of carrying out some such investigation and in your belief that the general lines of the scheme he recommends are as good as can be adopted, tentatively at any rate ?—I think so.

9745. (*Mr. Legge.*) A considerable feeling has been expressed that white bread is not so good as brown bread ?—I know that there has.

9747. What do you think of eating this white bread ? —As taken by the Irish peasants, this white bread, composed as it is, when it is home-made, of white bread flour mixed with Indian meal, when it is consumed it certainly seems to result in a good deal of flatulence and making the people very dyspeptic.

9748. But you are aware of the recent American experiment, which tends to show that a white bread made of the most refined white flour is really more nutritious than brown bread, that the elements of nutrition are more assimilated ?—But in the first place they do not get fine white flour, and the method in which it is prepared is not an ideal one. The baker's cart is now going through the country very largely, even in places where nothing but

home made bread was used, and I am afraid that the baker's bread in the rural districts is not much better than the home made stuff that they consume—it is sour and sometimes sodden.

9749. You prefer the oatmeal if you can get it ?—Yes. But in its place there is generally Indian meal.

9750. Have you been struck by the large number of athletic records held by Irishmen, enough I believe to indicate that they are the most athletic race alive ?—Well, the athletic class in Ireland is mostly drawn from the class I have referred to which supplies the bulk of our men for the constabulary, practically the farming class.

9751. They seem to be a most prodigious race ?—They are well fed, big, brawny, muscular men.

9752. Many Yankee athletes are imported Irishmen ?—Yes.

9753. Now a man like the two Davins, Pat and Tom Davin, were they of the farming class ?—I should say from the name they probably came from the midland counties. Names are so localised in Ireland that you can generally make a very fair guess.

9754. What do these fellows eat ?—They have milk and eggs and potatoes in large quantities and a little meat. Fish or a little meat during the week and meat on Sundays.

9755. Do not you think if the Scotch were to abandon the oatmeal they might succeed against the Irishmen which they never have yet been able to do ?—The racial question comes in there, because these men of the mixed breed in the midland counties are probably on the average bigger men. I do not know, but they probably are bigger and heavier. I am judging from men that I know.

9756. About this anthropometric survey, you would not seriously argue that a pensioner from the Irish constabulary or the Dublin police force would make a better and more accurate surveyor than a certified medical practitioner ?—By no means.

9757. Nor indeed a trained and certificated teacher who had been through some sort of probation ?—But the certificated teachers would have to be paid much more highly. My scheme would provide simply that those should be the men who would do the manual work, the actual measuring and recording, but that they should be under the supervision of inspectors who I think should be medical men and men of some experience on the subject Of course the very best results I have no doubt would be got if all the observers were trained medical men or trained teachers of a high class, but I am afraid that is out of the question.

9758. You have never been a certifying surgeon under the Factory Act ?—No.

9759. In every district in the whole country there is such a person as a certifying surgeon, you know ?—I am aware of that.

9760. Whose business it is to see children and young persons to be employed in factories on reaching a certain age and take stock of them. It would be a very slight addition to the examination that they now conduct, to take such measurements as Dr. Cunningham submitted ?—I am afraid you hardly realise the extra amount of work it would be.

9761. But we have put it to some of them and they are ready to undertake it ?—I have tried the experiment myself. I have tried how many men it was possible to get through in an hour, and it is astonishing how few I could do.

9762. But the certifying surgeon is paid for his work, and he would have to be paid extra for this ?—He would have to be, and the staff would probably have to be increased.

9763. Oh, no, when we had a certifying surgeon from a big district in Glasgow he said that he saw and passed a labour certificate for about 2,000 children in the year; that is a considerable number of observations for one man ?—It is.

9764. And a very good proportion of the population of his district were the juvenile population of the district ?—But then if he went to take the measurements of those himself he would find without a trained assistant that the number that he could get through would be very seriously diminished.

9765. Well, but how long would it take him ?—I should say about eight or ten in an hour would be a very creditable rate of work—eight or ten in an hour judging from my own experience. *Dr. Browne.*

9766. Dr. Cunningham's is very different ?—To take the same set of observations that we have had in Trinity College schedule, it took fully as long as that.

9767. I do not know whether the schedule that he submitted to us contained more than ours, but would pigmentation take a minute to a trained eye ?—No, it does not take so long, but it has to be carefully done like everything else.

9768. However, if it was found it was not to be so serious as you anticipate, you would be quite ready to acquiesce in the utilisation of the existing means ?—As far as possible, certainly.

9769. Your measurements of the head would be got by the use of calipers ?—Yes.

9770. One medical gentleman would take the circumference without the calipers ?—I would not agree to that. We tried the circumference in Dublin, and we abandoned it it as being inaccurate.

9771. Why ?—The amount of hair a person has makes a difference, and another thing is that the tape is so apt to slip and it is so extremely difficult when a considerable number of people are to be got through to get it accurately and on the right place—to get the exact maximum. It is rather a waste of time—it takes longer than with the use of the calipers to get it, and besides, gives no idea of the shape of the head. If such a caliper as Mr. Henry's self-recording instrument is used it can be done pretty rapidly and accurately, and there the difficulties of training are to some extent got over because the personal equation does not come so largely into the matter.

9773. You know, of course, that the existence of this Government Survey would not do away with the necessity of a more detailed investigation in particular localities ?—Certainly.

9774. So that one would be quite content to have very few measurements indeed for the general survey ?—Certainly.

9775. It would only bring out comparative results which might call for thorough investigations in certain localities ?—So far as I understand that is all that Professor Cunningham proposes.

9776. You do not think, to get reasonably adequate results from the general survey, that the list of details could be reduced ?—I do not think that it is excessive.

9777. You can clearly see that if one could reduce it to height, weight and chest measurement it would be very much simplified ?—It would be very much simplified.

9778. And that was practically considered enough by the old survey of the British Association ?—So far as it goes even that would be of value.

9779. (*Mr. Struthers.*) On that point of the factory surgeons, do you say that there are factory surgeons in every district of Ireland ?—There are.

9780. Even where there are no factories ?—Well, there are factories such as breweries and distilleries more or less in all parts of the country except in the rural districts.

9781. Such places as Donegal, for instance ?—Yes, and Mayo and Galway. Even there, Galway, in places, you would have distilleries to deal with.

9782. But still the population to be examined might be at considerable distances from the place where the surgeon lives ?—Considerable; the rural population bulks in Ireland, and it is not the town population that makes up the larger total.

9783. Is the factory surgeon a man in practice otherwise ?—Yes.

9784. And who generally lives in the immediate neighbourhood of the place where he certifies the people ?—Yes.

9785. So that he would not have time to go round ?—No. He would need to have a special staff in addition.

9786. There would be a special difficulty in carrying that out in Ireland ?—Yes.

9787. On the matter of emigration, is emigration to America and other countries increasing or diminishing

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at present?—It has of late years rather diminished. It is not as heavy as it was in the eighties.

9788. But still it is very large?—It is very large.

9789. Is it general from the whole of Ireland or more marked in particular districts?—Is it general from the whole of Ireland or more marked in particular districts?—It is more marked in particular districts. I know of districts even in the most congested parts of Ireland where the flow of emigration is very small. The group of islands at Great Man's Bay where the soil is almost all rock and bog, and where the position is that the people have very little to live upon, and yet the amount of emigration is very slight.

9790. But of course that is a population living on the verge of starvation, so to speak?—They are on the verge of starvation.

9791. And those are the people who will not emigrate who have brought up the estimate of insanity and so on?—There is very little insanity in this particular district. They do not pull up the insanity returns, but there is a considerable amount of consumption.

9792. As to the districts where insanity is most prevalent is it more marked in one part of the country than another?—There are some districts in which there is a considerable quantity. In Wexford it is said to be very prevalent in parts.

9793. That is a rural district?—Yes.

9794. Is that insanity more prevalent than in the towns do you think?—I cannot recollect at the present moment whether it is or not. I am under the impression that it is, but I cannot speak positively.

9795. You think that it is more in the rural districts?—In the rural districts. I may be wrong, but that is my impression.

9796. Because it will be a very important factor as to the effects of emigration upon this insanity?—It would.

9797. I understand that it is from the country districts and not from the towns that the emigration comes?—From the towns to some extent. The towns with the exception of four or five are all decreasing.

9798. But those four or five are increasing?—Yes.

9799. And increasing at the expense of the smaller towns?—At the expense generally of the rural districts around them. The decrease of the rural populations of Antrim and Down has been considerable, and yet the populations of the counties on the whole have increased owing to an increase in Belfast, part of which is in Antrim and part in Down.

9800. Has the population of Ulster diminished within the last decade?—Yes, it has declined.

9801. To what extent?—I forget. All the provinces have declined.

9802. From what districts is the emigration most marked?—From the rural districts, the pastoral districts, I think.

9803. From Meath and Tipperary?—Yes, and there are considerable pastoral districts through Connaught.

9804. Not from such districts as Cork?—There is an emigration there too, but mostly from the farming class. The fishing populations do not emigrate much.

9805. As to the farming class, do they emigrate singly or *en bloc* by family or individuals?—Generally by individuals now. It is the young unmarried men and the young girls that have gone. One member of a family goes out, and remits home money to a brother and sister to bring them out.

9806. But that means that the whole family will more or less go out?—Eventually.

9807. And not that the weak still stay at home—there is no conscious selection of the strong?—No. But it is only the enterprising ones who will go.

9808. But if he is in the habit of sending money, will they not go?—Even then a good many will not go. I have known of cases where men tried to induce their brothers to go, but they would not go, saying, the hours of work are too long.

9809. But the men who stay at home are physically markedly inferior?—Not to the naked eye, but certainly in enterprise inferior.

9810. You judge the enterprise by the fact that the other leads?—Yes, and if that brother returns the difference shown in his business capabilities is very striking, and some of them do return and they are markedly superior to the people round them at home.

9811. But the entire change of living has that educative effect, has it not?—Decidedly.

9812. About the dietary, you speak of a large consumption of Indian meal?—Yes.

9813. Does that mean in place of oatmeal?—It has almost completely ousted oatmeal in Ulster.

9814. What is the reason of that?—It is cheaper, considerably, and they have taken a fancy to it.

9815. (*Chairman.*) It is sweeter, too, is it not?—Yes. I was down in a Scotch-settled district in Ulster in a place where oatmeal was once one of the staples of the dietary, and I found, to my surprise, that they were not taking oatmeal but Indian meal.

9816. (*Mr. Struthers.*) Do they grow oats?—They do

9817. What do they do with it?—I am afraid that the oats went largely into the still in that district.

9818. To malt it for making *potheen* instead of barley?—No, they mix it in the proportion of one-fourth with the barley. It is what they call "backing." Generally where they make *potheen* from malt it is from the barley, backed with oats—generally in the proportion of half and half, and sometimes three parts of barley to one part of oats. Then the oats is sometimes sent to the market, and sold for horse-feeding; the bulk goes there.

9819. They can sell their oats for more than the equivalent in Indian meal?—Yes, and that is the reason they sell them. The reason for distilling is because they can make more money out of it than by selling. They find it cheaper to buy Indian meal than to have their oats ground into meal.

9820. In what form do they take the Indian meal?—In porridge—stirabout.

9821. Do they make cakes at all?—They make soda bread, with bi-carbonate of soda, a small proportion of white flour and a considerable proportion of Indian meal, and they also use boxty.

9822. What is that?—It is a bread made from grated potatoes. The raw potato is grated on a nut-grater, the shavings are squeezed to extract the moisture, then Indian meal or white flour is added, and it is made into a kind of damper, and has about the consistency and digestibility of putty.

9823. Is it largely eaten?—Yes, in Mayo, Donegal, and Galway, and in other counties.

9824. (*Dr. Tatham.*) You were speaking just now of some investigations in conjunction with Professor Cunningham?—Yes.

9825. Was that at Trinity College?—Yes.

9826. Are you a graduate of Trinity College?—Yes.

9827. With regard to the staff that you would propose to employ in the anthropometrical investigations that you spoke of in Ireland, you referred to the class from which the constabulary is drawn. Am I correct in saying that many of those men are highly educated men?—They are above the average in education. The constabulary men obtain promotion by competitive examination.

9828. As compared with the ordinary policemen elsewhere they are very much superior?—Yes.

9829. They are university men?—Very few indeed—there may be a few, but very few. They are the same class of men that might have one brother as a policeman and probably a brother a school teacher.

9830. It used to be otherwise. With regard to the deterioration, you attach great importance to the increase of lunacy. I cannot help saying that I was very glad to hear you say how very unreliable the data are upon which the increase is based. In times gone by, at any rate, you know it was difficult to define very accurately what lunacy was. I suppose opinions differ from year to year, or decade to decade, as to what really constitutes lunacy?—To some extent.

9831. Even medical opinion canges?—Yes.

9832. What is the legal definition of lunacy in Ireland? You have given me rather a poser there. I think that

legal responsibility is based upon a knowledge of the nature of the act.

9833. Under the head of lunacy is there included practically senile imbecility as well as brain disease?—I believe senile decay is included.

9834. In addition to the various forms of brain disease which you and I would recognise as lunacy, there is a good deal of senile imbecility, is there not?—I believe so.

9835. And I may take it that this may vary at one time as compared with another, and so probably invalidate the data for comparison, is that your opinion?—Well, that may vary with an increase of the ages in the population.

9836. You speak of the constant drain of the best blood of Ireland by emigration. Does not that have the effect of very considerably altering the age constitution of the population?—Yes, decidedly.

9837. And that in its turn would alter the statistics of diseases, lunacy amongst others?—Yes, lunacy amongst others.

9838. But certainly lunacy?—To some extent, but I do not think that it accounts for the whole.

9839. Your opinion, based on experience, is that lunacy is really actually on the increase?—Yes.

9840. It is not a question of classification?—Classification accounts for some of it. Undoubtedly in Ireland in older times, in my father's time for instance, the village idiot, or village lunatic, was quite a common character. The wandering lunatic was quite a common character, but he is now registered and locked up.

9841. And generally placed in an institution?—Yes. He is placed under restraint in the workhouse very largely, and in the lunatic asylums.

9842. You think some of the physical deterioration is due to alcoholism in some form?—I do not think that alcoholism has increased.

9843. You think not?—I do not think there is as much the illicit still has practically gone from many parts of the country. There is as much alcohol, but the rural populations do not drink much. In the small country towns there is a great deal of drink, in fact it is a prevailing curse.

9844. I suppose the people that you speak of in the country districts, whom you describe as being very poor indeed, have not the means to spend on drink?—They have not the money. They will spend money on a fair day. Certainly when they have some money in their pockets they will get tremendously drunk on the occasion but perhaps not taste alcoholic drinks for weeks afterwards.

9845. If they cannot pay for the ordinary excise whisky they would not object to take it if it has not contributed to the revenue?—I think that the illicit distillation is on the decrease, but it comes very nearly as expensive as the other.

9846. Really?—They sell it for about 12s. a gallon.

9847. Why is that?—On account of the risk.

9848. Is it the coastguard?—Yes, and the constabulary.

9849. So that really the risk is not worth running?—In a great many districts there is a great deal of it and a great deal more than the people who merely visit the district would suspect, but I do not think, taking the country population all round, that they consume very much of it per head.

9850. I suppose that the stuff sold as distilled liquor is very impure?—It seems very maddening. On the occasion of fairs and big markets it has the name of being bad. I have not drunk it myself.

9851. But one's experience of its effects upon people who do take it would lead one to think so?—I think that it must be very bad.

9852. Probably quite new?—Yes.

9853. Recently distilled?—Yes, probably; I do not know from what sources it is got.

9854. Is illegitimacy on the increase in Ireland?—I do not know how the statistics go. Illegitimacy is not common in Ireland, not outside the towns, in the rural districts it is not common at all.

9855. In the towns it is?—Yes, I think the condition is pretty much the same as in England, especially I should say that Dublin is not any better than most other large towns as regards morals. *Dr. Browne.*

9856. As regards tuberculosis, you say that pulmonary tuberculosis is increasing in Ireland. Is that a general statement or does it refer to towns?—I took it from the Registrar-General's returns.

9857. Is the increase taking place?—I think it is in the country districts as well as in the towns. I have forgotten the exact figures, but I am speaking on the general impression.

9858. And the other forms of tuberculosis, are they increasing too, do you think?—Speaking again simply from hearsay, and impression, I should say that in the rural districts (from what the older dispensary doctors tell you) it is.

9859. You spoke about cancer: is cancer increasing in Ireland?—As to that I am not certain. I have not looked into the question of malignant disease.

9860. Speaking of the substitution of Indian meal for potatoes as a diet, you spoke of one district in which you found that to take place at a certain period of the year, I think you said at Christmas?—In a great many districts when the potato crop fails, that is to say when they have a bad crop of potatoes. Of course with a good crop it would last a good deal past Christmas.

9861. But when they substitute Indian meal for potato food that causes irritation of the bowels?—Yes, and diarrhœa.

9862. And is it a tractable kind of diarrhœa, or is it an epidemic?—They will tell you that it lasts about a fortnight. If they have a sort of general outbreak of diarrhœa it takes a fortnight before it ceases.

9863. It is simply irritation; it is not fatal?—It does not kill—it is not fatal; it is simply the result of change of diet.

9864. And it subsides of itself?—Yes.

9865. With regard to milk, does that really form any portion of the young children's diet?—In the Midland counties it does, and also in pastoral districts in the West, too.

9866. But in many of the poorer districts with which you are familiar, milk forms a very small proportion of the diet?—In some of the very poorer districts.

9867. They practically do not get it, I suppose?—The labouring classes do not.

9868. Do they suffer in consequence?—I think that they are decidedly less hardy than the farming classes, who get plenty of it.

9869. Is tinned milk used to any extent?—No.

9870. They could not afford it?—They could not. Milk forms a very large part of the dietary even of grown men in the rural districts. In parts of Kerry, Limerick, Cork, and very many of the southern counties if you go into a small cottar-farmer's house at dinner-time you will find a skib of potatoes, or it may be a dish. (The skib is made of wicker work), and there is a tremendous supply of potatoes and some salt and butter. A man will take about a quart of milk and half a stone of potatoes for his dinner.

9871. What price is the milk retailed at in Ireland?—Its retail price is small, and in the cities it is from 3d. to 4d. per quart to 2d. per quart.

9872. In this country, fortunately, we know very little of typhus. Unfortunately, you know more of it in Ireland?—A great deal too much in certain districts of Ireland. It is confined a good deal to certain districts.

9873. You know the district of Donegal?—Yes.

9874. I hope there have been no more sacrifices of medical men since the death of the Hero of Donegal?—Since Dr. Smith's case there was a case of death of a doctor from typhus in Galway, County Connemara. He got it from attending cases of poor, wretched people; and a great many of the houses have no chimneys or windows in that district.

9875. So that the disease tends to spread?—Yes, they are rather overcrowded.

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9876. And typhus still retains its virulence?—Indeed it does.

9877. You think that the recruiting statistics, such as you know them in Ireland, are of small comparative value?—Whether in Ireland or in England they are of small value.

9878. Is it because you have no standard with which to compare them?—Exactly, the standard has varied.

9879. Have you attempted to compare the recruiting statistics of Ireland with those of England of the same date?—I have just glanced over them.

9880. And you think, for many reasons, they are scarcely comparable because of the difference of standard? They are comparable at the present time, because the recruiting standard is the same.

9881. I was not aware of it?—The standard will vary with the time, but the minimum standard is the same for the three Kingdoms at any given time.

9882. You spoke of certain special difficulties in Ireland in securing anthropometrical statistics; what were the special difficulties?—The special difficulties were mainly two. One was a dread of conscription, put it that way; and another was a certain amount of superstitious feeling on the subject. However, that is generally easily put righ by putting a counter-superstition against it. There is t belief in the efficacy of measuring the head for various forms of headache, and this is practised by the wise women and quacks throughout the country, and I took advantage of that, and, generally, found it successful even when it was passed off as a joke—a laugh generally brought about consent.

9883. (*Chairman.*) In regard to that point of Dr. Tatham about the reluctance of the people to submit to the observations necessary for carrying on this anthropometric survey, I suppose you hold that the fact of its being introduced into the schools and being made familiar to the people in that way would tend to diminish the dread that parents might experience?—Yes, decidedly I think it would.

9884. Would you advocate the use of leaflets on the subject?—I would.

9885. And information in that form?—Yes. Because I have found, in making my own small surveys, that the best and surest way to do any work at all in the district is simply to talk to the priests, schoolmasters, and police, and various people, about what the object was on the first day.

9886. To explain it as fully as you can?—Yes, and the people took it up intelligently very often, and when they began to see their neighbours getting measured they were ambitious to see how they compared with the people of the next district.

9887. In a spirit of competition they took it up?—Yes, the whole difficulty is beginning. If you once break the ice in the district you can get on all right.

9888. You are satisfied that that would be the surest way of getting any reliable conclusions as to the physique of the country, as to whether ameliorative or deteriorative tendencies were obtaining the upper hand?—That is the only practical way of getting information.

9889. With regard to insanity in Ireland, is it in any way due to the existence or prevalence of syphilis?—No.

9890. Ireland is more chaste than any part of the British Islands, you think?—Well, except Dublin. In the rural districts syphilis is unknown.

9891. That would be one of the causes of insanity?—In Dublin, syphilis is very prevalent; it is a place where that disease is rife, but in the rural districts you meet very little of it.

9892. It has been suggested that the continence of the Irish race is one of the causes of insanity, is that so?—I do not know. I would not like to express an opinion upon the subject.

9893. Do you think that bad housing has much to say in the rural districts to the bad condition of the people?—To the increase of phthisis, I think that it has something to say, but even there the housing has improved.

9894. My own knowledge of Ireland is not extensive, but I certainly got the impression last summer that it was better than it was some years ago?—It has improved very markedly in the last twenty years.

9895. You do not think that the present condition of Ireland in the rural districts with regard to housing has much to say to physical debility?—I do not think so, except that the overcrowding and bad ventilation and some of the bad cottages must tend to the dissemination of phthisis.

9896. Is that in the rural districts?—Yes. They live a healthy open-air life, but the houses are bad.

9897. Are the houses air-tight?—I do not know whether I might digress to speak about the construction of many of those houses. There is the kitchen, which you enter by two doors, one from the front and one from the rear. There is often a bed in the recess in the kitchen. Off this is the "room," sometimes there may be two, but in each bedroom there will be one or two beds. The windows will be small, not made to open in very many cases, and in some instances only about 18 inches by 12 inches in size. I am speaking of the older type of old-fashioned houses.

9898. Is there a chimney shaft?—Sometimes from the "room," and always from the kitchen; except in some of the congested areas, where there is often no chimney, but simply a round hole in the roof.

9899. And that is still to be found?—Very largely, in Mayo, Galway and parts of Clare.

9900. And some fresh air comes in from that hole?—Yes. A hot peat fire helps the ventilation. But in these districts, the opposite end of the kitchen from the fireplace is used as the stable and cowhouse, and the fowl roost overhead upon the beams of the roof, so the air at night is not very pure.

9901. (*Dr. Tatham.*) Have they got any pigs there?—The pig occupies a pen at the side of the fire-place.

9902. It is not in the house?—Yes, it is in the house in some of the congested districts. The pig-stye outside is a characteristic of the richer and the better farming districts.

9903. (*Mr. Struthers.*) Even when the house is not better, is it any cleaner than it used to be?—Yes, the houses are kept very much cleaner, and the newer class of house is better ventilated and better lighted. There is a great improvement.

9904. (*Dr. Tatham.*) What do you call those cottages?—Cabins.

Dr. ROBERT HUTCHISON, M.D., F.R.C.P., called; and Examined.

Dr. Hutchison.

9905. (*Chairman.*) You are Assistant Physician to the London Hospital and to the Hospital for Sick Children, Great Ormond Street?—Yes.

9906. And you have, I suppose, given special attention to the subject of infant nutrition?—Yes.

9907. You hold that it occupies a very important place in the production of physical deterioration?—Undoubtedly.

9908. Taking dietetic errors, will you please enumerate what you hold to be the principal ones?—Artificial feeding of course is the chief cause during infancy that leads to physical deterioration, and the prevailing ignorance amongst mothers of how to use the methods of artificial feeding.

9909. First of all, there is the fact that they do not suckle their children?—That, of course, is a great pity; but that is not a question of "will not," but a question of "cannot." It would be unfair to say that the average mother at present refuses to suckle her own child; she is unable to do so in quite a large number of cases.

9910. You say a competent authority describes that condition of things as prevalent throughout Europe?—Quite so, it is certainly not confined to this country alone.

9911. We have been told that mothers do suckle their children habitually in a great many parts of the country. A lady was here from Sheffield sometime ago, and she said it was quite exceptional to find a mother who did not suckle her child, at any rate, for some time?—What one would like to know is how long it is carried on.

9912. I think she said three or four months?—It hardly counts, I think, unless a mother can suckle her child for the first six months.

9913. It is better than nothing, I suppose?—Yes.

9914. What other contributory factors do you consider are to be found?—As producing physical deterioration?

9915. Yes.—I have only considered the dietetic question.

9916. This is Dr. Bunge's enumeration which you give here?—Yes.

9917. I observe that the caries of teeth is a sign of physical deterioration; are you prepared to confirm that from your own observation?—I really would not like to give an opinion about that.

9918. Do you agree with him that it is found among women who are not able to nurse their children?—I have not given any attention to it.

9919. Does the inferiority of the substitutes for milk strike you as being a second prominent cause?—Yes.

9920. What do you say upon that point?—The large use of patent foods I think is a point much to be regretted in the artificial feeding of infants. Patent foods present certain marked inferiorities to human milk as a means of nourishing children; most of them are deficient in fat.

9921. That is their most characteristic deficiency?—Yes; and a considerable number of them also contain unaltered starch, which infants are unable to digest at all well.

9922. That produces diarrhœa?—Yes, and irritation of the bowels generally, and that naturally leads to impairment of growth and consequently defective physique.

9923. You consider cow's milk is the most satisfactory substitute for human milk?—Undoubtedly.

9924. Have you considered the subject of its distribution amongst the poor?—Yes; I have considered that.

9925. Can you tell us whether the hospitals have attempted any distribution of it?—No, they have not.

9926. Do you not think they would be the proper centres from which it might be attempted?—That question has been mooted, and of course there is the question of expense to be considered..

9927. Could it not be made self-supporting if the hospital were a centre of a large enough scheme of distribution?—The hospital I know best is the large Children's Hospital in Great Ormond Street, and there, I think, it would be extremely difficult. The children who come there come from all parts of London. Indeed, many of them come from the surrounding country.

9928. It is not a local hospital in any sense of the word?—Not in the least.

9929. We understand some hospitals in Paris have become the centres of milk distribution which are of great value?—Yes. I think the difficulties in London would be very great.

9930. Would you prefer to see efforts made by the municipalities?—I think something might be done in that respect. I do not see why something should not be done to improve the ordinary commercial milk supply.

9931. Who is to stimulate that improvement?—I suppose the medical officers of health. By a more systematic inspection of dairies, and so on, something might be done to improve the supply.

9932. If the people do not come to these shops because milk is too expensive or there is not a sufficient quantity of them, or they are not accessible, the mere purification of the supply would not solve the problem?—I do not find as a matter of fact that many mothers do not feed their children on cow's milk because of the question of expense, because it requires far more money to feed them on patent foods.

9933. Is that so?—Yes. Patent foods are very much more costly than cow's milk.

9934. You do not think the question of cost has anything to do with the difficulty of getting the poor to use cow's milk for their children?—No, it is certainly not mainly the question of cost because patent foods are more expensive.

9935. What do you think are the causes which deter them?—Pure ignorance.

9936. It is only that?—Yes, they do not know how the child ought to be fed, and they start by giving it cow's milk in an unsuitable form, usually too strong, and that produces colic, and they rush off to a patent food. I have no difficulty in Great Ormond Street in rearing the babies that I see on some modification of cow's milk.

9937. At any rate the hospitals might do a great deal in bringing information to the parents?—Yes, and so they do; but I think it would be very much better if it were done systematically by distributing leaflets when the birth was registered.

9938. You think the municipality might do that?—Yes.

9939. Or the Registrar of Births might do that?—I think that has been done in France. I would not like to speak positively on that point, but I think that is so. When the child's birth is registered these instructions are given.

9940. You look to the systematic instruction of parents in the methods of feeding and rearing as being of the first importance?—Certainly.

9941. As touching the root of the problem?—Yes. I believe that a great deal could be done by that. These mothers are very anxious to do their best. It is not a question of money so far as my experience goes in the majority of cases, but many of them are quite young women who have had no children before, and they do not know. If they are unable to feed the children by the breast, they do not know what to do.

9942. But does the withdrawal of the mother from the care of the child, in order to pursue what may be her calling, cause harm to the child?—That depends in whose care the child is left.

9943. Usually the child is left in the hands of somebody who is utterly incapable of doing her duty to the child?—That happens in a great many cases.

9944. The usual type of woman is one who desires to make as much as she can out of it?—Yes. A good many a re sent to crches.

Dr Hutchison.

9945. Are crèches of the type which is required pretty numerous ?—I do not think they are nearly numerous enough.

9946. Are they organised in connection with hospitals ?—No, they are usually in connection with charitable organisations.

9947. There are no municipal crèches so far as you know ?—No.

9948. You hold that that would be a very useful thing to see established to a much greater extent ?—I am not at all certain about that. It would be an additional encouragement to mothers to go out to work and leave their children.

9949. Do you think they could be made self-supporting?—I should doubt it very much.

9950. We are told that mothers as a rule pay 2s. 6d. a week to those women who look after the children. Do you think a crèche could be run and made to pay upon 2s. 6d. per child per week ?—No, because I think the congregation of a large number of babies in a crèche is a dangerous thing.

9951. Therefore you would not agree to any large number in one building ?—No, it spreads infectious diseases ; and diarrhœal diseases are much more apt to occur in hot weather—where you have a number of babies congregated together.

9952. There is no alternative in your opinion to the present happy-go-lucky system of leaving the child in the hands of some incompetent woman ?—I do not see any really more satisfactory substitute which would work out better on the whole.

9953. Notwithstanding the evils ?—Notwithstanding the admitted evils of that happy-go-lucky system.

9954. I suppose in London there is not so much employment of married women as there is in some factory districts?—I do not see a great deal of it. One sees a considerable number of children brought up by people other than their own mother to the hospital, but not a great many in proportion to all the cases one sees.

9955. Turning to the causes later in life, a sufficient diet is required for two reasons is it not ?—Yes. One wants it first of all to provide energy to enable a man to do work, and secondly to provide for the upkeep of the tissue of his body.

9956. The proportions which are required for those have been pretty accurately ascertained ?—Yes. I think they are fairly well ascertained by physiologists.

9957. Will you give them ?—For energy it has been found that a man of average weight requires 3,500 units of energy, and for the upkeep of his body 125 grammes of the chemical substance called proteid, that is to say, nitrogenous material met with in certain foods. These standards have been generally recognised and are accepted as the test of whether the diet is sufficient or not.

9958. With results that show that the present diet is defective ?—There are not a great many observations in this country. Probably there are many more in America particularly and many more also on the Continent, but those that have been made in this country tend to show that amongst the labouring classes diet is rather deficient in energy, and is even more deficient in the amount of the nitrogenous material it contains.

9959. Would you call these deficiencies, which you note here, serious ?—Yes, I would as applied to certain periods of life. I think as applied to the period of growth, for instance, the deficiency of proteids is a very serious matter. Those deficiencies I should say are much more important as affecting the period of life when growth is still going on.

9960. Have you any knowledge as to whether these deficiencies are greater in this country, supposing this is typical of the whole, than is to be found to be the case in America ?—The American results are certainly better.

9961. And the Continental results also, I suppose ?—About that I am not quite certain, speaking from memory. I think the Continental results are not so good as the American ; the American are best.

9962. Is that due to greater knowledge and greater judgment in the selection of food or in its preparation ?—I should not say it was due to either of those, but it is probably due to spending more money on the food.

9963. But surely it is not altogether a question of bulk, but of selection ?—If one has a limited income ; but one can improve the diet by more abundant expenditure.

9964. But if one spends more in ill-judged material, that will not be satisfactory ?—The bad thing about ill-judged material is when there is only a limited sum to spend upon it. It is then that it is important to get the proper materials.

9965. The classes we are dealing with have but a limited amount to spend ?—Yes, and that is why it is so important that they should know how to spend it. In America I think they actually spend more on food.

9966. With regard to the poorer classes in this country, would you say that these defects were in selection or preparation ?—They are defects in selection. The preparation of course, unless it is wasteful, is not so important.

9967. But it is very wasteful, is it not ?—I would not like to give an opinion whether it is or not. I think one might reasonably suppose we are less economical in the preparation of food than the French are.

9968. I suppose to a very large extent they do not prepare their food themselves ; they get it prepared from cooks' shops ?—I should not think that was very general.

9969. You think the mass of the poor in the urban districts do prepare their own food ?—Yes. I should think there are many people who are more in and out of the houses of the poor than I am who can speak to that.

9970. What have you to say as to the consequence of these defects ?—The consequence of the deficient supply of energy is to reduce physical efficiency. If a man is only taking in a limited quantity of energy in the form of food, he can only put out a limited quantity in the form of work.

9971. It renders the system vulnerable to disease also ?—Yes, I think that is especially so from the deficiency of nitrogenous material.

9972. Is there any special class of disease to which such persons are subject ?—One may mention tuberculosis as one of the most important.

9973. More or less the same applies to all zymotic diseases ?—Yes. Again, I should like to emphasise the fact that it is during the period of growth that this deficiency tells most. The critical age is from ten to fifteen.

9974. That is the most critical period ?—Yes. If a child has not sufficient food then, it will be permanently stunted.

9975. As that period is more or less co-terminous with school life, it affords a very favourable opportunity for correcting these tendencies, because it is a period when he is most under supervision ?—Exactly.

9976. And therefore you would attach very great importance to steps being taken which would secure that every child who was under instruction should be more or less adequately nourished ?—Undoubtedly. Of course, looking at it purely scientifically it would be an extremely important thing to insure to every child at school a sufficient and proper sort of meal. It is an economic question. Purely scientifically I have no doubt that it would do a great deal to improve the physique.

9977. It would check the waste of human material ?—Yes.

9978. At the most crucial period of its development ?—Yes, because an arrest at that time is never made good. That is the difficulty.

9979. What remedies would you suggest with regard to the defects in infant feeding ?—The first question is that of milk supply. I think that has been dealt with by a Commission. I gave evidence before a Commission.

9980. Was that with regard to preservatives ?—I think so. They took a great deal of evidence upon that point. I gave evidence on the effects of preservatives in milk ; the other method is the systematic instruction of mothers in the methods of artificial feeding.

9981. You do that by the distribution of leaflets. Do you think the County Council might organise a system of lectures or instruction for girls between the age of leaving

school and the period when they naturally would become mothers?—No; I do not think it comes home to them until they have a baby of their own. I think the instruction is better postponed till then, and I think the best way is by the distribution of leaflets. That has been done by some County Councils—in Hertfordshire for one. I saw the leaflets they drew up for distribution when births were registered. I think the Hampstead Health Society is doing something in the same direction. I am quite certain that is the best way of doing it.

9982. You do not think that a crèche in which young girls could be got to attend to see what is being done, and so learn the value of it, would be of use?—It could not be made operative on a large scale. You would never get enough to do any real good.

9983. You believe in the leaflet?—Yes. I venture to suggest there that more attention should be given to the kind of feeding bottle which is used.

9984. What is the bottle which you describe here?—It is the feeding bottle with a long india-rubber tube. Its use has been made illegal in some of the States of America.

9985. A bottle with a long nipple?—A long india-rubber tube with a nipple at the end of it. I think its use is illegal in France; it is certainly in some of the States.

9986. What are the bad effects which follow from it?—Specially diarrhœa. It goes to produce a great deal of chronic diarrhœa.

9987. Because it is so apt to get contaminated?—Yes; it is impossible to keep it clean. Every day at the Great Ormond Street Hospital one has to stop the use of those tube bottles.

9988. Would there be an outcry if that were made illegal?—There would be no public outcry. I suppose the makers might object.

9989. Why are they so much in use? Are they inexpensive? What is the advantage of them?—I believe it is mainly because they can lay the bottle beside the child, connect the child with the tube and go away and leave it; whereas with the ordinary bottle they would have to stay by the child while it was being fed.

9990. It is laziness?—Yes. I had to stop its use at the hospital; in every case it produced illness in the child.

9991. In regard to your suggestions dealing with dietary in later life, you attach the greatest importance to an intelligent expenditure on food. You know tea and bread are the principal items?—If I were asked to state the chief fault in the diet of the working classes of this country, I should say it is the excessive use of tea and bread.

9992. Particularly of tea, I suppose—that is distinctly deleterious, but I suppose a bread diet is not?—I should not like to say tea is deleterious.

9993. Is not tea drunk in the form in which the working classes drink it very strong, because it has been standing a long time?—In the London Hospital, where I have good opportunties of judging, I do not see many cases of disease produced from tea-drinking. There is a certain amount of indigestion in women produced by it, but from our present point of view, the question of physical deterioration, I do not think that need be considered serious. It is really that the money spent upon it might be better spent on other things.

9994. I suppose it is rather expensive?—Well, it is not very expensive nowadays.

9995. You do not see so much money spent on tea in London as the Irish mother spends on it—she always gets the best tea she can find?—I would like to see less use of bread and jam and the substitution of porridge and milk, let us say.

9996. We had a witness this morning who told us that porridge and tea were full of uric acid?—I am prepared to swallow that for the sake of the other advantages. In Scotland gout, which is caused by uric acid, is almost unknown. I never saw a case of gout all the time I was in Edinburgh, and yet porridge and milk is a large part of the diet there.

9998. And then when you say again there is much room for the imparting of detailed information as to the choice of foods and the most economical methods of purchasing and cooking them, would you still have recourse to the leaflet?—There, frankly, I am not prepared to suggest the actual means of getting at the working classes. I have thought a great deal about it, and I really do not know any very satisfactory way. The County Council might do a great deal by organising lectures.

Dr. Hutchison.

9999. Lectures of a practical type?—Yes. I have lectured myself a good deal in various parts of London on the subject of diet to working class audiences, and I have always found them extremely interested

10000. Mothers' meetings might be organised on that basis?—Yes. I quite agree; I think something might be done in that line.

10001. Unless the mothers have had some practical knowledge of the preparation of these foods, I suppose a mere theoretical appreciation of the advantages of a change would not do much good?—That is just the difficulty. It is difficult to change people's habits in these things.

10002. You do not attach much importance to the training in that direction during school age; you think the interval is too long before they can make practical use of it?—It seems to me that children at school age are not able to appreciate these things, but I may be wrong about that.

10003. Do you think the compulsory attendance of girls at continuation classes between the period of their leaving school and becoming mothers, say twice a week, should be devoted to domestic economy, in the widest sense of the word, would be of value?—Undoubtedly it would be of value.

10004. Now with regard to the most important question of all, that is the securing that the children at school should be properly fed; would you advocate a general system for the provision of school dinners, not, of course, resting upon an eleemosynary footing at all, but with a view to parents contributing a great part or the whole of the cost?—I think purely from the medical point of view, putting aside all economical and other questions, that, undoubtedly, would do a great deal to improve the physique and development of the children.

10005. You hold that the value of it, from a medical point of view, would be so great that certain sacrifices might very well be accepted?—I admit the advantages would be very great.

10006. Even if they could not be made absolutely self-supporting a certain charge upon the rates might very properly be incurred for the purpose, even at the risk of undermining, or being said to undermine, parental responsibility?—I would rather not enter into the economic aspect of the question. I can only say that I feel certain that the provision of meals would do a great deal to improve the health, and growth, and development of the children of the poorer classes.

10007. Do you think there is much intentional neglect?—No. I should say from my experience of the working classes that they are really very fond of their children, and the great majority of them do the best they can for them according to their lights. I think it is much more want of knowledge than want of thought.

10008. You think they would fall in with any scheme which might be started by the school authorities or charitable agencies, the advantages of which they understood, and that they would contribute towards it so far as they could?—I think that if they thought it was for the good of their children, and that it would not cost them any more, they would do so.

10009. We are told that parents constantly give 1d., 1½d. or even 2d. to the children in order to provide their mid-day meal, but the children are very apt to spend it partly upon sweets, marbles, and tops, and in some cases they never spend it on food at all?—Yes.

10010. So that if parents could be encouraged to place these pennies in the hands of the school authority, who in return would supply children with mid-day meals on that scale of expenditure, a good deal of good might be done, and the parents would not suffer even pecuniarily?—Yes.

10011. Then there is the initial difficulty of the child going to school in the morning badly fed; perhaps from some point of view the morning meal is the most im-

Dr. Hutchison.

portant of all, is it not ?—I do not know. A child has got to get down a certain amount of food in twenty-four hours ; I do not think it very much matters how you divide it up. It depends how the day is arranged. If you are going to put a child through physical work it ought to have a meal first.

10012. You must remember that the school attendance in the morning is longer than it is in the afternoon ; the principal mental pressure which the child undergoes in the course of his school life is applied to it in the morning ? —Yes ; but from the point of view of food, mental pressure is far less important than the physical pressure. If the child is romping about in the afternoon it is more important that it should have its meal in the middle of the day.

10013. You think that an inadequate meal in the morning is not of so much consequence, so long as it gets well fed in the middle of the day ?—Yes.

10014. What would you describe as a sufficient meal for a child at school age—a good vegetable soup with a certain amount of meat stock in it, and bread ?—It is very difficult to answer a question of that sort offhand. I should say that most of the children do require a certain amount of animal food if they are to grow and develop sufficiently. It is extremely difficult to do it in towns on the basis of pure vegetarianism.

10015. When you say animal food you do not mean milk exclusively ?—I mean milk and meat also. It is difficult to do it without having recourse to meat. That is my own feeling. But a great deal can be done and has been done by penny dinners, by making suitable vegetable soups, such as those containing peas.

10016. (*Colonel Onslow.*) Is there any reason known to the medical profession why mothers feed their children from the breast less now than formerly ?—No ; we do not know.

10017. It is common to all classes of society from top to bottom ?—Yes ; and it is common to all highly civilised peoples. It seems to be one of the indirect consequences of civilisation. A very eminent authority, whom I quote in my *précis*, went most carefully into the statistics for the whole of Central Europe, and he did not succeed in arriving at any very satisfactory reasons for it.

10018. It is not fair to say that it is either due to laziness or even in the case of the lower orders because of the strong desire of the women to get to work ?—No ; all the motives work the other way. The chief object of a working class woman should be to feed her own child ; first, it is more economical, and secondly, it prevents subsequent pregnancies, which is a thing they are often very anxious to do. So that really when they do not feed their own child you may be perfectly certain that it is very rarely because they will not, among the working classes. In the upper classes it may be because they will not trouble. I am certain in regard to the lower classes it is because they cannot. I always correlate that with the birth rate ; they go together. The Jewish women in the East-end almost always feed their children at the breast, and they are people with a large number of children. They seem to have greater reproductive powers.

10019. (*Chairman.*) A lady witness we had before us, who is a sanitary inspector at Sheffield, stated that nearly 79 per cent. of children were being fed on the breast alone ? —I should like to know how long they were fed on the breast. As I said before, unless the breast feeding can be prolonged for at least six months it is not very important.

10020. (*Colonel Onslow.*) Until that child is ready to be weaned ?—A child ought not to be weaned until it is ten months old, but the first six months are the most dangerous. That is the time when the absence of breast feeding is likely to do most harm. I would not call a child breast fed unless it was so fed for six months.

10021. Having breast food and other food as well is very harmful, I take it ?—It is never successful. If one tries to feed the child on the mixed method my invariable experience has been that before very long the mother's milk disappears. I have never been able to carry on mixed feeding successfully for more than a few weeks.

10022. You say the Jews have large families : is that at all consequent upon their origin ? We have been told here that one explanation why Jewish children are much better developed than Gentile children of the same age is that they are a tropical race ?—I think that a more natural explanation is that they are more naturally fed by the breast in infancy. They are much more attentive to their children. They spend less on drink.

10023. You said that pamphlets giving instructions on feeding should be given by the registrar of births, but births are seldom registered much under six weeks, are they? —No. Still it is better to do it. I am not certain that in France they do not proceed to give instructions to do it when the marriage is registered. I have been told so.

10024. The first few weeks are a very dangerous age ?— A great many children are fed at the breast for the first month, so that it is not really so dangerous as you may suppose.

10025. Speaking of tea, you appear not to have the same strong objection to it that many witnesses have, but tea which has been standing on the hob all day long must surely be very harmful ?—I have given a great deal of attention to it, and my own feeling is that the harm done by tea is enormously exaggerated. It produces a certain amount of indigestion, particularly among women, but I do not think it does anything more.

10026. I was referring to tea as drunk by the very poor ? —I quite understand.

10027. I understand your theory against that, because in Australia and other places it is the custom of all trades, miners and everybody, to drink nothing but tea ?—Quite so.

10028. And apparently it has no effect on the constitution ?—I think people get accustomed to those things. They get accustomed to tea badly prepared, and I do not think it does much harm. It is the tea and bread and butter meal which I object to particularly, not so much because of the tea element in it as because of the bread and butter, or rather the bread and jam. Bread and butter would be better. If one could get a more nitrogenous meal than that, such as has been suggested, porridge and milk, I am sure it would be a great advantage. It has been calculated by Dr. Noel Paton that one such meal a day would bring the diet of the labourers in Edinburgh up to the physiological standard -- the mere substitution at one meal a day of porridge and milk for bread and jam.

10029. (*Mr. Struthers.*) You speak of the physical disability of women to nurse their children. Is that established by statistics, or is it your general impression?— I would not like to say there are definite statistics, but that is the general impression of all medical men. I may say that it is absolutely certain it is increasing.

10030. Women are worse in that respect than a generation or two generations ago ?—Yes. Artificial feeding was unheard of before the seventeenth century.

10031. That meant that they fed them on cow's milk, did it not ?—No.

10032. What do you mean by artificial feeding ?— Any substitute whatever for human milk—cow's milk or anything else.

10033. You say that was unknown before the seventeenth century ?—Yes. I think that is the first mention of it.

10034. We have no statistics as to children's deaths before that ?—No.

10035. It may be that there were as many not fed by the breast, cases where the mothers tried to feed them and starved the children ?—I do not think it is likely.

10036. You speak of Jewish women being an exception ? —Yes. Breast feeding is much more prevalent amongst the Jews than amongst the corresponding Gentile population.

10037. Do you connect that with the higher birth rate amongst the Jewish population ?—Yes. I think the two things go together. I think the capability of having a number of children and the capability of nursing them are two things which are in some way related.

10038. You think that capability is due not to race or not in any great degree to race ; but simply to differences in the care of infants ?—I should not like to say that. It may be partially racial and partly the indirect consequence of the Jewish code.

10039. I ask you because I rather gathered from your reply to Colonel Onslow that it was rather a question of the way they brought up their children. But you think the element of race comes in?—I should not like to say it did not, that is all I am prepared to say. One sees the same in the West of Ireland. The Irish women produce enormous families, and I am told nurse most of them. I do not know whether it is a question of race.

10040. But in the West of Ireland they do not feed their children well apparently?—Not after the breast stage, that is true, but during the first period I gather they do. I do not know the conditions of the West of Ireland at all intimately.

10041. You say that Dr. Noel Paton was of opinion that a meal of porridge and milk instead of bread would bring up the diet of the labouring classes to a proper level?—Yes. That was his opinion.

10042. You were asked the question whether the diet of the labouring classes was very insufficient. Do you think it is? As shown by Dr. Noel Paton's investigation in Edinburgh, does it fall seriously short of what is really required?—That is a question to which it is very difficult to give a general reply; it depends so much on the work a man is doing. When he is doing really hard work it would be insufficient, but for a man who is only doing light manual work he could get on with it without suffering from it.

10043. It would be quite insufficient if you include the period of growth?—I think it is during the period of growth that the deficiency is most serious.

10044. These statistics refer to people who are past the period of growth?—No, to the whole family.

10045. The critical period as regards the feeding of young people is in your opinion between the ages of ten and fifteen?—Yes, when growth is most active.

10046. It is more important even than the period of infancy?—It is difficult to estimate their relative importance. I have a general idea that as regards growth and physique ten to fifteen is the important time, but on the other hand, bad feeding during infancy may give a bias to the body which may persist through the whole of life.

10047. We have been told that children come to school with the mischief already done—I think that was the phrase used—that feeding afterwards cannot remedy the evil?—I should not agree to that. I think in the Navy, where boys are taken on board ship and properly fed and where they get exercise and fresh air, one sees the magnificent physique they develop.

10048. You find the same thing in industrial schools?—Yes. I do not think it is at all irreparable until after the age of fifteen or even later than that.

10049. (*Colonel Onslow.*) Do you think it is limited to fifteen? Would it not go on to eighteen?—I agree. I think one could put it at a little later, but I feel that the very critical period is from ten to fifteen.

10050. The reason I referred to it was that we find the recruits when they come to the gymnasium between the ages of seventeen and eighteen improve enormously, but when you get to older men of nineteen there is very little difference. That applies to weight, muscle, height, chest and everything?—Yes. That is just what one would expect, I think. At the age of fifteen one would probably find the increase still greater.

10051. I think you corroborate the statement that the improvement in boys when they first join the training ship is enormous?—Yes. I do not share the pessimistic view that the mischief is hopelessly done by the time a child reaches school age.

10052. (*Mr. Struthers.*) Is there any age which you could roughly fix beyond which it would be impossible by proper feeding to repair the mischief done?—I should say eighteen. After that time the bones are united and it is physically impossible to get growth.

10053. If a rickety condition has been produced in infancy it would be very hard to remedy that?—If the bones have not united, even that is repaired to an extraordinary extent.

10054. So that feeding between the ages of ten to fifteen is an all important matter?—I quite agree.

10055. Even starvation at ten or eleven might be remedied at thirteen to fifteen?—Yes. If it had not led indirectly to disease in the meantime, but a great many children habitually starved succumb to tuberculosis or to some such disease.

10056. Your suggestion is that leaflets should be distributed to mothers when the births of the children are registered. It has been put to you that that might be rather late. But when a child is born the mother has usually been attended by a doctor or midwife, has she not?—Yes.

10057. Could it not be arranged that one or other of these persons should give instructions in the form of a printed leaflet?—If a doctor is in attendance and the mother cannot feed the child naturally he usually gives instructions as to how the child is to be fed.

10058. I think we may leave the doctor out of account, but I am thinking of those cases which are not attended by a doctor?—I doubt if it could be done.

10059. The midwives are registered now?—Yes, but it is difficult to get them to do it, I think.

10060. They must be on a register now: Do you think it might not be possible?—It would be a purely voluntary act on their part if they distributed that circular. Something might be done by the instruction of midwives themselves, but I think the best way is to do it through the registrar of births.

10061. Would not that be far the most effective way of getting at the instruction of the mothers in the feeding of infants, to have properly instructed midwives?—It would certainly help greatly.

10062. We have been told of a rather successful organisation in Manchester where the Ladies' Committee has paid visitors who go round the houses of certain districts, particularly those with newly born children, and give the mothers instruction: Do you think that would be a good system?—Yes. The National Health Society does a good deal. I have lectured to their visitors more than once on the subject.

10063. That would be much more effective than an early attempt at instruction in the school, or to girls?—My own opinion is that the instruction of girls in the schools is of very little use. I do not think they take the matter sufficiently seriously.

10064. It must, in the nature of things, be of comparatively little use?—Yes.

10065. I mean the instruction in matters of that kind?—Yes.

10066. Because there must be always an element of make believe about it however you do it?—I entirely agree.

10067. As regards the provision of dinners at the school, it would be an absolutely sound proposition from the health point of view?—Certainly.

10068. As regards the actual children who were being fed it would, but might it not have a tendency to discourage the mothers from cooking at home, and so have bad effects on the rest of the family who are not at school?—I do not think my opinion would be of any value upon that.

10069. (*Colonel Fox.*) Has it ever been brought to your notice that children of the working classes are not only badly fed, but also suffer from want of proper rest and sleep. That it is a common complaint that the children of the working classes never get a chance of getting proper sleep at night?—I cannot say that has been brought to my notice.

10070. In support of your statement just now that a very small proportion of mothers suckle their children, I may mention that Dr. Robert Jones, in a lecture on physical deterioration, stated that a Sheffield medical officer informed him that only one infant out of eight in the town is brought up at the breast?—I should not be surprised to hear that.

10071. He further states that not only is a very small

Dr. Hutchison.

proportion of children suckled, but that that number is decreasing?—That is my own impression.

10072. (*Dr. Tatham.*) We have had a good deal of very varying evidence with regard to the prevalence or otherwise of certain diseases amongst children, and we have been referred generally speaking to the mortality returns of the Registrar General. As you know, many diseases to which children are subject are not generally fatal; they are frequently recovered from; and therefore the mortality returns of the Registrar General are not much guide. From your experience as physician to the London Hospital would you advocate the establishment if practicable of a registration of sickness?—Yes, if it were practicable; we would get a great deal of valuable information from such a registration, but I do not believe for a moment it is practicable. We cannot define sickness. If a child is a little out of sorts, and stays two days in bed, is that to be registered?

10073. But suppose you merely applied registration to some of the more important diseases, such for instance as tuberculosis and rickets?—That would certainly be valuable.

10074. You would advocate it on scientific principles?—Yes; again purely on scientific principles.

10075. Now, with regard to the question of rickets, that is a disease which very happily is not by any means always fatal. Do you think from your experience at the hospital that rickets is on the increase or not amongst children?—I do not think it is on the increase, but my experience extends over a very short time. I have not been seeing much of the diseases of children for more than ten years, and only part of that time has been in London. I think there was more rickets in Edinburgh than I see in London, but I do not think it is increasing from what I can gather from the experience of men who were working on the subject, men like Sir William Jenner, thirty or forty years ago. I think from the records he has left, and from what I see now, rickets is not increasing much.

10076. Is tuberculosis increasing amongst children?—I should not like to say. There has been a general decline in tuberculosis mortality.

10077. The mortality is scarcely a sufficient measure of its prevalence?—That is so.

10078. With regard to the forms of tuberculosis, is it your experience that the form known as *tabes mesenterica*, or tuberculous peritonitis, is increasing?—No, I think not. Tuberculous peritonitis has always been a common disease in children. It is by no means necessarily a fatal one. I should say the majority of cases recover so long as it is confined to the abdomen. I do not think it is increasing. There again I attach no importance at all to the Registrar General's returns on that point, because you will constantly see cases of what is called *tabes mesenterica* written down. Now *tabes mesenterica* is a disease which hardly exists in reality, and most of the cases so recorded are cases of mistaken diagnosis—chronic diarrhœa, or of true tuberculous peritonitis. I attach no importance whatever to the statistics of *tabes mesenterica*.

10079. It was because I thought you probably would take that view that I asked you the question; it confirms the evidence of several other medical men. With regard to the registration of midwives, of which we were talking, do you think the precautions which are now taken to secure a fair amount of competency on the part of midwives are sufficient?—I think as much is done as one can reasonably expect, and I do not think that really has much bearing on the question of physical deterioration or otherwise. I do not think that physical deterioration is due to injury at birth. It is a much more important question from the point of view of the mothers, they suffer from the want of skilled help, but the children not so much.

10080. Is syphilis in your judgment a very important factor in deterioration?—No, I think it is exaggerated.

10081. And what there is of it is of a much milder type than it was many years ago?—Yes.

10082. With regard to the dietetic value of the present style of white bread as compared with the old fashioned bread that one used to know, the home-made article, do you think the present very white bread which is sold is comparable to the former?—I am a believer in the white bread.

10083. Supposing it to be really wheat flour?—Yes; it is as a matter of fact.

10084. We had evidence here this morning from a medical man that a great deal of the bread which is sold by bakers as such consists very largely indeed of potato meal?—I do not believe that.

10085. That is not the case here, you mean?—No.

10086. He spoke of a certain part of the country in which to his knowledge it was?—I can only say I do not believe it to be so in London.

10087. We also heard that when Indian meal was substituted for the ordinary food of the very poor it had a tendency to produce diarrhœa. Have you any knowledge of that?—I have no knowledge of that, but I can only say that in America, where they use Indian meal far more than we do, many experts have actually advocated it as a food I hardly think they would have done so if it tended to produce diarrhœa.

10088. The evidence we had was that in certain parts of Ireland where the ordinary diet consisted almost exclusively of potatoes at certain periods of the year, during the Christmas period, when the potato crop failed, it is the practice of the poor people to resort to Indian meal as their almost exclusive article of diet, and the result of that is uniformly, so that witness stated, to produce an irritative diarrhœa for something like a fortnight?—It may be so, but I have never heard of it.

10089. Do you agree with those who look upon diarrhœa as a specific infection, and not as a simple enteritis?—Not simple; the acute summer diarrhœa has, I believe, a specific infection.

10090. I am speaking of the diarrhœa due to food?—There is a great deal of chronic diarrhœa due to irritation of the bowel by unsuitable food, which cannot be described as infective.

10091. With regard to your objection to bread and jam, is it to bread and jam as such, or to the peculiar article which is sold by the name of jam?—I do not think the peculiar article sold as jam has much influence on the food value of the products. It affects its flavour and so on to some extent, but I do not think it affects the food value. It is bread and jam which I object to. Bread and butter would be better because of its containing fat. To bread and jam the leading objection is that it is very deficient in nitrogenous matter.

10092. You spoke just now of the fact that many of the prepared foods are much more expensive than milk, and, therefore, there is not much inducement to use those prepared foods in place of milk?—Yes.

10093. Do you include tinned milk?—Tinned milk is really more expensive than cow's milk—I should say, roughly, three times as expensive, if you take its true food value. Mothers buy it, so far as I can see, for certain special reasons—one is that it does not so soon go bad. They can open a tin of one of the sweetened condensed milks and keep it without its going bad for a number of days.

10094. Because it contains sugar?—Yes. Then at the end of the week they can buy one or two tins of milk, and make their outlay right away, and then they are provided with milk. If they trust to buying cow's milk from day to day they sometimes have not the money for it. It is such questions that influence them and not the price.

10095. I am glad to get from you that it is more expensive than ordinary milk, because that may have a tendency to diminish the use of it. In certain parts of the country, unquestionably, it is used very largely indeed instead of cow's milk?—It is a large question, but I am not one of those who condemn condensed milk altogether. I frequently recommend it under certain conditions.

10096. I am glad to get from you the fact of its being so much more expensive?—That is the fact.

10097. (*Mr. Legge.*) We have had some conflict of

evidence as to the comparative chances of children from different classes of society, at birth. The chief physician to the Royal Maternity Charity issued a circular to medical gentlemen who assist him in different slum quarters in London, and he put to them this question: "What number per cent. of new born children amongst the poorest classes would be capable of living a normal physical existence were it not for neglect, poverty and ignorance, and what indication of a good physique for coming generations might be anticipated from their conditions?" He got answers giving a percentage for the total of eighty-six. Does that surprise you?—No. I think the raw material one has to work on is very good. It is made bad by injudicious management and rearing.

10098. Then with regard to what has been said about the Navy and industrial schools. I think you will find in the Navy and in the industrial schools there is one physical defect that they cannot make any great impression upon, and that is height; sailors are men who have superb physique but they are not noticeably tall men. I believe the marines are considerably taller than they are?—Yes.

10099. (*Colonel Onslow.*) This simply comes from the standard. The seamen enter at the shortest at 5 feet 3 inches, whereas the shortest marine is 5 feet 5½ inches at seventeen years of age?—I think it is reasonable to suppose that that may arise from the difference of development. If you develop a man's muscles as they do in the Navy, you must stunt his growth; you cannot develop him all round. If you take it out in muscle you have to be content with some deficiency in height.

10100. (*Mr. Legge.*) I am speaking of training boys under fourteen; do not you think the stretching exercises, the back arches, and exercises on apparatus, would stimulate growth in height?—I think growth is the product of two things—it is partly due to causes which we cannot trace, inborn causes, and partly it is a question of feeding. If you feed them well enough they will grow, unless at the same time you make them develop their muscles so much that everything goes to provide muscle and there is nothing left for height.

10101. You would agree that the men of the poorer classes are continually growing to a later age than the adults of the best nourished classes?—I should not be prepared to agree to that. I should be surprised to hear that there was evidence that that was so.

10102. There is evidence of it?—Of course there is an explanation that occurs to one, that many of them are very badly fed between the ages of, let us say, ten and sixteen; then they start to earn wages for themselves and become better fed, and then they grow, but of course it is physically impossible for anybody to grow after the bones have united, and that takes place short of twenty.

10103. The want of nourishment early in life may retard the date at which the bones unite?—I think not.

10104. There is actual evidence to be found, such as in the case of soldiers growing up to the age of twenty-eight?—That is new to me. *Dr. Hutchison.*

10105. (*Colonel Fox.*) Many soldiers say they are eighteen when they are only sixteen?—I should be surprised to hear that they grow up to twenty-eight.

10106 (*Mr. Legge.*) You know that many public school boys stop growing in height sometimes at sixteen?—Yes.

10107. So that they seem to stop early because they have been too much coddled up in their infancy perhaps and so on—they are a sort of hot-house product?—Yes.

10108. From your experience of children and your general experience at the London Hospital have you any strong views with regard to tobacco as an actively deleterious poison?—I do not think there is any scientific evidence that will bear examination about it, one way or another. It is entirely a question of impressions.

10109. Do you think it is desirable that one should get some such evidence, because it is a growing practice among school boys?—Yes, but I think practically the statement that early smoking diminishes growth has no scientific basis at all that I know of. I do not mean to say it is not true, but there is no scientific ground to believe it to be true. The only way that it could do so that I can think of is by affecting their appetite.

10110. We have had a great deal of evidence about an important suggestion, namely, the establishment of a central bureau of anthropometrical statistics to make periodical surveys of certain classes of the population in different districts of the country. Do you think such a survey would be of value in enabling us to take stock of the physique of the country at different periods?—Certainly.

10111. That would have your support?—Undoubtedly.

10112. Would you be satisfied for those general purposes with working at a few general facts?—I think it would be better to work at those general facts over a wide area.

10113. Then they could specialise where they saw any disparity?—Yes.

10114. What would you require?—I suppose you would want height?—I have not given much consideration to it, but one would want height and weight—they are the two chief things.

10115. And chest measurement?—Yes.

10116. Then Professor Cunningham, who gave us some valuable evidence on the point, added certain dimensions of the skeleton—the hips and shoulders, and the depth and width of the cranium. You would agree to that I suppose?—Professor Cunningham is such a high authority on those things that if he says there is use in them I have no doubt there would be.

EIGHTEENTH DAY.

Wednesday, 16th March, 1904.

PRESENT.

Mr. ALMERIC W. FITZ ROY (*in the Chair*).
Colonel G. M. FOX.
Mr. J. G. LEGGE.
Mr. H. M. LINDSELL.
Colonel GEORGE T. ONSLOW.
Mr. JOHN STRUTHERS.
Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary*).

Mr. C. S. LOCH, called; and Examined.

Mr. Loch.

10117. (*Chairman.*) You are the Secretary of the Charity Organisation Society?—Yes.

10118. On the general question as to whether physical deterioration is increasing I suppose you agree with most people that there are not many data available?—Certainly not a great many direct data.

10119. And therefore our conclusions, so far as we can draw any, must be largely based on indirect data?—Yes.

10120. And from that point of view there are a great many circumstances which are distinctly adverse to any theory of general deterioration, are there not?—I think so.

10121. Would you say what the most notable features of the situation are from that point of view?—I have tried to take a generation from 1873 to 1903, and of course the first thing that strikes one is the question of money wage. The evidence as to money wages is before the country, and it would seem certainly to show that if you compare 1878 with 1902 you get a distinct advance, roughly, according to index numbers, from about 85·27 up to 97·70, or 100 in 1900. That is the first item of real importance. With regard to the normal wage of unskilled labourers I ascertained a few days ago that in Poplar, where weekly wages are paid, 21s. per week was a common sum for fifty-four hours a week. Of course there are a great many points to be considered in making a general statement; in South London, dealing with builder's labourers, which is a fair test, a man would average 22s. per week. I think one may say that the trend of wage has been, on the whole, satisfactory, without working it out in detail.

10122. When you get to the purchasing power of a wage the balance of advantage which accrues to the wage earner is still more noticeable?—Yes, the point is extremely important in reference to the question whether or not the fall in prices has tended to an upward movement in social ability or competence.

10123. It should have been so?—It should. Therefore, taking the year 1888 as the year in which the prices practically fell to a level which they have retained ever since, one may compare the period after 1888 with the period before it. The retail prices of food for a workman's family is put down for 1877 at 143; in 1888 at 100; so that the period since then should be a period of advance.

10124. Would you expect to find that the increase of education has fitted the working man to make a better use of his resources?—I should not expect to find that it had, except in general terms that it has taught more people how to read and write—whether there is a social education to enable them to use wages better is a different problem to that of the elementary school.

10125. You would expect one to re-act upon the other, to a certain extent?—Yes, that the intelligence should be used. The higher wage and the cheaper prices have been turned to account it would appear in purchasing more food, which is the most important question, and in purchasing food which is particularly good for children. It is shown in the Board of Trade Return that more milk is purchased by the people who have the larger wage. That again seems to be a clear sign of an upward tendency.

10126. But there is a class which is not tapped?—That is below the rise. My point only is that the increased wage meant an increasing expenditure of the right sort.

10127. To set against that, one element is the increase of rent which has taken place, but is not that owing partly to the rise of the wages of persons employed in the building trade?—Yes, the rise in rent has been very remarkable in London in this last decade, due no doubt in part to the rise in wage and cost of material, but also due largely, I think, to the increased demand for accommodation in districts where there are clearances, and also to the increased rates that people have to pay which eventually devolve upon rent.

10128. Has not that a tendency to send the people outside of London into the suburbs, such as Stratford and Tottenham and other places?—Undoubtedly, and some of the easement that is now felt in some districts in this matter, where rents are not so high and overcrowding is somewhat less, is due in part to that.

10129. Do you believe if the means of transit and facilities for expansion were provided that it would have that effect?—Yes, but that coupled with other things. The transit must be to places that have good open spaces and other amenities.

10130. There ought to be opportunities for securing them in these suburban areas?—Certainly, if we have statutory powers to acquire them.

10131. You would make it incumbent upon the local authority to provide a certain minimum of open spaces for the population?—Yes, and particularly with reference to the playgrounds of the schools.

10132. And of recreation grounds for children who have left school?—Certainly. But the question of the playground for children at school seems to me primarily important.

10133. That, I presume, the Board of Education does see to where practicable; or do you think that it does not do it on a large enough scale?—I think that it finds it difficult, as there are not statutory powers independently of the supply of the school accommodation.

10134. You mean something more than the playgrounds attached to the school?—Yes. Some time ago I was interested in the question and wrote to people in different parts of London about it, and I came to the conclusion that the playgrounds were altogether insufficient.

10135. I suppose it is better in London than in many places; for instance, in Manchester it is extremely bad?—I daresay.

10136. You note here the fall of the marriage rate and deduce some serious reflections from it, but the fall of the marriage rate, I suppose, is partly due to early marriages which are not in themselves good things, being less frequent than they were, is it not?—Yes, I think that is quite one reason for the change.

10137. Very early marriages tend to the birth of feeble and sickly children, do they not, and, therefore, the postponement of the age at which people marry is a good thing?—Yes. The general tendency shows that that is one of the causes, and there are fewer earlier marriages.

10138. You think that the figures for London are of more serious import than some people are disposed to believe?—I think that they are. There seems a fall in the birth rate which, in itself, is rather important.

10139. Do you know at all in what class that is most particularly noticeable?—The difficulty is to arrive at that. As far as I know there is no information. We

cannot say what the incidence of it is, so far as I know from information I have at hand.

10140. You are not in a position to say that Dr. Karl Pearson's belief is correct. It is the less numerous and more capable class?—I should have said that one could not say that it is on a statistical basis, but one can surmise a considerable reduction in the well-to-do class. One notices, of course, that the total births per 1,000 has gone down, and then, on the other hand, the infant mortality is less.

10141. Is it materially less in London ?—Very little.

10142. It is not less over the country at large ?—The figure for 1871 for all ages was 21·4, and it came down to 16·9 in 1901. In 1871 for children aged 0-5, it was 67·0, and from five up to thirty-five it was 7·9. Then in 1901 it fell to 54·1 and 4·0 respectively.

10147. (*Chairman.*) It depends largely where you take the start from, like the tariff reformers when they take 1872 ?—Yes. But at the same time taking the decades, it is quite fair, because in 1871 you begin with a high pauperism and a great pressure. I mean by general assent. You have had all these phases of change in the decade, and you have the last half in the thirty years on cheap prices and good wages, so that the comparison is very interesting on the point of view of the allegation that there is deterioration.

10148. Have you any other facts upon which you can base your theory as to how the greater resources at the disposal of the working classes have been utilised in this period ?—Well, one point is clear, I think. If we take the point of advantageous expenditure, a certain amount have gone to better houses. That is shown under the Inland Revenue Return, and shown also in London by the Report of the Sanitary Inspector of the London County Council.

10149. You mean there has been a decrease in the number of tenements inhabited by more than two or three people, and so on ?—Yes.

10150. There has not been a very noticeable diminution in the two-roomed tenements inhabited by more than four persons, or two-roomed tenements inhabited by more than six, not so much as in Lancashire, as a matter of fact ?—No, but as a percentage of population it represents a large increase in the number of persons who are now living not more than two in a room in tenements of less than five rooms. The percentage of persons in the Metropolis who were living more than two in a single-room tenement in 1891 has diminished by 1·85 (5·10 to 3·25); and this difference alone represents (say) nearly 68,000 persons who have moved into more healthy quarters. The figures thus stand for a considerable number of persons, and in particular districts they mean a distinct change for the better in a borough.

10151. It is not a very notable diminution ?—That is true in a sense, but we must not consider the definitions too rigidly. You may get conditions under which a man and his wife and child—quite a young child—are in one room. They would be reported, but it would not be a case of overcrowding like three adults. I have seen no discriminating investigation as to the actual incidence of overcrowding.

10152. The test that the County Council applies to the dwellings is not occupation of so many in the room, but the amount of cubic feet of air ?—That would be for the registered dwellings, but for the class of dwellings that we are dealing with this Return refers simply to the enumeration as so many persons to a room.

10153. But in the instance you gave of a husband and wife and a child you agree that a child should have the proper minimum of air even more than an adult, because its future may be mortgaged by its sleeping in a polluted atmosphere ?—Yes, but one must go by degrees. But it is well to discriminate between cases. Where you have open windows that state of things might go on without great injury.

10154. But they never open their windows, I understand?—That is a matter to which I was proposing to refer under the head of Social Education. If we bring those things to the front then the idea will work its way, but only by degrees.

10155. Well, on this subject I should like to have your opinion. You will agree that the great difficulty in dealing with overcrowding is that improvements are apt to cause an accentuation of the mischief in another place ?—That must be so. *Mr. Loch.*

10156. And the class you wish to eliminate is the one most reluctant to move and the most incapable of moving—Yes; they probably go to the nearest possible place.

10157. And create and aggravate the conditions of overcrowding in that place ?—Yes.

10158. Is not the disposal of these people the most serious obstacle to the exercise by the local authorities of the powers with which they are entrusted ?—I think that the powers of the local authorities are sufficient.

10159. No doubt they are, but they hesitate to exercise them because of this difficulty, do they not ?—They do. But that is not quite their business. Their business is simply to carry the law out, and if they enforced the law thoroughly I think the supply would right itself quickly, much more quickly than it now does.

10160. With a view to enforce the laws against overcrowding, what would be the effect of the declaration of the local authority that after a given date overcrowding should cease ?—I should imagine that it would be better to proceed tentatively, and not at a particular date. I should think that it would be better to proceed rather in group and group.

10161. Taking the worst centres first ?—Yes, but taking them firmly and sternly. I should not suggest the application over the whole area, but to apply it as you suggest, piecemeal.

10162. Would it involve the local authority in a problem difficult to solve ?—I do not think that they are responsible for overcrowding.

10163. What would become of those people ?—That is their affair.

10164. Should not we have an immense increase of the vagrant population ?—If we have it we must deal with it. I do not myself think so. I think that you might have an increase in the indoor relief that is going on now, but conditions are very plastic, much more so than people incline to believe. An instance of that, in regard to a rather different condition of things, is this: before common lodging houses were under the London County Council we had returns of them from the whole Police County of London, the larger area, and it is quite extraordinary how quickly in those days the lodging houses grew up with an increasing demand on the part of their *clientele*. That showed how very instantaneous the supply would be when the demand was clearly expressed.

10165. The County Council should use their control to bring life up to some standard of comfort and decency ?—I think that it is infinitely better since the County Council took it over, and the supply is based on the conditions of health and sanitation, which were not admitted before.

10166. With regard to the statement of Mr. Charles Booth in his book, that he advocates interference "by administrative action and penalties at each point at which life falls below a minimum accepted standard while offering every opportunity for improvement," or as he elsewhere puts it, "the community will be obliged for its own sake to take charge of the lives of those who, from whatever cause, are incapable of independent existence up to the required standard." I suppose a drastic action on the part of the local authority would create some such problem as Mr. Booth here contemplates ?—Yes.

10167. How would you propose to do deal with the residuum that supply and demand does not provide for?—Well, to take a preliminary question in order to answer the further question, it seems to me that if we put ourselves forward as taking charge of any class that class will come under our wing and stay there; and the administrative ability of our people and ourselves is not very great when we come to deal with social problems largely bound up with moral questions, and the ability of dealing with people after a certain age is very small, when they have got ossified. Consequently if we put ourselves in that position we are bound to fail, and our penalties will be of no avail. If we have to deal with the question of the residuum, there

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is the older view of residuum, namely, that it is residuum, which means that you cannot deal with a——

10168. *De minimis non curat lex*?—All that you can do is to provide it with maintenance, and the Poor Law idea is that a certain number of people who cannot stand upright have to be provided for by the community, and they therefore will remain a charge upon it. I hold, myself, that the present system of haphazard and hesitating treatment of the difficulties where the law allows a plain verdict, has helped to create a class which eventually becomes part of the residuum. You do not stir their will up to make the effort when they might, and they become more and more accustomed to conditions which they ought never to have been allowed to fall into.

10169. And from which they will never emerge?—Yes.

10170. And you strongly advocate the firm grasping the nettle?—Exactly.

10171. How far then should the central authority step in?—Well, there are many conditions for the prevention of which a local authority is working, and in regard to which a central authority could do a great deal to assist. It can inspect, and it can work on the natural method of promoting good conditions by the process of imitation.

10172. Bring them up to the level of the best administration?—Exactly.

10173. We have had evidence that the standard of administration varies enormously. We have had evidence from Tyneside and the Potteries, describing those places as the blackest blots on the civilisation of this country?—Yes, and another point that is worth considering in relation to that is the staff now available, say in London, of sanitary inspectors and men in such positions, used to the greatest advantage. Does that amount of human force produce the proper amount of human result.

10174. You think that the staff is insufficient, and its efforts are perhaps not applied to the best purposes?—Well, I should urge that possibly by a more systematic application of the law on definite lines, in conjunction with the support of the central authority, the staff work could go very much further.

10175. Do you look to the enlistment of volunteer work for assistance?—In certain directions, certainly, I think that it is very desirable that we should have volunteers in connection with this work who would assist the sanitary inspectors. I think that it is very good to have what are called sanitary visitors.

10176. They have them in Manchester—what they call the Ladies' Health Society?—That is very good.

10177. Which does a great deal of excellent work?—Yes, and personally I think in connection with hospitals a great deal might be done.

10178. Now will you resume the general current of your evidence? What conclusions can be drawn as to the figures of pauperism?—These figures from pauperism, I think, deal specially with the period since 1886. In 1887 there was the drop in prices, and I have kept that in view, and there ought to be a change for the fifteen years, dating from a point like that. The first point that strikes one is the large drop in the number of children who are in receipt of relief, and also the drop in the number of able-bodied out-door paupers. Practically the latter has carried the reduction in the former. Taking the figures between 1886 and 1903, and omitting lunatics and vagrants, there is a *plus* of about 65,000 under the heads able-bodied indoor relief, and not able-bodied in and out relief. On the other hand we have a *minus* of 71,600. And this decrease consists of 51,626 children and 19,974 able-bodied adults no longer in receipt of outdoor relief. From this it appears that the balance is being altered steadily, the number of children goes down, and that of the able-bodied indoor paupers and the not able-bodied goes up. And the latter have so gone up that they neutralise all the gains and leave the percentage of pauperism on population almost even. I am inclined to infer, that with these higher wages and lower prices, and so on, there has been an endeavour to get rid of the expense and the responsibilities which are connected with the care ofthe aged. Otherwise had the not able-bodied pauperism remained at the old figures pauperism would have gone down immensely. One has wondered why in this good time the pauperism has not gone down, and the answer is there.

10179. And the increase in the number of lunatics points to a similar conclusion, does it not?—Yes, comparing 1903 with 1886 the insane pauper returns show a *plus* of 15,000 and females a *plus* of 16,000 odd.

10180. You have touched upon the evidence there is to show the sources from which the incomes of the working classes have been improved. Is there anything more you would like to say upon that point?—I should like to say one more word about the aged paupers—those over 65 years of age. They have increased—we have important returns in August, 1890, to January, 1st, 1892. Between 1890 to 1892, August compared with January, the increase is 9 per cent., and between 1892 and 1900 it is 6·9; and a very remarkable return obtained by the Departmental Committee on the financial aspects of Mr. Chaplin's proposals showed that out of 5,980 persons in different towns and parts of the country over sixty years of age and not in receipt of Poor Law relief, and all understood to have an income of not more than 10s., 55·62 per cent. who would be assisted by their children, relations, and friends, and 37·1 per cent. by employers. I lay stress upon that, because that indicates the issue from the point of view of what I should call social deterioration. If these figures were to be deleted the effect would be that a large number of persons out of the 5,980, for instance, would be at once thrown upon the public and the whole advantage of the increase of wage and the lowness of prices would be nullified, whereas now in their case, social obligation, which is always educative, is carrying forward an amelioration, moral and social. Questions of that kind, dealing particularly with the lower stratum, say 10 per cent., are most prominent in the minds of the public, and they are, I believe, least understood.

10181. The general conclusion that you have come to is that such deteriorative tendencies as are noticeable affect the conditions of the people late in life?—Yes, one has been struck with the alleged increase of lunacy in Scotland, in the later times of life, whatever it may be due to. But it is said by Dr. Carswell, of Glasgow, "that the number of applications bears no definite relation to the amount of certifiable insanity in the parish; it indicates the desire of the public to get the assistance of public institutions when it is at a loss how to dispose of a difficult or burdensome responsibility arising in connection with mind disorder."—desire to be rid of expense and responsibilities in the case of the dependent. So that there, also, the same factor is working on figures.

10182. That is a deterioration, then, more in the nature of a pauper deterioration than anything else?—Well, yes of course, one is struck also by the life table which Dr. Newsholme, of Brighton, has formed, which shows that the "improvement is great in the early years of life, and very small" later. I do not know whether that would hold good generally. But my feeling is that there is no physical deterioration but an advance, and the advance is shown in part by the lessened pauperism and the lessened lunacy of the early years of life and the greater expectation of life in the earlier years.

10183. And I suppose that the condition of the people at a later period of life is, to some extent, due to causes dating from a period anterior to the introduction of amelior ative tendencies which have since brought about an improvement?—Yes; it is certainly so in the case of the aged, because they grew up under conditions different to those now in force.

10184. Some of the people who have been most impressed with the bad conditions of the present time have said that they believe they are the result of causes diminishing in intensity and that may pass away in the next generation, and your view would be more or less similar to that?—It would.

10185. Have you anything further to say upon the evidence of beneficial expenditure of the surplus income possessed by the working classes, which should tend to ameliorate their condition? You have referred to improved dwellings and increased expenditure upon food; do you think there is a more general sense of responsibility to their children? Do they recognise the duty of devoting their larger resources to bringing up their children worthily and well?—That con-

clusion may be drawn from the large decrease in child pauperism, unless you look for the cause in charitable institutions taking charge of them, instead of the Poor Law, which I do not think is the case—the numbers are too large; at the same time it seems to me that where the higher wage has not been combined with a better power of using the wage the children have not come off better.

10186. I am afraid we have had a lot of evidence to that effect. But how far it is general it is very difficult to determine, but among the countervailing tendencies which have come permanently under your notice, what should you class as the chief?—The countervailing?

10187. I mean those which have prevented improved resources going to the profit of both parent and child?—Of course, I think it must be admitted, and it is said in the House of Lords' Report that betting has largely increased, and I think that anybody with any experience knows that that is an immense consumer of money.

10188. You believe that that is so?—I believe it from talks with men casually.

10189. Does it go in drink, or is it a sort of alternative excitement?—Both. There is a good deal of evidence, judging from talks that I have had, in the way that the children are dragged into it so that it becomes a habit early in life. Then the question of drink is extremely difficult to analyse, but, undoubtedly, the evidence shows that in particular places (and again dealing with our 10 per cent. so to speak) the public-houses make it very difficult for landlords to get their rents and so are affecting the whole condition of the families. There are certain classes of people in those houses who are practically irresponsible, and their money goes in that way.

10190. With the consequence, I suppose, that they have starving children?—Yes; of course all those things lead to want and hunger.

10191. Do you believe that a very large number of children are sent to school in a half-starved condition?—I do not think so. Estimates have varied at different times, and taking them all into account, and allowing that those who make the estimates are very much in the child's interest and very often know very little about the family, I do not think that the actual number is at all large. May I say a word about the system?

10192. Yes?—It seems to me that it is a very foolish method for dealing with the problem; if meals are given they are given only for part of the year, and they do not really touch the needs of the home. They tend very often to break into the domestic habit of providing meals, which is after all a most important thing to keep up, and they are not educative in any way. They do not educate the child and make it think of how he obtains the meal; nor are the children taught to make meals for themselves; nor are the parents led to take any further steps to provide better meals, more suitable for children and so on. The whole movement it seems to me is purely a movement against destitution without regard to education, and that in itself is a strong criticism of it.

10193. But could not it be so modified as to remove the objections to it?—If you handled a few children with a thorough knowledge of the families it could; but a thorough knowledge of the families must be conjoined with an effort to deal with those families *qua* families. Those are the only conditions in which I think it would be useful.

10194. You do not think a system of contribution on the part of the parents so as to practically get rid of any idea of philanthropy would stimulate the sense of parental responsibility?—When the movement for meals was started that was the proposal, but it has gone to pieces. It is carried on now with regard to crippled children, but it has absolutely broken down otherwise. The number who are put on the lists are not entered on account of hunger, but rather on account of sentiment, or possibly even on account of elections.

10195. You think it has no relation to hunger?—It has no relation to it.

10196. But if the parent is away during the day it is very difficult to provide for the children; what would you do in that case?—If those cases were numerous they might be be dealt with on their own merits apart from the general system.

10197. You only advocate the system on a very small scale?—Yes.

10198. And that with special reference to the whole conditions of the child's life?—Yes, and as secretly as possible.

10199. The advertisement of that sort of thing does harm, you think?—Yes, I think so.

10200. You have noted here that the degenerative tendencies you specify have a particularly bad effect upon the young?—Yes, I might say that I have myself inquired into the condition of school cases in the past with special reference to this, tabulating every case, and I have all these tables, which are at your disposal, if you wish.

10201. Yes. You observe that a comparison of the physical conditions in different classes shows what a very large margin there is for improvement in the lower classes, but have you formed any opinion how these improvements are to be brought about?—Yes.

10202. This class, I suppose, is the bed rock of the whole difficulty?—It is. I should work from the school very much more from the point of view of strengthening the physique and giving the children more play, and I should bring social education much more to the front.

10203. By social education you mean social education outside of the school rather than in it. Is not the age at which children leave school almost an insuperable obstacle to anything very considerable being done in the way of such education?—I think that a good deal could be done with the girls before they leave, and a good deal afterwards when they have left if it was begun at the school.

10204. Do you think that compulsory continuation schools for girls, at which attendance might be twice a week, for the subjects of a domestic character, would to any extent meet the evil?—I think it would be quite worth trying, provided that the work was entirely practical.

10205. And then with regard to the boys during the same period, fourteen to sixteen, if it could be made obligatory for them to attend classes for the purpose of physical exercise, do you think that would be useful?—Yes.

10206. And you might exempt from such attendance boys who belonged to any club or brigade in the scheme of which physical exercises formed a prominent part?—Yes.

10207. It is during that period after they leave school and before they grow up that most of the contaminating influences that destroy them come into play?—I think that the habit is earlier in the home.

10208. Except that the deterrent influences of school during five or six years, I suppose, has effect?—Undoubtedly.

10209. It is the danger of lapse after that disciplinary influence is withdrawn?—Yes, but the difficulty that we are speaking of is often due to the fact that their attendance has been very irregular and that they have not been very much in the school. As the teachers have said to me, if we can only get them it would be all right.

10210. And then you go on to deal with the conditions in their home?—That is so.

10211. And the goodwill of their parents?—You get to the root of the evil there.

10212. But by what methods other than school?—I should make the school much more than it is at present the centre of trained voluntary work quite apart from the relief. I should do everything I can to associate it with efforts to provide wholesome exercise quite apart from school—cadet corps, and the like, and all this would help to make it more attractive than teaching proper, and I should be inclined to make it a kind of scholarship to go into the country, so that a boy might go into a good industrial school, not by way of punishment, but as a change, as it were, to a boarding school, where he would see life from a different standpoint. He might have six weeks or six months there, and it would do him an immense amount of good.

10213. But you could not deal with any very large number of children in that way?—No, but you would turn a certain amount of thought amongst the children in that direction.

10214. You think you would create a desire to see the country?—Yes, and would not make the curriculum merely intellectual, which I do not think is always beneficial.

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10215. No attempt has been made to do anything of that sort?—None.

10216. And do you attach great importance to the reservation of open spaces?—I think that that ought to be definitely considered for the whole of London and the outer area—certainly the whole police area. I once tried to work it out in that fashion, and I am more and more convinced of the necessity of this reform. Each year is making it more difficult, and it ought to be dealt with summarily.

10217. Has not the time gone by for dealing with it adequately?—I do not think so. If there is any clearance for further artizans' dwellings, I should keep it as an open space.

10218. You would have to compensate the property owner?—That is always done because of the clearances; only I should keep the clearance, and after a time, when the population has migrated, I should sell it at the market value, and, eventually, you would recoup yourself.

10219. But you would destroy your open space eventually?—Yes, but the child population would have gone, at any rate.

10220. The size of London makes it very difficult to carry out that suggestion, but it would be possible in a great many provincial towns if the local authorities were to show some intelligent anticipation of the needs of the community, and to secure an enlargement of borough boundaries in time, so that open spaces might be acquired and worked into the ultimate extensions of the towns?—Certainly, a great deal might be done by that, but I do not despair myself of London.

10221. By the process of demolition?—Yes; but I have seen, myself, the area of Acton, for instance, become covered. Even now something could be done, but ten years ago it was an open problem. And there are places now beyond Acton which are now filling in, but are still quite clear for action. Nothing could be more urgent than the appointment of a small body to take charge of this business in conjunction with the County Council, and the authorities within the police area.

10222. The County Council have not got the powers requisite now, have they?—No.

10223. You know that in Germany most careful precautions are taken against covering the surroundings of a manufacturing centre with houses?—Yes.

10224. Great rings of thinly-peopled spaces with avenues, stretching into the open country, are always preserved, and the density of the population which arises after that is confined to a limited area, and however big the town it always has its lungs and its open area?—Miss Octavia Hill was anxious that that should be done for London, but public opinion was not alive to it. It seems to me that it is good to do it even now. With our easier methods of transit places further away would be within reach now.

10225. Have you any reason for thinking that we are less intelligent than the Germans in these matters?—I do not think that we study them. It is very hard to get a book on English administration on this side, and even for our local administration we have to go to Germany; we commonly use a German book on the Poor Law—Dr. Aschrott's book—and the same may be said of our information as to other countries.

10226. In manufacturing towns where the presumptive conditions are unfavourable to health the Germans are vastly in advance of ourselves, are they not? I cannot speak absolutely. It is too long ago since I went into it, but it struck me that their control from the police point of view and others is much stronger than our own. In that connection I should like to refer to one point with regard to the vagrancy question. The police control in Germany is the saving factor of the position. The rest of their methods could not be carried on without it. It seems to me that it is possible that if some system of general service in the army or anything of the kind were introduced here, many things done in Germany might follow from it.

10227. Do you think that the disciplinary effect of that touches every point of administration?—I think so.

10228. Have you anything to say upon the current classifications of poverty that have been made the basis of certain conclusions in more or less well known books?—Yes, I have myself taken a view very much in opposition to those who have propounded those systems of classification, but I find it extremely difficult to put before you the rather intricate points which are connected with the matter. I should very much like, if it were wished, to submit some memorandum about it.

10229. We should be very pleased to have it?—I have a great deal of material and it was rather difficult to submit it, and if I took two or three points it would not give their proper value.

10230. If you provide us with that we shall print it *in extenso*, and we shall thus be able to get a clearer and more comprehensive idea of your views?—If you thought that what I send in was in clear opposition to any evidence you have had, I might be allowed to answer questions about it.

10231. Yes. You might come again. That would be a good suggestion?—I shall be pleased to do so.

10232. (*Mr. Lindsell.*) Do you know in your experience anything about the methods adopted for making the schools more attractive to boys and girls during the school hours?—Only from conversations with school managers and people working with the Charity Organisation Society.

10233. Do you know anything about that holiday school, which was started?—Yes. I cannot tell you about the working of it. I have been only told the story of it.

10234. That would be a step in that direction. You were speaking of making school life more attractive?—I should like a holiday school in the country possibly.

10235. You know that there are seaside camps got up?—Yes, and they are all doing very good work I think. But I should like it as a matter of mere routine that they should go there—boys and girls.

10236. You mean that there should be some form of pressure to go?—Yes. And if connected with future service for the army for the boys, I think that it would be a fair expenditure of public money.

10237. You know that the boys go into the camps in some schools?—Yes. That might be largely extended—if the movement would really catch hold of the schools—I believe it might.

10238. At Grantham, in Lincolnshire, I understand that it was a great success. There was a very large volunteer camp in Lord Brownlow's Park where the Grantham boys went with a separate corps of their own, and where we permitted their attendance and gave them a money grant as for school attendance?—I have not heard of it. It would be good.

10239. It was rather a bold experiment, and it is worked with considerable success, and perhaps it may be further extended?—Yes, I see.

10240. You would hardly suggest that the average boy should go to those industrial schools in the country?—Oh, no. My idea is that there is something to be got from aggregate life which these boys do not get in the way of school life. I was not thinking of the industrial school except from that point of view. I thought it would be a good thing for them to have a school of that kind for a short time, and under those circumstances, if possible in the country, and they would go away with different ideas, and possibly strengthened motives.

10241. I suppose the boys hitherto that you get at the seaside camps are not quite from the social stratum of those very poor that we have been speaking about?—I am not sure. To a certain extent they are. But the tendency would be to get the better type—I think that would be the tendency.

10242. (*Mr. Legge.*) I should like to refer to the matter of feeding school children. Am I to understand that you have not heard of what you consider a really sound scheme for the feeding of school children out of their homes?—No. I do not think any, except where there has been quite special care taken in the management of a few children in connection with the families.

10243. But supposing we had a medical inspection of schools, and the medical officer having a child brought before him by a teacher certified that the child was simply suffering from malnutrition, would you object to steps being taken to prosecute the parent for neglecting that child, but in the meantime to feed that child at the

school ?—I should feed the child, not necessarily at the school, but with a view to a particular end like that. That is necessary, and I take it for granted all through.

10244. But those cases might not turn out to be 1 per cent. in certain schools, but might turn out to be 25 per cent. in the poorest localities ?—I think I should not alter it; it would be better that the feeding was not at the school.

10245. And that really any step taken on behalf of the child should be accompanied by some step taken in relation to the parent ?—Yes.

10246. To enforce the feeling of responsibility ?—My conclusion from going through a number of cases is that there must be a plan in each case, and that the case considered in that light comes out quite differently. In many of the cases which we dealt with our real trouble naturally was with the parent. We made the plan and they threw it over, and I do not see how you can get over that as long as the parent does nothing criminal. You want a boy apprenticed, but at the last moment the parent says "No." The real issue is in the management of the case, and not in the general issue.

10247. You are aware of the industrial school system ?—Yes.

10248. Have you studied at all in particular the day industrial schools, of which there are one or two samples in London, in Drury Lane, for instance ?—I did in the early days of its introduction rather than in later years.

10249. Do you think that that is economically sound ?—I think that it is a good method decidedly, but I think it too wants particularly to be placed under conditions in which its work will be in relation to the family.

10250. It is the best feature of a really day industrial school, that they bring to bear influence upon the parent ?—Yes, and I am not inclined to doubt it on the whole. It would be a point of great importance to work it out in detail.

10251. But there is one special feature of their curriculum, namely, that the boys and girls in those schools do not take the full elementary school curriculum; they have class work as it were for three hours a day, and the rest of the time they are at simple occupations and employments, with once a week or twice a week a technical lesson. Would you approve of that sort of instruction for the class of the population which has to earn its bread by the sweat of its brow, and not by stress of intellect ?—Yes. I should myself make the curricula for the public elementary schools according to the class of the children in the district, and I should extend the teaching of domestic economy and subjects of that kind, provided that it is quite practical, and I think that the plan of division of labour in the industrial school is very good.

10252. The only way to work the industrial system in an ordinary elementary school is to make it practical, because you cannot give girls laundry every day in the week for two or three hours at a time; you must give up a good deal of the time to washing, and this scheme could be carried out by enabling girls to bring actually from their homes the week's washing and do it in the school under proper directions ?—Yes.

10253. Now what do you think of this suggestion: that also in certain districts mothers who keep decent houses should be allowed to have their girls half time for domestic employment at home after a certain age, say thirteen ?—I should be inclined to try that experiment.

10254. Do you think that would have a good effect upon mothers who had not a good home and encourage them to get the home up to the standard, to enable the managers of the school to grant them a license ?—I am afraid that is a question one cannot answer without trying it experimentally. There is a great imitative faculty amongst those people.

10255. If Mrs. So-and-so's girl was allowed out because she kept a decent home, do not you think that would have a strong effect on Mrs. B. and C. if they found by a little elbow-grease about the house they could get their girl home ?—Yes, it would have an effect, but the question is whether Mrs. B. and C. had not gone too far to care for such things.

10256. I gather from your answer to the Chairman that you think that all these questions of health and sanitation in particular districts are primarily the business of the local authority ?—In this sense, that primarily it is the business of the individual owner, and only the local authority to come in as a kind of police. I am not speaking of the roads—on the public side of the question, but of the inside—the room.

10257. You would not allow them further powers than that of the police; you would not allow them to play the part of the missionary ?—We have no data for that. If we ought to do it, we ought to do it as we have done other things. They have mostly been worked to a point on voluntary lines, and then, if useful, turned to account. But it is a question whether, as a local authority, you would have a large enough educational staff for this purpose in addition to the public elementary school staff, for that is what it would come to.

10258. But we gather, from what we have already heard and we know, that local authorities in different parts of the country vary in the most extraordinary degree as to the sense of their duties. Now you would agree that the Central Government might play a very important part in bringing to book any local authority which became notorious for neglecting its duties ?—Certainly, in the formation of opinion. I think that the local authority's report should be drafted on definite lines, so that the central authority should have *data* on certain matters, whatever happens, and if the report shows mismanagement in regard to them as compared with another district, then there is the evidence.

10259. Supposing the facts as to one-roomed and two-roomed tenements were clearly set out in a table for different localities, that would give the sort of indication you are aiming at, would it not ?—Yes. There are a whole series of questions which, if you take up those reports, you will find not touched upon. The report often turns upon a special experiment about which the municipality is a little proud.

10260. Back to back dwellings might well be brought out ?—That is one of the things.

10261. And another method which has suggested itself to us and one or two witnesses is that there should be a Central Government Bureau to collect from time to time anthropometric facts about the population in different parts of the country. Do you think that would be a valuable indication as to whether there was deterioration going on in one district more than another ?—The evidence is very insufficient for answering that question.

10262. We have got practically no data at present ?—I have no data.

10263. Do you think it would be a good thing to have anthropometric data ?—I should think so. I should have thought that some societies, equipped by the Government, would have led the way.

10264. They have in a measure, the Anthropological Institute, but they go rather upon the principle of asking the Government to take the burden off their shoulders, and they admit that it is too big a job for them ?—In that case it becomes a sort of normal sanitary management of the community, and it is within the scope of the community.

10265. It is just as reasonable to have such a thing as to have an ordnance or geological survey ?—Yes. I was very much struck with Dr. Newsholme's Brighton Life Table. I do not know whether that system would be generally applicable, but it seemed to me a most suggestive method which would do something in the same direction as an anthropometric survey.

10266. (*Dr. Tatham.*) With regard to the question of vagrancy, I daresay you are aware that the Salvation Army people—the authorities of the Salvation Army—have recently issued a pamphlet on the question of what they call the "Won't works"?—It so happens I have it, but I have not had time to read it; but they are a well-known class.

10267. In general terms they propose that that class of the population, unfortunately a large one, which simply will not work, although they can do so, but prefer to live on the generosity and charity of their neighbours—should be treated by somewhat severe measures. The proposal is that the magistrates should have power to convict persons of that class, and to commit them for periods of three years or more to a labour colony, where they might be made to work, with a hope that they might,

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eventually, find it advisable to work on their own account. And the opinion is expressed that the existing charge might be used for the legitimate object of relieving those who can not earn their own living—the residuum you speak of, who are perfectly willing to work if they could, but are unable to do so from circumstances. Would that proposal commend itself to you if it were practicable?—There are one or two things about it. The difficulty of dealing with the vagrant is the magistrate. If the police dealt with the question, as they do in Germany—the question is would the English Public substitute the police for the magistrate? The next question, as to the results: it will depend very much on the age of the person who is committed, whether any result will come. In Germany they have a work or correction house system, and on conviction the Court may order that the prisoner be handed over to the District police authorities for detention in a house of correction or be sent to labour, that is, of public utility for any period up to two years. But their "work"-houses are very full, and they have there "ins and outs" who, at last, settle down in these houses. Your labour colony would be very much the same unless there is discrimination. If you sent a small number there—you may say, roughly, men under thirty-five—you may presumably awaken their power of self-amelioration. But the difficulty is great to deal with those people in the aggregate. The standard of standard of labour amongst them is so low unless you have strict supervision, so as to make idleness impossible. I do not think, myself, judging from the figures, that what you may call reformed vagrants ever form a large proportion of the number. It is true that you may be dealing, not with the vagrant only, but also with the more or less settled labourer who will not work. That leads to another difficulty; who is to look after the wife and children. The children may have to be taken over. Are we prepared to do that for long periods? It would come to a very large charge. The advantage, it might be argued, would be that very likely the father, and possibly the mother, would have to contribute towards their children's education in some school. Well, of course, you are dealing with numbers, and after all the financial question underlies your scheme. I do not, myself, believe that the number of vagrants is very large. But it is most difficult to deal with the class which are called the "Ins and Outs" of the workhouse, and I should be inclined to adopt a penal system in regard to them; call it a labour colony if you like, with a long detention, with a view to reformation in those cases. But I can see that it is quite likely that after three years or so the results would rather sadden the reformer, and the result of that would be a reaction in favour of merely keeping them. On the other hand there is this to be said, it was one of the results of the Act of 1882 for dealing with casuals and detaining them a longer time—for two nights. The Act had a very remarkable effect. At the time I saw a good many of these cases, and was in communication with some of the officials, workhouse masters, and others, in connection with the Poor Law, and they said that the nett result was that though many of the men could earn only a little, this obstruction, by which they were thrown on their own resources to earn that little, led them to become to that extent supporting and self-respecting members of the community. Now the negative side is always criticised, but it has that positive result, as has been shown quite clearly again and again, and it is a question whether the extension of your machinery will not, after a short time, lead to a reaction which will again necessitate negative treatment, and then you are no better off except that you have imposed upon the community a large new administrative machine which has, after all, failed of its purpose. There is one other point. You have in London a large number of common lodging-houses of all descriptions, of shelters and so on, for the vagrant. The person who inhabits those houses is, to a large extent, the man who prefers idleness. If he has 5s. or 6s. a week he is more or less content. He lives at a low standard constantly. He is a man who does not want much, provided he is comparatively idle. From those shelters and houses, which are often filled with people, a great number pass into the workhouse and the infirmary; and the consequence is that the community pays twice over: first, by voluntary contributions or philanthropic investments for establishments for them, and then, having congregated them in cheap establishments, for their public assistance by the Poor Law in the infirmary or workhouse—often a very large local charge. I very much fear that if you had a labour colony on a large scale with large numbers of this class in it the same results would follow. Therefore I fall back more and more upon the position dealing with cases individually, and if you desert that principle the reaction following your treatment will very likely upset your plan of reform.

10268. With regard to the persons of the labouring classes who occupy the houses provided for them by the London County Council, is it your experience that those houses are really occupied by the people who have been displaced and who are really intended to occupy them, or are they occupied by a higher class?—I think, undoubtedly, the latter. There is one exception to that in Camberwell. That is, the Borough Council have adopted a plan which is really the old one which commended itself to Lord Shaftesbury and others, of having the houses refitted and made clean, and keeping the tenants in them all the time. That is cheaper. It causes no displacement, and that is the plan on which Miss Octavia Hill has worked. Personally in my opinion I think that is the best for the community.

10269. You think that would be better than large and very expensive labourers' dwellings which would not be occupied by the persons intended?—Yes, and there is the advantage that you do not create the difficulty of overcrowding by reason of your reform.

10270. You were speaking just now on the question of infant mortality. I have before me the last published Return of the Registrar-General of England. It says that ever since the year 1838 there has been practically no diminution in the infant mortality, that is to say, the proportion of deaths of infants under one year of age per 1,000 of births; and the same thing with regard to the last sixty years, that is from 1841 onwards, obtains in the case of London. From 1841 to 1850, 157 per 1,000; 1891 to 1900, 160 per 1,000; so that practically the figures are identical?—Yes, thank you.

10271. (*Colonel Onslow.*) We have had stated in this room by at least one witness, I think more, the idea that the State having undertaken free education of the children it is incumbent upon the State to see that those children come to school in a fit state to receive that education; that is to say, that they come well fed. What is your opinion upon it?—I think that it is a *non sequitur*. You might say that of any order of the State.

10272. But surely there are many cases where the parents are, either owing to want of work or to their being "the won't works" or from being drunken or anything like that, absolutely unable to provide meals for the children before they go to school; but the children must go to school. In those cases would not it be possible to discriminate in giving meals to the children—would not it be wise?—We generalise too hastily. We must have a distinct report in each case, and if that is done the conclusions drawn in regard to the cases are usually found to be different. Some of those cases are Poor Law cases clearly and ought never to come (I mean that the conditions are such that no meals would touch them). The dinners would keep them out of the relief which they ought to have from the Poor Law.

10273. But there might be other cases where parents are entirely neglectful, when they could pay for the meal instead of getting it all free?—I think that you must deal with the parent as he stands. The difficulty of all direct work with the poor is to get the will of the person who is causing the difficulty on your side.

10274. Might not that well be obtained from the first by using force, as formerly when parents had to pay for the schooling of the children. Where parents were poor they got it free, and those who were able and would not pay were brought before the magistrates—could not the same thing be done in the case of meals?—With regard to the past it was said to be a constant cause of complaint; and I always fear myself that magisterial firmness will melt away before the difficulties of the situation. I think that the cases of the type are not numerous. I could not give proportions, but I think that it would be found that they would not be so numerous but that they could be dealt with themselves individually on a great variety of methods.

10275. Granted that the children must be fed, if you do not wish them fed in the school where do you propose that they should be provided for? Have not you formed

any idea?—At times it has been arranged that they should have their food locally outside the school by the plan of coffee houses. That is not altogether satisfactory; and the larger the numbers the more difficult it was for the school to find dining places.

10276. Could not the preparation of the food for those children be co-ordinated with instruction in cookery for others?—I should accept that within the same limits, namely, the careful discrimination of the cases.

10277. You spoke about camps, but I understood you to say that it would be a good thing if they were brought into line as a sort of preliminary for boys going into the Army, or in connection with the Army, and that then the State might be called on to contribute towards them?—Not under present Army conditions. I had not that in my mind, but the possibility of some *quasi* Militia system.

10278. Or some universal service?—Yes.

10279. Is it not your experience that, with the very poor in particular, if they get the idea into their heads that whatever you are doing is with an ultimate idea of bringing the boys into the Army or Navy, they would set their backs up against it at once?—I think so.

10280. And be dead against it?—Yes, judging from particular cases; but I am inclined to think that you would have the young on your side at the ages of fourteen and sixteen.

10281. Undoubtedly. For Admiralty recruiting, after boys have come back from the training ships and have been about the country, all our country officers are overrun by applicants, but out of one hundred who apply we get about fifteen, because the parents won't allow the boys to come in, the boys having reached the time when they are earning wages. Of course that is not sentiment; it is not that they do not want the boys to go into the Navy, but simply because they want the boys to pay for their rent and so on?—Quite so, and it is also to be remembered that the economic position is that of the family. They do not manage their budgets on the individual system of the wage-earner. In every family there is an immense amount of compensation in economic difficulty forthcoming from the members of the family, and that as a matter of course, so that I think that is a good point on one side of the question.

10282. Regarding sanitary questions, you were saying that the report from the local authorities should be based upon a set form. You meant that the local body, the Corporation of a town for instance, should report in a set form to the Local Government Board on certain questions?—Yes.

10283. And that the questions should be quite regardless as to whom the property belongs?—I had not thought of that.

10284. I mean to say it is a fairly well known fact that in some towns they have shockingly bad insanitary dwellings, but they go on from year to year—they go on and no one seems to report upon these dwellings. What do you say?—My opinion is that there ought to be a property map of ownership to each town, and to carry the idea further I think that the central authority should report upon the reports and that should be a public document.

10285. The person who reports upon the sanitary condition is naturally the sanitary inspector, but by whom is he appointed?—By the local authority.

10286. And he is removable by the local authority?—That is true: but we have a county system, and I always hoped myself that the county inspector and the county system would carry with it a county system of supervision.

10287. You would advocate having somebody above the official appointed by the Corporation or the local body?—Yes, in the main so.

10288. To see that they did their work properly?—Yes.

10289. (*Mr. Struthers.*) Do the local authorities at present make a report to the local Government Board in any form?—Not that I am aware of. At any rate I do not see them. Some make very useful reports—small reports.

10290. On special points?—Yes, and some are almost annual reports which would be of great service, but they are not formally made to the Local Government Board.

10291. Nor are they compulsory; they make them when they please?—Yes in form and everything.

10292. They are not required by any Act to report with regard to the sanitary condition of the town?—I understand not. In London they are obliged to report as to certain charities; but that comes incidentally in connection with the older administration of London.

10293. But they are not required to make up an annual statement as to what they are doing in the matter of sanitation and administration of the law relating to overcrowding and so on?—No, the medical officers of health do make a medical report, but I do not think they do it according to any specified requirements. I might add that the poor law authorities do not, and it is most important that they should.

10294. It would require legislation to get what you desire, that there should be a duty imposed upon the local authorities to report in a specified form by the Central Government?—Yes.

10295. But even if you have that, if even the sanitary authority such as you have in certain parts of the country should make any inquiry as to their powers or as to the state of the police of the towns from the point of view of sanitation, would not they be apt to be lax in the matter of the report?—I think that they would. I think that the change would come gradually as in other reforms; with the large amount of conference and association that is now possible it would work upon their imitative faculty.

10296. But if you have not anything stronger than the imitative faculty, would that be sufficient?—I am afraid that it would break in one's hands! In the matter of finance I think that a central audit would be a good thing. I look upon this really as the other side, the audit.

10297. In Scotland the Local Government Board has pretty extensive powers of dealing with the local authority, if necessary, in offences against the law as regards sanitation and such matters, and it exercises that power by presenting a petition to the Court of Session to have a certain local authority compelled to do its duty in a particular matter. You do not think that that would be a desirable power here?—I think that it depends upon how much it succeeds in Scotland. But I do not think it has been tried long enough. I think it was under the last Act. I do not know if it is satisfactory.

10298. Dr. Mackenzie who gave evidence on this point said that they had made use of it in a number of cases and I asked him particularly whether it had been brought to bear upon any large municipality, and he said it had?—Then I think that it is quite worth considering its application to England.

10299. As regards the comparison of municipal administration in Germany, of course you pointed out the essential difference that the administration of Germany rests upon a very complete police system; but there is also the fact that there is a permanent burgo-master for a period of years?—Certainly.

10300. Whose business is local administration?—Certainly.

10301. Who is a trained administrator, and all the local officials are more or less men who, in addition to a good general education, have received a certain special training for their duties; so that there is no analogy between Germany and this country?—Nothing of that kind.

10302. There is no provision for the training of local administrators in this country?—No. The German system seems to me to depend upon the German electoral system, by which the property holder, at any rate the man who has most stake in the community, practically holds the election to a very large extent, and he appoints the best steward he can find as mayor, as has been described. You can get a consistent policy on those lines, which it is almost impossible to get under our conditions.

10303. But even with the best local authority in this country there is an element of permanency wanting, which is secured by the German system?—One would say so.

10304. Permanency and gradual development?—So far as I know Germany, it seems that is so. Perhaps one does not fairly gauge the general movements which go on here, which possibly they do not have in Germany.

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10305. Your general impression is that owing to the practical rise in wages and the lowering of the cost of living there has been, as regards the great bulk of the population, a substantial improvement in the last quarter of a century?—I think so.

10306. The question of deterioration only refers to a comparatively small class?—I think so.

10307. But there is one little item as regards cost of living which perhaps has gone up, and that is the cost of house room. It is true that food and clothing have gone down, but may not a man have to pay a larger proportion of his weekly wage, 21s. or 23s., for the mere room to live in?—That is true. But one has to consider some other points in connection with which the rent rises, where there is economic disturbance, for instance, owing to the pressure of the people in turning the dwelling houses into warehouses, and so forth. When you get outside the line of that disturbance you will find that the rents are not excessive, and also you will find, at least so I judge from information I have received, that taking the last four or five years there is a tendency of less crowding in places where you would hardly expect it. That is to say, they have got outside the bounds of disturbance.

10308. But still there are many parts of London where they pay from 5s. and 6s. to 7s. 6d. for two rooms, and that is quite a common charge?—That is so.

10309. That is a very large proportion to pay for mere house room out of an income of £1 or 21s. a week?—A very large proportion. One-third would go in rental, but it would be very difficult for any one to live in some of these places, unless he were comparatively rich, it would be too expensive; and if the local authority buy land and resell it, and bring the cost of it down to artisans' dwellings' rates, they still charge a rental which considering the older rentals is extreme, very often. So that you interfere, it seems to me, and yet by the very process of the demand you cannot escape from the difficulty of having the population housed at high rentals upon an expensive area.

10310. You do not think that any taxing of land values would have any effect upon that?—It is very difficult to say. I have not myself seen a scheme which would parry this.

10311. But the real difficulty is with a comparatively small portion of the population, and that item you think is swelled unduly to a certain extent by the neglect of old people by the people who ought to support them?—I think that it is.

10312. That is to say that the real proportion of these people, the submerged tenth say, is not really so large as it appears to be?—I think not.

10313. Just because there is a certain proportion of the older people in that class who ought to be at the charge of the younger members of the family and relations?—I think so, when it comes to the question of maintenance upon the rates.

10314. Then as regards the means of dealing with that submerged tenth you seem to lay a great deal of stress upon education?—I do.

10315. And that, of course, would apply chiefly to the younger people?—Yes; but I should try to give the benefits of the school to the younger men and women.

10316. Your conception of education is not simply a matter of the school?—Certainly not.

10317. And what you would like to see take place would be to have the educational means extended far beyond the mere schooling that is given under the code at the present time?—Certainly.

10318. You spoke of what you call social education. What is your idea of that. You say social education, that that is the thing that is very much desired?—To teach the younger women and girls what the nurture of children should be, to arrange that every boy, if possible, should join a friendly society, to show him and let him understand, if possible, what it means; to take the physical question—what it means—that there should be an open-air inlet in the room and so on.

10319. A great part of this health education would be outside of the school?—I think as things stand a great part must be, unless there is a very great difference it will only be begun in the school.

10320. For that purpose we should require another class of teachers, social missionaries, or health visitors?—The problem has not been attacked from that point of view. There is really very little done. I think that the Polytechnics might have served in London in some way, but I think what is wanted is an experiment on very clear lines and with a very clear statement of results and a very careful choice of the teachers. The teachers in many cases I should like to have voluntary, at any rate in part, and I should be very sorry if it became a great State charge.

10321. You speak of the outside teachers?—Yes.

10322. You would have those outside educated in the first place by a voluntary organisation?—I think that I should try that first.

10323. To work in connection with the schools?—With all authorities.

10324. But especially with the schools?—Yes.

10325. To keep in contact with the children from the time of leaving school and trace them to their homes?—Yes. It sounds rather gigantic, but if we consider specially one class I think that it is not so gigantic as it seems.

10326. There are a great many districts that you might practically leave out. The question scarcely arises there to any appreciable extent, but even in the poorer districts it is, after all, only a small proportion of the whole?—That is my view.

10327. It is smaller or larger in districts, but it is not like taking in the whole of the people, but the younger children?—Yes, I very strongly feel that.

10328. What is your view in regard to a medical inspection of children in schools?—I should like the medical inspection of the home—the fulfilment of an already recognised public sanitary duty, and I should like the two to go together—what was done at the home and what was done at the school, and there should be some combined report. I think that the whole man has to be dealt with. I always fear a sort of lopsided assistance or intervention which merely upsets the local plans of the family or individual.

10329. But a local inspection need not give rise to these results?—No.

10330. When it is simply the case of a child whose eyesight is bad or who is defective in hearing, and his parents are told that steps must be taken to put this right, what do you say to that?—I quite agree that is the best to be done. With medical inspection other considerations must come in.

10331. But on the back of the medical inspection such a voluntary organisation might easily get to work?—Yes.

10332. And visit the particular parent whose child is underfed and take steps to get the child fed?—Quite so.

10333. And have it enquired into?—Yes.

10334. You spoke, I think, of the household management teaching given in the schools, with some favour, but you said you would approve of it if practicable. Have you any experience of that kind of instruction given in the schools?—Not directly.

10335. You do not know whether it is practicable or not?—I could not speak with any authority.

10336. Just one question about betting. How does the habit of betting increase the poverty of a given district or class, because presumably if it is fair betting it means the transfer of money from one pocket to another?—I was not thinking of that class, but probably both lose.

10337. If they both lose where does the money go to?—To some third party.

10338. Then the third party is in the district?—But the evils go on; the man has not the money when he wants it when he has lost it. He is also thinking of getting in a speculative way a livelihood, which upsets him morally. After all it has the effect, as in the case of drink, of one man getting what belongs to another.

10339. You mean the accidental upsetting of his income for the time being?—Yes.

10340. Of course a great deal of the money goes to the third person, the bookmaker?—Exactly.

10341. And it is not fairly distributed among the betters? —Quite so.

10342. (*Colonel Fox.*) You spoke about ventilation of schools. Do not you think that the best way would be to teach the students all that when they are at the training college ?—I entirely agree with you.

10343. You might teach them the management of the household, and physiology, and hygiene, and then you get the thin end of the wedge in the schools ?—I should like to teach them under the conditions of a new scheme. I would take them to a single room or two rooms, and I should take them there just as hospital students might be taken.

10344. And you have considered that drink was one of the causes of poverty amongst the working classes ?—I think that it is. I think that it is difficult to deal from that point of view in a large general statement, but when you get to particular places that have particular facilities for drink, in those places I think that this is so.

10345. Do you look upon the public-houses as the cause of that principally ?—I suppose the actual cause is the desire.

10346. Do not you think that they are educated to it on account of the public-houses being so near at hand ?—Yes, I think that the opportunity is too frequent. I think that the whole question is one of public control.

10347. Is there any other place where the working classes can go except a public-house as a meeting house ?—I am not in favour of such measures as would prevent the Foresters, for instance, meeting there if they had no better place. I think that there is a great deal of prejudice about their doing so, judging from my experience in these matters. Most of them would prefer another place of meeting.

10348. But I am told by everybody that the only place where they can have a chat is the low public-houses, the beerhouses ?—That is partly so. In the case of the better clubs, not with the low ones, but in the case of the better and well-managed clubs there is no particular objection ; they have an upper room where they have their meetings and paraphernalia.

10349. But during the time of those meetings there is nothing for them but beer or spirits, which is the cause of all this drunkenness ?—Yes ; but their difficulty is that there are no other places. We may protest ; but I think that many of them are alive to the evil, and are careful that the drinking should be within the bounds of good manners and that there is not a great deal drunk. In some cases that may not be so, but that is according to the tone or temper of the particular Lodge.

10350. Have you been in such places as Whitechapel, in the houses at night ?—Yes.

10351. Which are full of women as well as full of men ? —Yes.

10352. And more women than men ?—Yes.

10353. Surely this drunkenness is due to the public-houses then ?—Yes, I think that it is in one sense. All that I am anxious to do is to make it clear that there are a great many who can avoid it. It is only one cause, but a very important one. The particular case in my mind was a district where I think that the public-houses acted as a special temptation to the district ; and I was only anxious to make it clear that under those conditions the public-house was particularly harmful. The general issue, the immense amount of poverty and destitution, due to drink either directly or indirectly—that is absolutely certain.

10354. Do you consider that this scheme of Lord Grey's, the Public House Trust, if his suggested establishments took the place of those houses, or if those houses were converted or made into a class of house where they could obtain eatables as well as drink, do not you think that the people would take to them ?—I was very much interested in Lord Grey's scheme, but the power of attraction in a public house is very great. I have myself in thirty years found an immense difference in the viands at the public houses from what they used to be, and in a great many of them you will find something to eat. But whether the counter attraction of Lord Grey's public houses will be sufficient I am rather inclined to doubt. It is not a strong enough antidote.

10355. You do not believe in it ?—I think that it is good, and it ought to be tried as an experiment, just as I should try several others.

10356. As regards poverty and the food for the children when quite young, we have had evidence from a great number of people that the Jewish mothers feed their children much better, and not only know what is best for them, but know how to cook it, and that they are more thrifty and more abstemious, and that is the reverse with our Christian people ?—I believe that is so. I believe that is a true statement.

10357. As the mothers of the poorer class do not know how to feed their children, do not you think that the best way is to teach the children in the schools the art of cooking ?—Certainly.

10358. Do you think that they would forget by the time they became mothers all that they had learnt at school ? —They forget a good deal, but that might continue with them.

10359. Do you think it would help ?—It would help immensely.

10360. You were saying that there should be less mental work in the school and more physical work ?—Yes, in one sense, but I really look upon many practical things as being really more mental than what is called so.

10361. But you suggest less mental work and more physical ?—Yes.

10362. And reduce the number of subjects of education ? —I think I should as far as I understand it.

10363. (*Chairman.*) With regard to the vagrancy question, you let fall that you thought the number of vagrants was exaggerated. There is no system of enumeration ?—No.

10364. And that might be done and be very useful, you think ?—Yes. In Scotland there is a systematic enumeration of vagrants right through the country, and I have the recent figures here, and it comes to, taking it year by year, about 2·1 per thousand of the population. In England there are only one or two investigations made continuously by night counts both of the vagrants in casual wards and also those in common lodging-houses. These point to the number being, by comparison with estimates frequently made, very small ; and the night count of the poor law is very much smaller than the day count, for it excludes the duplication of applications—of the application made by the single vagrant at more than one casual ward or workhouse in the course of a single day. I think it would be very important if we had a useful return of all vagrants, if possible. I should take a return of all vagrants in a single night, taking one winter day and one summer day.

10365. You thus get the minimum and maximum ? —Yes, and you take the mean of these.

10366. Do you think the present system manufactures vagrants ?—It brings a stress of vagrants to particular places.

10367. In that sense it does ?—Yes, and the charities of London to a certain extent manufacture vagrants of the in and out sort, and the Poor Law, too, manufactures these vagrants.

10368. With regard to the allegation that in labour colonies the standard of labour tends to the level of the most idle, would not it be possible to restrict that with a proper classification of labour ?—I think that a good deal might be done by cleverness. A great many of the men could only do certain tasks.

10369. But do you think classification would meet that ? —Yes.

10370. And you indicate that it is one of the difficulties that in the case of a great many of the men you would have to provide for the wife and children ; but it might be the best thing for them to be placed in industrial homes ?—Yes, if the country is ready to undertake such a great charge.

10371. You would have to guard yourself against that ? —Yes.

10372. Having regard to the interest of the community in the preservation of the young from contaminating and depressing influences, do you think it would become advisable to take charge of the children of all parents who

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have proved unfit to discharge their obligations to the children they bring into the world?—No, I should deal simply with the ins and outs, and then see what happens. I think that we might upset more than we set right—we have very small foresight—we do not know how things re-act. I should limit the problem and then try the experiment of a far longer detention with the ins and outs.

10373. Would not it be possible to make the parents the debtor to society on account of the child and to empower the local authority to charge the parent with the cost of suitable maintenance, with the further liability in case of default of being placed in a labour establishment under supervision until the debt is worked off?—Well, that is very difficult to carry through. The money certainly won't come in.

10374. Would it not?—I think not; I do not know whether it is easy to get the industrial reformatory school money.

10376. (*Mr. Legge.*) I am sorry to say that it is not.

10377. (*Chairman.*) I thought you said it was?

10378. (*Mr. Legge.*) We get in more than is generally imagined; but we only get at the outside what represents one-tenth part of the maintenance.

10379. (*Witness.*) In the case of those that come on the rates, the ins and outs, their maintenance is accepted already, and that is a great help to the carrying out of an experiment.

10380. (*Chairman.*) You do not object to see such a scheme started experimentally and tentatively?—No.

Mr. SHIRLEY MURPHY, re-called; and further Examined.

Mr. Murphy.

10385. (*Mr. Legge.*) Have you had any experience out of London?—No. I cannot say I have had any experience bearing upon this subject out of London.

10386. You have had no provincial experience before you took up the position in London?—I came in touch with the poor of Manchester years ago as resident medical officer of a hospital there.

10387. How long were you there?—It was under a year—I forget exactly the time.

10388. You are not prepared to say whether the conditions in Manchester are better or worse than those in London?—I could not compare Manchester at the present time with London.

10389. With my experience of the provinces, which is pretty extensive, London seems to me extraordinarily well off for open spaces?—I think London is well off; and in London many unhealthy areas have been cleared under the Housing of the Working Classes Act.

10390. And the County Council in London has been taking a great deal of pains to secure open spaces in congested districts?—Yes, they have done very much in that direction.

10391. However small those open spaces are?—Some of the open spaces they have acquired are small.

10392. And the Metropolitan Board of Works did something also?—The Metropolitan Board of Works did some important work in that respect. If you remember Hampstead Heath was acquired by them.

10393. And all this embankment?—Yes, that was their work.

10394. Which, I believe, is turning out a very profitable investment?—That I am not able to say. You mean as to the rentals of premises?

10395. Yes?—I have no information on that point.

10396. You informed us last week that you attached great importance to cleanliness?—Yes.

10397. And you mentioned school baths in Sweden?—In Norway.

10398. I thought you mentioned Stockholm?—No, Christiania.

10399. Did you notice a bread hatch, as well as the baths?—No. I have not been in that part of the world for something like six or seven years. They were then making a beginning of altering the schools for the purpose of introducing baths, and it was that operation in certain schools which I saw.

10400. You did not see any arrangements for feeding the children?—No.

10401. I saw some elementary arrangements of that sort at Stockholm—a bread hatch, where the child presented a little money or a ticket and received some bread: you saw nothing of that?—No, I did not see that.

10402. Have you any views about the feeding of school children? You say cleanliness is of enormous importance, but surely that the child should be properly nourished is of almost equal importance?—Undoubtedly. I look upon the feeding of the poorer population of London as being the most important subject matter which is before you.

10403. You are in favour of the medical inspection of school children?—Yes, certainly.

10404. Supposing a child were brought to the notice of the medical inspector of a school by a teacher and certified by him to be suffering from an amount of improper nutrition, would you be prepared to advocate the feeding of that child at the school?—I see no objection to its being done at the school, but I think what is immediately wanted is full inquiry into the whole of the circumstances of that child's life in connection with the home.

10405. You think the home circumstances are really a more important matter for studying than the condition of that particular child?—I will put it in this way: I am satisfied the child has got to be fed, and the circumstances under which that should be brought about should be made the subject for inquiry as to whether the fault is in the home, or whether it is really a case of poverty which must be remedied at the hands of the proper authority for the purpose.

10406. But pending the result of such inquiries you think steps should be taken to see that the child should not suffer?—Certainly, the child must be fed; that comes in the first place.

10407. How is that feeding to be done—by a school kitchen?—I believe the supplying of food in the school has been found to work out to be a most convenient way of doing it—using the school premises.

10408. Would you make it an essential condition that the parent should either pay the cost of the food or be punished?—I am certain it is very important that the parent should not be relieved of his responsibility of feeding his own child, and I think, if it becomes necessary to feed the child in the school, every effort should be made to recover the cost from the parent, assuming he is in a position to pay, and that it is not really a case that ought to have the assistance of the Poor Law authority.

10409. Would you allow a child to be fed at all, after a sufficient time had elapsed for inquiries, where the Poor Law authorities could not certify that the parents were not themselves able properly to feed their child?—That is to say, where blame attaches to the parent?

10410. Yes.—That is a class of case which, I presume would from time to time occur, and that would have to be dealt with; but I should not propose that the child should be deprived of food to its detriment because the parent was a bad parent, but rather that the bad parent should himself be dealt with on other lines.

10411. What would you say to the objection which has been urged before us a good deal, that one of the great causes of physical deterioration is the laziness and incompetence of mothers in the discharge of their domestic duties, an important element of which should be cooking. This feeding of children at school relieves the mother of the necessity of providing a meal for that child, and to that extent it does harm?—Amongst the very poor in London there is a great tendency to buy cooked food. I may mention that recently my attention has been directed to that matter in connection with an observation made by my colleague, Dr. Hamer, that typhoid fever has been spread by the consumption of fried fish. He has gone into this matter carefully to find out what classes of the population eat fried fish, and finds that wherever there is a particularly poor locality the fried fish vendor pitches his tent there, and the people purchase fried fish for their family.

10412. And you think it is idle to try and resuscitate the state of things which belong to the past?—No, I do not think it is idle to do it, I think it would be most useful and important to teach cooking.

10413. People used to make boots by hand, and so on, now-a-days boots are machine made, and in the same way domestic cookery might very possibly become a thing absolutely of the past; in the next fifty years, except in well-to-do houses where people can keep a decent cook, everything may be machine cooked, so to speak?—Of course, one must be prepared to see changes taking place in the habits of the population, but I feel sure that there would be great advantage if the poor had a good knowledge of cooking which would enable them to do cooking in their own homes. I may say, however, that the very poorest tenements very frequently have no proper cooking stoves. A house which is built for one family comes to be occupied by several families, and very often there is no alteration in the grate, and nothing but an ordinary bed-room grate is available. So that as a matter of fact they have to fall back upon boiling. In some instances gas stoves are put in, but in the one-roomed tenements there is often nothing but a bedroom grate at which people can cook.

10414. I should like to ask you a question or two about ventilation, you agree that that matter is largely bound up with cleanliness?—Yes.

10415. A small room kept scrupulously clean and free from hangings and so on, is better from the point of view of health than a much larger room filthy and infested with rags?—Yes.

10416. Is it not a fact that what are called respiratory changes take place less at night than they do in the day-time?—Respiratory movements are less frequent during sleep.

10417. So that not so much air space is required at night as in the day time?—If there is any difference it is probably in that direction.

10419. But you have not yet secured as an absolute minimum the 300 cubic feet you were speaking of?—No, that is very much wanting in London. There are numbers of rooms at the present time occupied to an extent which would not give 300 cubic feet per person. Even when children are counted less than one.

10420. Do you grant certificates to lodging houses? Not to houses let in lodgings; to common lodging houses?—Yes.

10421. What is your limit there?—We have nothing less than 300 cubic feet in London. When the London County Council took over the administration of the Common Lodging Houses Acts it was found that many houses had been apportioned on the basis of 250 cubic feet. That is altered now, and houses which are coming on to the register anew, that is to say, which have been since licensed for the first time, a higher standard, viz., 350 cubic feet per head has been required.

10422. Do you demand cross ventilation; is that required whether there is cross ventilation or not?—Every endeavour is made to secure cross ventilation, and if you were to go into ordinary dwelling houses which have come to be occupied as common lodging houses, you will find in many instances a door has been cut between the front and the back room, or that a part of the wall has been taken away so as to get through ventilation.

10423. Do you think that an adult requires more room than infants?—I know of no sufficient physiological reason for making any material difference.

10425. You think that really an infant requires as much room as an adult?—I think so practically.

10426. Therefore, you think it is a mistake to allow relaxations in the case of young children?—Yes; in view of the fact that I look upon 300 cubic feet as a very small amount of air space. I should be glad to see that required for each child, but, of course, one has to consider what is practicable. I may say, however, that in two or three districts 300 cubic feet per head is required for children as well as adults in houses let in lodgings.

10427. Where is that?—I will supply that information.

Mr. Murphy.

10428. I believe the council took the census lately of those found actually homeless during a particular night; were you associated with that?—Yes.

10429. And what was the result?—We took a limited area involving a considerable part of Stepney and extending up through the City as far as the West End of Hyde Park, and all the people having the appearance of vagrants were counted. They were aggregated in particular places in large numbers for the reason that they went to certain Salvation Army shelters to get a night meal. The total number counted in the streets between half-past one and five was about 1,800. It led me to estimate that probably one person in 2,000 was homeless, that is, was sleeping out in the streets on that night. I may say that our inspectors included in these numbers people found sleeping on stair-cases and landings inside tenement houses, and various places to which the poor resort.

10430. Under some sort of cover?—Yes.

10431. Did you get the number of women as distinct from men?—I think I can give you the figures for women as distinct from men. Of those walking there were 1,463 men, 116 women, 46 boys, and four girls; asleep in different places, 100 men and 68 women, making a total of 1,797 persons, or 1,609 males and 188 females.

10432. I suppose a certain number of those women would be what are called street walkers plying their trade at that hour?—There were people of that class undoubtedly.

10433. Were you alarmed by that; do you think that is an alarming number—1 in 2,000?—No.

10434. Was it larger or smaller than you anticipated finding?—I had never formulated any precise notion of what it was; we were absolutely without any guidance as to the number of people.

10435. What led you to make investigation?—A desire was felt in two or three quarters for this information to be available, for some gauging of the numbers, and that is why it was done. The Public Health Committee of the County Council were interested in the matter.

10436. The County Council has been obliged to prohibit, has it not, the system of sleeping in bunks adopted in the Salvation Army and other shelters?—They have not prohibited that at the present time, but they have indicated their view that this should not go on for an unlimited time, and after some years I anticipate the bunks in their present form will practically cease to exist. They have certain disadvantages which make them undesirable.

10437. There has been a suggestion before us which I should like to put to you as a medical man and also as interested in the study of social questions that there should be a central Government Anthropometrical Bureau; what do you think of the value of such an establishment?—I think it would be very valuable to have some arrangement made by which observations of that sort should be kept. We are all feeling the disadvantage at the present time of there having been no antecedent observations covering a considerable period for the purpose of knowing in which way the population is drifting. It occurs to me that the very fact that observation of this sort was being made will be found to be beneficial in a variety of ways. It would focus public opinion upon the question of the condition of the population.

10438. You agree that the results of measurements, even a few superficial measurements which is all you could get when you are dealing with millions, would afford some indication of matters of social importance?—I think they would be of some value, but I may say this, that I believe there are great difficulties in getting measurements made with the precision which is wanted for comparative purposes.

10439. If you cover instances numerous enough will not the tendencies to error on one side or the other balance themselves?—I should think so in a considerable degree. I am perfectly satisfied it would be a desirable thing to do.

10440. (*Dr. Tatham.*) With regard to the question of young men at the age of from sixteen to eighteen, at a time of life when some of them develop into the Hooligan class, I think you have considered what could be done for

Mr. Murphy.

them with advantage?—I might mention that what I have seen is this: there is a very large employment of boy labour now, boys employed as messengers and errand boys, which teaches them nothing useful for their future life; and when they have outgrown the age at which they can be employed in this way the risk of drifting into the ranks of the unskilled labourer is a very large one. If it were in any way possible to make provision for those boys being fitted, say, for military service, it would be an advantage.

10441. Do you mean a cadet corps?—Yes; and if they could be taught a trade upon which they could engage after leaving the Army, if they enter it.

Dr. Frederick Walker Mott, M.D., F.R.C.P., F.R.S., called; and Examined.

Dr. Mott.

10460. (*Chairman.*) You are physician to the Charing Cross Hospital?—Yes.

10461. And pathologist to the asylums of the London County Council?—Yes.

10462. Have you given a great deal of attention to the subject of syphilis?—Yes, I have devoted a great deal of my time to the investigation of the relation of syphilis to nervous disease and certain special forms of insanity, particularly general paralysis.

10463. On the general question should you say there is more syphilis than there was, or less?—I could not answer that.

10464. Would you say it was of a more virulent type, or less virulent?—I could not answer that, because diseases now recognised as syphilitic were not previously recognised as syphilitic. I think myself it is probable that general paralysis is on the increase, not only because of syphilils but also because of the stress, and of people being crowded together in towns. We know that in uncivilised countries, where syphilis is very rife, general paralysis is hardly known.

10465. It is a syphilitic tendency acting on depressed physique?—Yes, there are two conditions, the tendency to stress and excitement combined with alcoholism, and syphilitic poison. I do not think there can be any doubt of this, from my observations.

10466. Do you find many cases of syphilitic taint in the young now?—I can only speak with regard to what I know from going over the cases. I have investigated these cases and I have seen that when the wife is infected with syphilis one finds an extraordinary number of still births, abortions and disease in the children, but if the man is not married for two years after he has been infected—I have records of many instances of this—then it is probable, especially if he has been treated properly, that his wife is not infected and the children do not suffer; but if the wife is infected they certainly will suffer for some time. Two years interval is, however, too short a time for safety.

10467. Great advances have been made in the treatment of syphilis?—Yes, but what strikes me in going through these cases is that the lower orders do not seem to know the dangers of syphilis. Perhaps they may go to the hospital, but as soon as the sore has healed they do not attend any longer.

10468. Is the hospital accommodation sufficient to begin with?—I do not think it is myself, because we do not take cases in a general hospital for syphilis. Unless they have some very serious nervous disease I should not take them into the hospital, because I have not room for them. Then it means a long course of treatment. My general experience is that syphilis is much better treated in the middle and better classes than in the lower classes. As a rule either they are not treated at all or are treated by quacks and chemists, or else as soon as the sore has passed away and they have no further trouble, and when it does not interfere with their work, they go away and do not come back. I think it is more often their own fault.

10469. From that point of view and also for prophylactic reasons would you make syphilis a notifiable disease?—That is a very difficult question to answer. There are many points to be considered. I think the first thing would be really to understand the extent of the disease, to have a thorough inquiry before any system of notification was adopted. It might lead to disease not being divulged, and not being treated.

10470. If they are bound to notify there would be some risk in concealing it surely?—Yes, there would. Personally, of course, if I could see my way to its satisfactory practice I should say it would be a good thing.

10471. But you are afraid the effects might not be what was desired?—I am afraid not.

10472. Do you think an inquiry is wanted as to the extent to which the disease is now prevalent?—Yes, I do. I believe the Registrar General's Returns seem to show that syphilis is very much less than it was, but one must remember that many of these diseases, *e.g.*, softening of the brain, would not have been called syphilitic diseases previously.

10473. (*Dr. Tatham.*) The Registrar General's Returns, I think, only deal with fatal syphilis?—Yes, but supposing I was certifying a patient as to the cause of death from general paralysis, the immediate cause of death would be called broncho pneumonia or something like that, which was the actual cause of his dying; or if he had locomotor ataxy you would not call it syphilitic disease.

10474. Unless you put syphilis afterwards?—That is so. It would not be recognised as syphilis otherwise. Of course, our opportunities of finding out the extent of syphilis and the effect in the production of disease are influenced very much by these facts: If a man gets syphilis he goes to the Lock hospital, perhaps, and is treated there, and if he gets some complication following from the syphilis he does not return to the Lock hospital, but goes to a special hospital where that disease is treated; consequently, the people who are becoming blind, or who see double, or have some eye disease, go to Moorfields, or one of the ophthalmic hospitals, and if they get brain disease they either go to one of the general hospitals, or else to a special hospital, *e.g.*, Queen's Square. In Scandinavian towns, where State regulations require hospital treatment for syphilis, where there is one general hospital, they have perfect records of all cases of syphilis and all cases of the *sequelæ* of syphilis, and one gets the most reliable records. It was in Scandinavian countries where general paralysis was first recognised as being of syphilitic origin by Kjelberg, of Upsala.

10475. (*Chairman.*) That is well ascertained?—That is well ascertained.

10476. And you would advocate a hospital system of that sort applied to the investigation of disease in this country?—Yes, it would lead to more reliable results, there is not the slightest question of it; and it is the same with insanity. When a patient is transferred to the infirmary, no particulars are obtained of his antecedents.

10477. Do you think any large amount of the increase of insanity is to be traced to syphilitic diseases?—I think so with regard to general paralysis, which as a form of insanity is the worst of all; it destroys the best people. The general paralytic is potentially a very useful member of society. He is generally a man both physically and mentally considerably higher potentially than the average man.

10478. It affects the highly organised mentally to a much larger extent than the lower mental organisation?—Yes, I think so myself. One does not get the same history of hereditary insanity in general paralysis that one gets in other forms of insanity.

10479. You trace syphilis as one of the causes of most of the organic diseases of the nervous system?—I would not say most, but I find in a great many of the cases of men between twenty-five and forty-five coming into the hospitals, syphilis is the cause.

10480. Syphilis and syphilitic tendencies transmitted by the parents?—Yes. The great argument in favour of general paralysis being due to syphilis is the fact that congenital syphilitic children suffer from general paralysis; it comes on just after puberty to twenty years of age and it affects the sexes equally, because, of course, the possibility of infection is equal; whereas, in the adult form it affects the males four times more frequently than the females. As you rise in the social scale so it becomes less and less frequent. The whole of the arguments are very strong in favour of that. I find that in 80 per cent. of these cases one can get a history of syphilis.

10481. In regard to your work as pathologist to the asylums of the London County Council, do you observe the effects of venereal disease in respect of the offspring of the poor to a large extent ?—Yes.

10482. Do the sterility, and abortion, and still-births, which you have noted, grow out of these effects ?—Yes, they do.

10483. On the whole, the chances are against the children ?—I think the living offspring is more likely to be stunted and to be bodily and mentally weak.

10484. It makes them, generally, vulnerable ?—Yes. Some authorities think rickets is largely due to syphilis.

10485. Have you investigated that at all ?—No, I have not.

10486. You agree there is no adequate provision for the proper treatment of disease ?—Not among the lower classes.

10487. Sir Alfred Cooper testified to the same deficiency and he thought it was largely due to the fact that the hospital authorities like to keep it in the background ?—Yes.

10488. And did not apply their resources to attacking the disease in any serious spirit ?—I think a great deal might be done if, when people come to the hospital, the physician or surgeon would warn them that they ought to attend for a prolonged time so as to get thorough treatment, and warn them also against the dangers.

10489. But surely that is quite within the competence of the hospital authorities now ?—Yes.

10490. Why do they not do it ?—They do in many instances, but it is difficult to make these people believe that it is dangerous. As soon as they have no pain and can get to work again they think they are cured.

10491. They do not believe in the taint ?—No. It is a question of the education of the lower classes, I think.

10492. Do you think a great number of cases do not get treated at all ?—Yes, I do.

10493. Surely, the notification which I suggest would be a valuable thing ?—Yes, but there are great difficulties in the way of notification.

10494. Would not notification be a very serious bar to its communication ?—Unquestionably. From that point of view it would certainly be most valuable, with regard to the prevention of the spread of the disease.

10495. Sir Alfred Cooper quite agreed, and I do not think he saw the difficulties in the way of notification which you appear to do ?—I wish I could say it was possible.

10496. Have you any other remedial suggestion to make ?—I think it would be very valuable to have an inquiry to ascertain how great the evil is now, irrespective of its temporary increase or decrease. These are the suggested terms of reference of Colonel Long's Committee. I daresay you have seen them. (*The document was handed to the Chairman*).

10497. That, I suppose, was somewhat similar in intention to the resolution adopted by the Brussels Conference ?—Yes.

10498. Do you know whether anything has been done to bring the Brussels Conference resolution to the knowledge of the Government of this country ?—No, I do not.

10499. You are familiar with its terms, I suppose ?—Yes.

10500. Its objects may be said to be the same ?—Yes, very similar.

10501. (*Mr. Struthers.*) You spoke of the suggested terms of reference; there has been no actual Committee appointed, I presume ?—There is a Committee. It is a voluntary Committee. It was suggested by Sir James Crichton Browne at one of the meetings of the Committee that it would be a good thing to have a Commission to inquire into the whole subject. That is what is really required, I think, more than anything. It should be the subject of a special inquiry. One sees what great good the Tuberculosis Inquiry has done already. On these grounds Sir James Crichton Browne advocated it, and it was certainly supported by Sir Victor Horsley.

10502. (*Dr. Tatham.*) With regard to the virulence of syphilis, do you think there is any doubt that it is much less virulent now than it was twenty years ago ?—I was only a student twenty years ago, but my experience is that one does not see the bad skin and bone cases one saw then, but one sees more of the nervous diseases. It seems to attack the part upon which stress is acting, and, of course, the stress of life is greater now on the nervous system.

10503. You are speaking now of untreated syphilis ?—No, of treated cases too. I have seen cases in which syphilis has been well treated, and yet they have had these serious nervous affections.

10504. Such as general paralysis ?—Yes, and also syphilitic *gummata* of the brain, and so on. There are cases where, in spite of treatment, it seems to go on, but I think, as a rule, the cases are much more likely to be serious if they are not treated. The cases which are neglected are very often the more mild cases, with the soft sores, and not the typical chancre. Those cases are neglected and not treated, and then they may develop those later serious affections of the nervous system, which are invariably fatal.

10505. With regard to the present law as to the dissemination of syphilis, do you think it would be at all practicable that an Act of Parliament should be passed making it penal for a man to infect a woman—I mean, making it a matter of serious consequence to himself if it could be proved that he did so—a criminal act, in fact. It is not so in this country now, as you know ?—I think if he really knew that he had this serious disease and had been warned of the dangers, then it would be desirable.

10506. (*Mr. Legge.*) Warned by whom ?—By the doctor. A man may very frequently have disease and not know the serious nature of it. A great many of the lower classes do not really recognise that they have a serious disease, because it causes them no pain. In fact that was my experience in going through a great number of these cases. I find they do not attach any importance to it at all.

10507. (*Dr. Tatham.*) But in the case of a man better educated than the class of persons you are speaking of, in the case of men, for instance, about town going among women of the prostitute class and infecting a large number of them ?—I do not think they would affect the prostitute class, because I think the prostitutes, probably, are already immune. The danger is, I think, that they would infect the young women who are in shops and so on, who have not got on the streets yet. In fact, that class of person, I think, is more dangerous than the prostitute as regards syphilis, because after two or three years the prostitute has already had the disease and is not likely to infect others with syphilis.

10508. (*Colonel Fox.*) In addition to that, she knows how to take care of herself ?—Yes.

10509. Do you not think it would be a difficult thing to bring that home to a man ?—Yes, with regard to prostitutes it would, but with regard to a servant or a milliner, where it was known that a man did communicate the disease to her, I think if she brought an action against him for bodily injury she ought to recover.

10510. (*Chairman.*) That would be a civil action, of course ?—Yes.

10511. (*Colonel Fox.*) Do you not think in the case of a private individual, a non-professional, she would rather hesitate to make public the fact ?—Yes.

10512. She would be rather against advertising herself in that respect ?—Yes. That is why I say it would, perhaps, be desirable to leave it open for her to bring an action.

10513. (*Colonel Onslow.*) Would the re-enactment of the C. D. Acts have any effect ?—I would not advocate that. I think they have been given up as a failure.

10514. Were not they a failure more because they were only applied to certain towns ?—At the Brussels Congress, I believe at the last meeting, the countries where it had been practised for some time were against it.

10515. I understood the other day from a witness that that referred more to the licensed houses and so on, and not so much to the inspection of the regular prostitutes

Dr. Mott.

Do you not think that the action of the C. D. Acts prevented a large number both of young men and young women from going on the loose?—No, I should think it did not.

10516. Not young women?—It might young women; it certainly would not young men.

10517. It would have an effect upon the young women for the reason that they saw these C. D. inspectors were on the look-out, and if a girl was seen walking with one man one night, and another man another night, they generally followed her up and gave her a warning; it deterred them in that way?—I cannot say that I know that.

10518. Has it not been the fact that, in those garrison towns where the C. D. Acts were in force for a few years, after their abolition the increase of venereal disease generally was enormous. Did not that come within your practical knowledge?—No. I daresay it is so.

10519. I think that both military and naval doctors at the hospital will inform you that the increase amongst the men was enormous?—I do not think a C. D. Act would ever be passed in England again.

10520. But putting aside all the feeling against it?—A breath of it is enough to spoil anything that you want to bring forward in the way of reform.

10521. We know how it was abolished and by what Party; it is very difficult to get it again, I know, but I wish to bring out whether medical opinion is in favour of it as a preventive or not?—I think some other measures will have to be adopted, and certainly I think they ought to be adopted.

10522. (*Colonel Fox.*) Can you tell us what measures?—I think the preliminary measure would be to ascertain how much syphilis there is and what provision there is against it. As soon as that is established on a firm basis I think something could be done. We should have strong evidence to go upon for further steps; until that is thoroughly rammed home you will not do anything.

10523. (*Chairman.*) How are you to find out how much syphilis there is if it is not a notifiable disease?—Tuberculosis is not a notifiable disease. I think if we could put this on the same basis as tuberculosis, and get an inquiry, and then show what effect it has on the population, a great deal of good will be done, and that some such treatment and special hospital provision as in the case of tuberculosis would be admitted as necessary by all right-minded people

Sir VICTOR HORSLEY, F.R.S., F.R.C.S., called; and Examined.

Sir V. Horsley.

10524. (*Chairman.*) In considering the influence of venereal disease upon the national physique, have you incidentally formed any opinion as to whether venereal disease is more prevalent now than it was?—No, because there are no statistics available at all on the subject.

10525. There is no information gathered in the hospitals which would establish that, more or less?—I do not think so. As regards the current treatment of patients and, of course, as regards the death certification from venereal disease, that is extremely fallacious.

10526. Because the remote consequences are not considered?—It is because the practitioner under the present system of death certification dare not put it on the certificate.

10527. Because of the prejudice it would excite?—Yes, at the present moment The British Medical Association has been for some time engaged on this subject, endeavouring to make the death certificate a private document between the Registrar-General and the doctor, so as to take away the onus of publication. Then, again, unfortunately, especially since the Playfair case, a medical man is open to an action for libel.

10528. You think some such change in the system of certificates is absolutely necessary in order to afford material for any accurate classification of venereal diseases and their effects?—Yes, I do; and I think also there should be protection afforded to a medical man on the ground of libel.

10529. It should be a privileged communication?—Yes. That would have to be determined by a Statute.

10530. Turning to another aspect, which is perhaps more ascertainable, could you say that the character of the disease was more or less virulent than it used to be?—On that I can offer some information. As regards the actual destructive lesions of syphilis, they evidently are not so common. In general hospital practice one used to see more *gummata* and more active destruction of bone than you see nowadays. But with regard to the remoter consequences of syphilis in the second and third generation in nerve diseases, of course we think at the present moment they are more common, but probably it is only that more work has been done on their pathology and we have more correct knowledge of their origin from syphilis, and that syphilis is really a prime factor in many of those diseases.

10531. There is a greater differentiation of disease which the progress of medical science renders possible?—Yes. As regards the general virulence, I think on the whole it must be less.

10532. I suppose the methods of treatment have improved as the disease has become more understood?—Very much so. That, however, cuts both ways unfortunately. Undoubtedly, many syphilitic individuals are preserved to life who are quite capable of reproduction and who, consequently, produce stunted and diseased offspring.

10533. You would not propose to sterilise them?—I would not, personally, though I think they deserve to be.

10534. Do you believe the hospital accommodation for treating this class of disease is very defective?—Yes, very.

10535. Is that due to the repugnance of the hospital authorities to deal with this class of case or to any feeling that a person who suffers from syphilis suffers rightly and is not a fit subject for public charity?—Oh, no; there is not only that feeling. We take in cases of syphilis at my hospital. The real trouble is that an ordinary syphilitic patient is not so bodily ill as to consent to enter a hospital in the vast majority of cases. The most dangerous patients are not bodily ill, and therefore they will not enter a hospital; they persist in going on with their occupation and become sources of infection to innocent people.

10536. Could not something be done to stop them?—Yes.

10537. Could not it be made penal in the case of a person who is under treatment for syphilis?—The first step which should be taken is to have a Commission of Inquiry into the prevalence of venereal disease. A committee that I had the honour of belonging to collected information in regard to the hospitals. I understand the reference to this Committee is chiefly to the poorer classes. Now on that point you could begin with the workhouse infirmaries and give the medical officer of the workhouse infirmary statutory power to detain a patient. At the present moment, as soon as a patient enters a workhouse or, by implication, a workhouse infirmary, he can be shifted about between the two institutions; he can be taken out of the workhouse, where he is congregating with innocent people, and put into a Lock ward in the infirmary. But the medical officer has no power to keep him there, and a medical officer, no doubt, ought to have that power.

10538. So long as he found his release would be a detriment to the community?—Exactly.

10539. Would you go so far as to advocate its being made a notifiable disease?—Certainly.

10540. You do not see any difficulty? Dr. Mott appeared to think there might be some difficulty?—I think, probably, there would be a great many difficulties, but, I think, they could be overcome. If you have already given a doctor the protection of privilege in his official communication, then, I think, you have made the path perfectly easy.

10541. Do you think it would lead to many persons refusing to be treated for the disease?—That argument has been repeatedly brought forward. It was even brought forward in connection with simple zymotics at the time of the Notification Act, but, we know, it has not had that effect.

10542. People would hardly run the risk of declining to accept any remedial treatment?—I think their natural

fear of the disease would prevent that. The public knows well that syphilis is a very destructive disease.

10543. You do not think that knowledge is so widespread as you might hope?—That is so. Patients seem to be afraid of it at the time. Unfortunately, the treatment is very successful at the start, and they immediately feel very much better, and they get callous. But, undoubtedly at the start when they first come they are very much alarmed. Even the hospital out patient is nervous about his condition.

10544. What is the first effect of syphilis on the adult?—The first effect is simply that they get thinner; they get cachectic.

10545. Wasting?—Yes. They become sallow, but, of course, they can do their work. Then under treatment they immediately improve very much.

10546. What would be the average length of treatment; supposing detention were made obligatory what would it amount to in most cases?—That is a difficult question to answer. Certainly, they ought to be detained six months

10547. As much as that?—They are really infective—some of their secretions are infective—their saliva and so on—after six months. But, I suppose, as a practical measure you could not detain them for longer than that.

10548. (*Colonel Fox.*) Do you find that most of the cases which present themselves are in the primary stage or the secondary stage?—There are a great many primary cases which escape altogether. Supposing you took a row of venereal cases at a general hospital a certain number would actually be complicated with gonorrhœa, and, of course, a still larger number would be confused with soft chancre, and those cases might escape altogether being classified with syphilis. Of the remainder, I think, most of the primary cases, certainly all the external chancres, would come for treatment. It is the internal chancres which escape treatment, as a rule. Then, as regards the cases which come for secondary syphilis, I suppose the majority of cases attending a general hospital are secondaries.

10549. When their systems have been pretty well saturated with the poison?—Yes.

10550. (*Chairman.*) How do you trace the effects of syphilis upon the next generation as a rule; what symptom do you expect to find in a child in the first generation?—You are speaking now, of course, of a viable child, a child who is going to live, who will be a deteriorated member of the community?

10551. Yes?—Soon after birth the child will present snuffles and rashes on the skin; perhaps nothing more.

10552. All the orifices are inflamed?—Yes, the mucous orifices, and perhaps nothing more. Then as it goes on to the time of second dentition you will find that its growth is proceeding slowly; as its teeth appear you find them present the ordinary signs of congenital syphilis.

10553. Irregular and soft?—Notched and peglike. By the time the child has arrived at puberty it is obviously a stunted individual; the bones are small and the muscles are small, and poorly developed.

10554. Is it generally mentally deficient?—As regards changes of the nervous system, if they are present as early as that as mental deficiency, it means they remain mentally deficient. There is a very large class of mentally deficient children whose condition is due to congenital syphilis alone.

10555. Does it render them vulnerable in after life to any particular class of diseases?—As regards after life, as soon as they arrive at puberty, yes; they are liable then to get diseases of the eye, and of the bones.

10556. Caries of the bone?—It is often not actually caries; but it is an inflammatory thickening and often causes destruction of the bone.

10557. (*Colonel Onslow.*) You are speaking of hereditary syphilis?—Yes. Finally when they come to the stress of life when they get about thirty-five they begin to break down from various nervous diseases.

10558. They are incapable of any prolonged stress?—Yes, they suffer from that stress even before thirty—at twenty-five sometimes.

10559. Their expectation of life is very limited, of course?—Yes.

10560. (*Colonel Fox.*) Do you find that syphilis affects the teeth?—Yes, markedly.

10561. Do you think the decay of teeth now which is very prevalent is a good deal due to hereditary syphilis?—I could not assert that; I should not like to say that. I think there are so many other causes of defective teeth at the present day. *Sir V. Horsley.*

10562. It might be one cause?—Certainly.

10563. (*Chairman.*) Is the effect in the members of one family at all selective?—Yes.

10564. There may be perfectly healthy children of syphilitic parents and other children who show the marks of congenital syphilis pretty prominently?—They are all hit more or less. The infection at one end of the family or the other may be slight, but you cannot say that any child of such a family whom you can trace escapes during his whole life and is really a healthy individual.

10565. Are the worst types of the family sterile as a rule?—That I do not know. The mentally deficient ones are.

10566. They do not get the opportunity; they do not marry at any rate. That is what I wanted to get at Do you think that nature does provide to some extent a cure as far as the second and third generations are concerned, in cases of this sort, by rendering the first generation less fecund than it otherwise might be?—I do not know. I have no facts. I have never enquired into it.

10567. Passing on to the second generation, do I understand you to say that the healthier members of this first syphilitic generation may transmit the disease to the second generation just as effectually as the worst members of it?—No.

10568. That is not so?—No.

10569. But they might transmit it?—Yes, they would probably transmit a tendency to nerve disease.

10570. Is that how it appears in the second generation?—Yes, disease of the nervous system, sclerosis, what is called disseminated sclerosis and degeneration of the nervous system of that kind.

10571. It produces hysteria in women?—It produces actual paralysis. It is an organic disease and a progressive deterioration which ends fatally ultimately after a course of a number of years, perhaps fifteen or twenty.

10572. Does it enfeeble them hopelessly during the earlier stages of life?—Yes.

10573. Even in the second generation?—Yes; in the earlier stages of the disease, not necessarily of life.

10574. Of life I mean. Would a person who suffers from a syphilitic tendency in the second generation have it in a form that you or anybody else might notice?—No, probably not. They might have an absolutely healthy looking child, healthy up to puberty—up to adult life, in fact.

10575. Not knowing of these transmitted tendencies they might marry with a light heart, and transmit the evil to another generation?—That I cannot assert positively. I have no scientific proof myself of syphilis in the third generation, although I believe in its possibility.

10576. When do you think the taint wears itself out?—Of course there is the Scriptural statement of the third and fourth generations. Scientifically, I believe it is impossible to produce positive evidence of the third generation, because of the impossibility of excluding individual infection of either parent in the second generation.

10577. It is only your surmise?—Quite so, having regard to the severity of the disease in the second generation.

10578. You would be prepared to find it in the third generation?—Yes, I think it is quite reasonable to suppose the inherited tendency would not be extinct in the third generation.

10579. Does it create vulnerability to tuberculosis?—I do not know enough about that. My work is chiefly surgical.

10580. Is that the opinion of the medical profession to a certain extent?—I have never heard it expressed. I do not know.

10581. Has it anything to do with cancer?—No, except as regards the tongue; undoubtedly people with a syphilitic tongue are much more liable to get epithelioma.

10582. Is the syphilitic tongue a transmitted thing?—No, it is usually acquired. In fact one might almost say

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it is invariably acquired. The surface of the tongue becomes fissured and corroded and so on, and the virus of cancer can more readily become deposited in it. That is probably the reason.

10583. You enumerate the lesions of congenital syphilis as affecting indirectly physical development?—Yes. I think I have mentioned most with the exception of bronchitis.

10584. Is that one?—Numbers of children die within the first six months of life from what is called bronchitis.

10585. That is syphilitic in its origin?—A number of those are cases of congenital syphilis of the lungs. Of course there is an ordinary infective bronchitis, but a great many of them are syphilitic.

10586. You would agree with the last Witness, I presume, that syphilis in the female is still more prejudicial to the child than in the male?—Certainly; and I think that is a source of general physical deterioration. When a female becomes infected at the child-bearing period the mucous membrane of the womb becomes altered and with the first syphilitic child which is born you find the placenta has actual organic changes in it, consequently the womb must be affected permanently for the rest of that woman's life. From the moment the first syphilitic child is born, you can say that damage is done to that woman as a child-bearing individual for the rest of her life.

10587. (*Colonel Onslow.*) Does that mean that the woman was herself infected beforehand?—Yes.

10588. It is not the effect of her husband having been impregnated, and perhaps cured?—I did not understand you. What I spoke of was the first child being born syphilitic, and that of course only takes us back to the fact that the woman must have been infected nine months before that, either by her husband or before marriage.

10589. (*Chairman.*) You think the effects of alcohol have a considerable aggravation on the effects of syphilis?—Yes. That is very well realised in the profession. Alcohol is a particularly aggravating factor in the progress of syphilis.

10590. And a person who is addicted to alcohol is much more vulnerable to it?—Yes, and if he becomes at all alcoholic he breaks down much more quickly from all forms of syphilitic trouble.

10591. I suppose the congenital effects are still worse upon the children in these cases?—Yes. I think it ought to be brought out in this connection, syphilis as a cause of physical deterioration of the race, that a great number of individuals become infected with venereal disease simply because they are intoxicated. That is a practical working point, so that the alcohol question, quite apart from the effects of alcohol itself, is an abundant source of further syphilitic infection of the nation.

10592. (*Colonel Fox.*) Am I to understand that you mean that a man under the influence of alcohol, more or less drunk, is reckless?—He becomes immoral.

10593. And he is reckless as to what he does?—Yes. Even if he were a decent fellow before he became drunk he would be immoral afterwards.

10595. You mean drink leads to immorality?—Yes, one sees plenty of that medically.

10596. (*Chairman.*) I understand you to think that the first step towards dealing with venereal disease is some special inquiry as to the extent of the disease?—I think so, because at the present time, although the public knows a good deal about it, it has never been brought home to the public at large to what a degree the disease is prevalent, and in the second place to what degree innocent people, those women who marry and others, are infected with it.

10597. You think there is presumptive evidence that it is a very serious factor in physical deterioration at the present time?—Yes. I think it is a very important factor. I do not think it is nearly so important as alcohol, but it is a very important factor indeed.

10598. You do not advocate this from the point of view of any prophylactic systems such as have obtained abroad, and which I believe are likely to be abandoned?—Do you mean registration?

10599. Yes?—No, because I think the registration system is an admitted failure.

10600. That is what I wished to bring out?—I think the notification of venereal disease would be a good thing.

10601. Notification, additional hospital accommodation, and full inquiry are your three suggestions?—Yes, and the inquiry should come first.

10602. (*Dr. Tatham.*) You mentioned just now in connection with the certification of the cause of death, what is unfortunately always present to my mind, that the certificates with regard to syphilis so far as it is fatal are of very small value indeed?—Yes, and also I mention the absence of the mention of syphilis from the secondary cause of death; it is very frequently omitted when it ought to have been put in.

10603. For what reasons?—For social reasons, so called—the character of the family.

10604. And because of the danger?—Yes, the danger of prosecution—of an action for damages.

10605. That would be done away with to some extent by rendering the certificate a privileged communication?—Yes, I think it would.

10606. With regard to the question of rendering the medical certificate of the cause of death a privileged communication, would you kindly tell the Committee your opinion on that matter?—The practical question is this. At the present moment when a medical man gives a certificate of the cause of death, he is writing a document which is for the information of the family, but it is a document which is indirectly to be the scientific basis of statistics for the nation. Those two things are really quite apart, you cannot combine them. Therefore it comes to this, that any document certifying the cause of death ought in the opinion of the British Medical Association to be a scientific document, a Government document, what we may call a State paper and a privileged paper, to be given to the Government official, the Registrar-General, and the contents of that document should only be communicated to the friends or relatives of the patient at the Registrar-General's discretion. Of course he would not refuse it to a relative. If the certificate of death were put into that position it would have a privilege attached to it which would insure its being a completely and accurately filled-up document.

10607. (*Mr. Struthers.*) Do you not think with regard to getting the requisite authority to bury the body, in that case the family must produce it?—There would be no more difficulty, the authority would come from the local Registrar.

10608. The Registrar in the district, not from Somerset House?—Yes, under the direction of the Registrar-General. I do not think the Registrar-General could refuse, to show it to the relatives, however painful it might be to them. I think there is much greater danger done to the nation by covering the facts up.

10609. (*Dr. Tatham.*) It is not only with respect to syphilis that you would require this alteration of the *modus operandi* of registration, but you would extend it to all diseases?—Yes.

10610. So that really the State Register of the cause of death should be a scientific document?—Yes.

10611. And should be therefore useful for medical and other scientific purposes?—Yes.

10612. And I think that opinion is your own very strongly, and it is also that of a large proportion of the medical profession?—Yes, I am right in saying it is the opinion of the British Medical Association which represents at the present moment nearly 20,000 practitioners.

10613. I think I am right in saying that you are the Chairman of the Representative Meeting and of the Medico-Political Committee of that body?—Yes.

10614. Therefore you speak with the authority of that body in addition to your own?—Yes, I am instructed to speak on the authority of the Association.

10615. You are aware, I daresay, that so far as the published statistics of mortality are any measure of the prevalence of syphilis, there is a slight improvement?—Yes, I am aware of that.

10616. You do not attach—and I certainly do not attach—much importance to that particular line?—No.

10617. With regard to the lesions of congenital syphilis as affecting indirectly physical development, you are now speaking of untreated syphilis or badly-treated syphilis?—In congenital cases?

10618. Yes.—Of course as regards the poorer classes undoubtedly one may say "badly treated" cases. Undoubtedly children of syphilitic parents who show signs of disease not only in the cases I have mentioned, but in the alimentary canal for instance, are only occasionally brought up to the hospital for treatment, and therefore they are badly treated as you say. I do refer to those cases chiefly.

10619. In the case of a woman contracting syphilis and being placed under proper treatment, do you consider that she may hope to be thoroughly and permanently cured, so as to produce healthy offspring afterwards?—I am afraid I cannot answer that question. That is more a gynecologist's question. I quite agree with the opinion expressed by Sir William Gowers, that nobody who has had syphilis is ever cured, meaning by that of course that they remain apparently perfectly well for twenty years, but sooner or later some manifestation of syphilis will show itself.

10620. (*Chairman.*) The person may die first?—Yes, of some other disease. As regards the question whether the person not being, strictly speaking, cured would have healthy offspring, I am sorry I cannot answer that. I do not know.

10621. (*Dr. Tatham.*) That is a gynecological question?—I daresay some gynecologists could tell you; they know the histories of families.

10622. With regard to the inquiry which you advocate, would you have that pretty much on the lines of the Royal Commission on Tuberculosis?—Yes, exactly parallel I think.

10623. And you would have it to the same extent?—Yes. I think it would have to be a very large inquiry.

10624. You do not think it is nearly so important a subject as that of tuberculosis?—No.

10625. Quantitatively?—Quantitatively there is a great difference.

10626. You speak of the prevalence of venereal disease here. I suppose in the absence of notification of syphilis it is difficult to measure it, is it not?—It is very difficult to measure it. When I said venereal disease I included also gonorrhœa, because gonorrhœa is an extremely dangerous disease. It does not kill immediately but it produces whole series of secondary effects which ultimately do kill, and its effects on women are disastrous. When you take all forms of venereal disease you cannot but be struck very forcibly in taking the histories of patients how common it is to find that they have had some form of venereal disease. I should say venereal diseases are extremely prevalent undoubtedly.

10627. But as compared with twenty years ago it is impossible with our present data to say whether the prevalence is greater or less?—Quite impossible. I think the only reasonable point on that is the one asked me by the Chairman relative to the virulence. The post mortem room records are so extremely clear now. The relative rarity of *gummata* and the relative diminution of syphilitic caries are undoubted facts.

10628. I asked Dr. Mott just now whether he would impose any serious penalty upon a man who knowingly infected a woman with syphilis: what is your view?—I think that, as the ordinary outcome of a Notification Act, it would be possible to have a statutory penalty on persons of both sexes. I do not think it ought to be only limited to the male sex, but I think certainly there ought to be a penalty as soon as the thing is put upon the ordinary basis of an infectious disease.

10629. (*Chairman.*) Is it more easy for a man to know he has got it than a woman?—Yes; I think it is.

10630. That is a plea for making some little distinction?—Yes; it undoubtedly is so.

10631. (*Dr. Tatham.*) I know that you agree that there are enormous difficulties in the way of insisting upon a notification such as this?—Yes, I think that they are chiefly the alarm which would exist in the mind of a medical practitioner that he was on the one hand revealing the secret of his patient, and on the other that he would lay himself open to an action for damages.

10632. You do not think it would lead to the suppression of the facts?—No, I do not. I was saying just now I think people if they find they have got the disease want to be treated. I think their natural desire to be treated would overcome everything else, at any rate at the start.

10633. And as a consequence of notification, what proceedings would you advocate being taken in the case of an infected person?—Of course as regards that point detention must be the first step. Supposing a person is informed he has smallpox he is detained by a medical man at the present moment. I think that with regard to syphilis they ought to be detained and sent into the Lock Hospital, or sent into the Lock division of an ordinary hospital for preliminary treatment at any rate. It is quite possible that a certain number of cases could be very rapidly treated in that way.

10634. And how long should he be detained?—As long as the medical man certifies it to be necessary.

10635. (*Mr. Struthers.*) The period of detention would be very different in the case of syphilis from that of small-pox?—Yes; very.

10636. So that it is a much more serious matter to detain a man with syphilis till it is safe for him to be allowed out than in the case of small-pox?—Yes.

10637. That would be an important difference?—Yes; very important. The period of detention ought to be relatively long even up to six months, and even then a syphilitic patient would not be cured; he would still be infective to a certain degree.

10638. Would a shorter period of detention be of practical use in that case?—Yes. It is like any other infective disease; if you can only get a syphilitic patient early and treat him very actively you can cut down the disease very materially.

10639. As regards that, I understand that it would lessen the risk of his communicating the disease to other people?—I think it would. I am only giving an opinion. I have only a few facts to base it upon, but I think if you get a patient like that treated actively by excision of the original focus of infection, by liberal giving of drugs, foods, etc., you would beat down the virulence of the disease in that individual, and it would not be so virulent when he went out into the community. I think you would produce an effect, because undoubtedly you do with other diseases.

10640. Even at the end of three, or it may be six months there is a certain appreciable percentage of risk of his communicating the infection?—Undoubtedly.

10641. And you have only lessened the percentage?—Yes.

10642. (*Dr. Tatham.*) You were speaking just now of the after consequences of syphilis and gonorrhœa; they are entirely different, are they not?—Yes; in a sense they are.

10643. Leading to different *sequelæ*?—Yes; totally different *sequelæ*. I was thinking of it as affecting the efficiency of the individual; they are both very destructive

10644. And although extremely serious in the case of gonorrhœa, they are not comparable in point of importance to succeeding generations?—No.

10645. It is the individual?—Yes.

10646. (*Chairman.*) Gonorrhœa is very much more easily healed is it not?—Very much more easily treated, and very much better treated at present, so that the remoter consequences, viz., stricture and so on, are rarer now than formerly.

10647. (*Colonel Fox.*) We have been told by a good many men that the majority of children are born sound into the world and start fair in life, and the reason they go wrong is because they are badly fed and do not get sufficient fresh air. If a man contracts syphilis, and goes through primary and secondary syphilis, and is properly treated, and allows two years to elapse before he marries, do you not think his children can be absolutely sound?—I have seen a great many people like that, and by the time they have arrived at forty, fifty, or sixty they begin to show the signs of disease. As regards their children in many cases—I am speaking now of my personal experience—their children are below the average.

10648. Notwithstanding their having been properly treated?—Quite so.

10649. And having allowed time to elapse?—Yes; the usual two years. That is the usual period. I am quite sure that period is too short.

10650. It is too short?—Yes; I am certain there are a great many cases in which people have been told that they could marry with perfect safety, and they have had syphilitic children of a worse type undoubtedly.

10651. (*Chairman.*) Is there any period when you can secure perfect immunity from consequences?—No; but undoubtedly the longer you get away the better—four or five years.

NINETEENTH DAY.

Monday, 21st March, 1904.

PRESENT.

Mr. ALMERIC W. FITZ ROY (*in the Chair*).

Colonel G. M. FOX.
Mr. H. M. LINDSELL.
Colonel GEORGE T. ONSLOW.
Mr. JOHN STRUTHERS.
Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary*).

Mr. WILLIAM MCADAM ECCLES, M.S., F.R.C.S., called; and Examined.

Mr. Eccles.

10652. (*Chairman.*) You have something to say by way of preface as to the character of the evidence?—It is one of those points of extreme difficulty, to be actually, definitely scientific about, because of the want of good statistical data, but the fact has borne itself in upon a considerable number of medical men that there is in alcohol a factor in deterioration, and that it may act directly or indirectly. Probably the weight of evidence is rather in favour of action indirectly than directly.

10653. How has this evidence been collected?—A number of medical men who have been particularly interested in the action of alcohol upon the living tissues were called together practically by myself, and they met on two occasions, and they discussed first, whether there was any evidence that should be presented, and secondly, as to how that that evidence should be presented, and thirdly, the character of the evidence. I might say these gentlemen who met were fourteen in all.

10654. Their names are given in this document, which is called:—"Statement upon which the evidence on the relationship of alcohol to physical deterioration will be based"?—Yes, five of them represent the alienist side, four were hospital physicians, two hospital surgeons, one medical officer of health, one a workhouse medical officer, and one the medical officer of a medical mission.

10655. There were certain laymen too?—There were four laymen; Mr. J. Y. Henderson, representing the National Temperance League; Mr. Stafford Howard, director of the United Kingdom Temperance and General Provident Institution, and two secretaries.

10656. What facts can you give us as to the direct action of alcohol in producing physical deterioration?—The first point is the physiological action of alcohol upon tissues. We felt it was right to put that in as an Appendix, showing the real basis upon which the statements are made, that is to say, that alcohol has an action on the living cell in producing deterioration, and if it acts upon one single cell it was felt that the action upon the cells of the body, as a whole, is similar in nature.

10657. Evidence to that effect is contained on page 25 of this document?—Yes.

10658. I think it would be best to publish this *in extenso*, as it forms the basis, to a large extent, of the evidence you are giving. It will be best that we should include it in the appendix?—I think we should look upon that as very desirable.

10661. It would elucidate your evidence apart from the value of the memoranda themselves? Yes. We have endeavoured not to give too much in the way of details but to lay down fundamental points. Passing from the actual experimental data, we come to the facts so far as children are concerned, the young cell life as one sees it in childhood. Here again no precise statistics can be presented, but there are numerous cases under observation. Sir Thomas Barlow has in the printed evidence given a short statement; and I might say, as a hospital surgeon, from my own experience I have seen quite a number of cases where direct want of growth seemed to be definitely the outcome of the actual imbibing of alcohol by young children.

10663. Were they given it deliberately?—First, I think it is given deliberately in infancy on account very often of the apparently beneficial results of alcohol in staying the querulousness of the child from intestinal pains, that is to say, brandy itself does in a certain number of cases produce relief from spasm of an intestinal character, and if a child is badly fed and is given alcohol it does relieve pain to a great extent, with the result, however, that it may be given in increasing quantities and then produces a result directly upon the child.

10664. It is never given by medical advice, I suppose?—I should not like to say it is not. I think it is given much more frequently apart from medical advice.

10665. If it is once known that any doctor has ever recommended it, it may be often done as the result of that recommendation without any further advice being given?—That is true. I am speaking more particularly of the lower classes. They do it, I think, entirely of their own accord as a rule. There is no doubt there is a physiological effect of alcohol in deadening sensation, and therefore in a sense it may be useful in that way, but not if it is continued for a length of time, particularly with the young growing cells.

10666. Is it the case that the children's hospitals are familiar with a large number of instances of that sort?—Not of direct action; I would not say the instances are large from direct action, but indirectly, as I think we shall see presently, the numbers are considerable. But from the direct giving of alcohol to children, I do not think we can say there is a large proportion.

10667. As to the bodily and mental deterioration which affects adults from similar causes, how do you seek to prove them?—First of all with regard to the question of the prevalence of intemperance: the word "intemperance" of course is a very comparative word, and what one might say was intemperance others would probably say was moderate.

10668. With reference to this classification on page 5 of this document, so many per cent. of careless, so many per cent. free drinkers, and so many per cent. decidedly intemperate, can you tell me how those sub-divisions are arrived at?—Merely from the statements of the actual medical men in attendance on those cases. Those are statistics given by medical men to the British Medical Association.

10669. How do you suppose a medical man distinguishes a careless from a free drinker?—It is a very difficult question.

10670. There are a lot of people on the border line?—Yes.

10671. It depends on the idiosyncrasy of the medical man which side he puts them on?—I would not lay great stress on the question of statistics in that way, in fact I think myself they are most misleading in connection with the amount of alcohol taken, but what I do think is an important point is, that there is an undoubted prevalence of intemperance among the lower classes, and if it can be shown that alcohol is a cause of deterioration then that amount of intemperance must be one of the factors in producing deterioration.

10672. The contrast contained here between the publican and the Rechabite, of course, is very effective for the purpose of your comparison?—I think there are a very large bulk of statistics now both in connection with the question of sickness and accident which are an important point in connection with degeneration and also in connection with actual length of life which show that there is an action of alcohol upon the tissue producing a certain amount of deterioration and therefore either inducing sickness or even diminution in the length of life, and, of course, the question of trade and occupation is a matter of extreme interest. I think Dr. Tatham has alluded to that very strongly in some of his papers.

10673. You base your conclusions to a large extent in regard to this branch of the subject on the expectation of life which the insurance offices take?—Yes, from those insurance offices which have for some years past systematically made a division between those who take alcohol, even though in very moderate quantities, and those who definitely year by year state on a certificate that they do not take any alcohol. The statistics derived from these two sections of insurance life work are to my mind absolutely convincing that there is some direct effect in connection with the alcohol taken.

10674. Do the insurance offices give the abstainers better terms?—No; except that they give better terms in the sense that the bonus comes out better, but there is no difference in the actual premiums.

10675. You think that is an absolutely fair comparison?—I will put it in this way: if you take one office, perhaps the largest office that separates the two "lives," in the general section they are good average lives as shown by the present basis of comparison, that is to say the Office Male Table, the newer basis of comparison in contradistinction of the old Healthy Male Table. These are good average lives, as I think we can show by the actual deaths—8,947; the expected deaths by the Office Male Table would have been 8,911, a difference practically of ½ per cent. On the other side in the temperance section the actual deaths were 5,124, being less than 75 per cent. of the expected deaths according to the average mortality of assured lives. Seeing that in the general section they were good average lives, that is to say they were not risky lives in the general section, it would appear that there is some influence at work in the temperance section in producing this smaller death rate than was expected. And seeing that this evidence is borne out by other offices, to one of which I am medical officer myself, it seems to me that there is certainly one factor which is common to them all and that is the abstinence from alcohol.

10676. The lives included in this average list were none of them lives that had been victims of excess in alcohol?—No, probably not; because in insurance offices those are lives which are very carefully excluded; I would not say there were absolutely none.

10677. Is it possible to exclude them so carefully as all that?—By medical examination one can practically exclude one who has had taken alcohol in excess.

10678. You cannot exclude people who perhaps drink more than is good for them without producing any overt symptoms of excess. I am asking for information. You say it is a reliable basis of comparison. It is easy to distinguish?—I think so, certainly. There are certain medical signs which indicate pretty clearly as to whether or not alcohol is having an effect upon the tissues, such as the question of arteries and kidneys and so on. I might say I asked definitely on the question of deaths in the temperance section as to whether there had ever been any death that was certified as due to alcoholism in the sixty years, and so far as one could make out there was only one death which had been from alcoholism in the temperance section.

10679. I presume there are some other facts here which illustrate the lower mortality of temperance lives—taking 100,000 persons aged thirty?—Yes; according to the average rates of mortality some 44,000 would survive to the age of seventy, but according to the experience of the abstainers section over 55,000 reach the age of seventy, or 25 per cent. more.

10680. And the same tale is told by the number of abstainers who survive after thirty?—Yes. We have merely given this office as an example. There are several other offices which bear out this statement.

10681. It is representative of the whole?—Yes, practically it is so.

10682. You think it establishes your point most conclusively?—I think decidedly so.

10683. Have you anything further on that particular point that you would like to say?—No, I think that is all on that particular subject.

10684. What have you to say as to the vulnerability to disease and accident?—I would like to urge very strongly, first of all, the question of indigestion. I take it that the great factor in physical degeneration at the present day is the want of proper assimilation of food, and I think that alcohol is one of the causes—I would particularly lay stress on the word "one"—of gastric irritation and consequent indigestion.

10685. Alcohol taken without food?—I would say even alcohol taken with food if the alcohol is sufficient in amount.

10686. I do not understand you to be contending that any alcohol is prejudicial?—No, what I am speaking of is alcohol either taken without food or taken in such quantities with food as to bring about an actual deleterious action upon the stomach wall. From one's own observations amongst the poorer classes of which one is particularly speaking, there is undoubtedly a considerable quantity of alcohol taken without food.

10687. It is taken merely to stop the craving for food sometimes?—Yes. It is also taken because of the effect alcohol produces in giving a certain amount of *bonhomie*, and so on. I am convinced in my own mind that a considerable amount of the poor physique of some of the lower classes is due to the fact that they cannot assimilate their food properly even if they get the food, because the stomach wall is so damaged by the irritation of alcohol.

10688. From early excess?—From early excess, and from the continuance of taking alcohol.

10689. I do not suppose that is a very common cause of indigestion in the young?—No, it is not, because alcohol is not commonly given to them. But from sixteen years onwards there is a liability from it increasing probably with years up to thirty.

10690. Sixteen is about the age at which the young may begin to be damaged?—After sixteen the young, as a rule, are out of their parents' control, in the lower classes particularly, and they do as they like.

10691. Do you think the parents in the class we are speaking of attempt to exercise any restraint upon them? With a drunken father and a drunken mother, do you not suppose that the children get as much drink as their parents will let them have?—I should think that they would in many families, but my own personal knowledge and actual observations do not go sufficiently far.

10692. You think that the increased drunkenness—if it has increased in this class—would include a good many young people?—I have myself seen young people from sixteen to twenty under the influence of alcohol at the hospitals.

10693. What have you to say as to the predisposition to syphilis arising from alcohol?—That is a subject to which I have given a great deal of attention myself, although I have never actually published anything on the question, but I always make a rule of asking every man who presents himself who is infected with syphilis, as to what condition he was in at the time when he ran the risk of catching it. I have been astonished at the number who were under the influence of alcohol at the time—it is certainly over 75 per cent.

10694. And, therefore, they were less careful of what they did?—Yes, they were less careful of what they did. I think that is a fact of very great importance, seeing that syphilis itself is such a very strong factor in producing deterioration.

10695. I would like to ask you one question which arises from what you have said: would you be in favour of making syphilis a notifiable disease?—Certainly. I should like Dr. Jones to be asked that question also. I am very strongly in favour of it.

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10696. What does the second cause of predisposition arise from?—A person who is actually affected by alcohol is in a state of lowered resistance to almost any virus, particularly syphilis.

10697. I suppose the poison takes hold of him more strongly too?—Yes, he is unable to throw off the poison so well as a healthy person.

10698. The most virulent forms of syphilis are to be found in persons suffering from alcoholic poisoning?—Yes.

10699. It aggravates the disease, and you have adduced evidence to show that in this document?—Yes. Then with regard to the question of militating against successful treatment, I think you may take it that every medical man who treats syphilis tells his patient as one of the first things "you must knock off alcohol." Until alcohol is really totally discontinued, any drug is not likely to have its full action.

10700. And it is the same with a large number of other maladies?—Yes. I have mentioned gonorrhœa particularly, because gonorrhœa is considered by a great many to be not such a serious matter as syphilis. Personally I consider that gonorrhœa leads to more invalidism and deterioration than even syphilis.

10701. Is it not now much more easily treated?—Its treatment is not yet successful. It is better than it was, but it is a most difficult thing to eradicate the virus of gonorrhœa from the body.

10702. If it is treated very early?—If it is treated early and thoroughly well, there is a hope. I would allude here to the question of invalidism and sterility in women, which is a point of very considerable importance in connection with the want of proper provision for children. We get a very large number of cases at the hospitals now where invalidism of the female has been induced by gonorrhœa, and gonorrhœa which has been inoculated while the recipient was under the influence of alcohol.

10703. You mean caught from the husband when in that condition?—Yes. I take it the majority of husbands would not catch gonorrhœa unless they were under the influence of alcohol.

10704. And tuberculosis tells the same tale?—Yes. There has been a very great difference of opinion amongst the medical profession of recent years with regard to the relation of alcohol to tubercule. Now there is almost a unanimous opinion that alcohol does predispose to tubercle in the otherwise healthy body. Dr. Jones will speak as to alcoholic lunatics. So far as enteric fever and pneumonia are concerned, it is a well known fact that both of these diseases in alcoholics tend to very greatly run a fatal course.

10705. I suppose in all diseases which are, in common parlance, called inflammatory, an alcoholic patient always suffers more?—Yes, and in the treatment of these diseases alcohol to a very great extent is not used at the present day, from the very fact that it seems that in alcoholic patients it does very little, if any, good.

10706. They are proof to the medicinal effects of it?—As a surgeon, I have not experience of enteric fever and pneumonia, but several of those who met at my house, who are physicians, are very strong on that point. So far as wounds are concerned, there my experience is very considerable. My own hospital, St. Bartholomew's, is close to the meat market, and, unfortunately, a very large number of the meat porters are very greatly addicted to alcohol, and we have a great difficulty to get their wounds to heal properly, because they are infused with alcohol, and because of the condition of their tissues, due to alcohol. These cases tend to run a very chronic, tedious course, and sometimes even end fatally. Then with regard to actual operations, one fights shy of having to operate upon patients who are alcoholic, because of the degeneration of their tissues; they do not heal well in spite of the aseptic ism of the present day. One does not get the sound healing in alcoholic tissues, as in others. That I am convinced of, from my own personal experience.

10707. That we are prepared to expect. You also find alcoholic patients are laid up for much longer periods in cases of sickness?—Practically it follows from what I have said that any sickness or any wound means that they are longer in convalescence than others.

10708. Remedial measures do not operate so thoroughly?—That is so.

10709. And the consumption of alcohol affects the female in producing sterility, apart from syphilis and gonorrhœa?—There is a direct action of alcohol on the generative organs of the female. I have spoken to several gynecologists, and they agree in that. There is a vicious circle in connection with it. If there is any trouble in connection with the generative apparatus, one of the first things women fly to is alcohol. That does for the time being help them, but it tends to produce an action upon the actual generative apparatus which may produce sterility. I think that is borne out by the case of prostitutes; they are sterile, and they are sterile from two reasons, probably from gonorrhœa and from alcohol. These are the two great causes.

10710. Perhaps it is a good thing that an alcoholic woman should be sterile?—It is an extremely good thing, but it does tend to diminish the birth-rate.

10711. At the same time, I suppose, the worst effects upon the child are those that are obtained through the drunken mother rather than through the drunken father, are they not?—Certainly, that comes from the indirect action of alcohol.

10712. Are the effects of alcohol in the mother brought to bear on the child as a rule?—This is a somewhat difficult subject, but it has been proved distinctly that alcohol circulating in the mother's blood does reach the fœtal system, although there is no direct connection between the two circulations; they are absolutely separate. But there is a means whereby fluid may pass from one to the other by a process of filtration. It has been proved that alcohol does find its way to the fœtus, and thus would act in two ways, either causing the actual death of the fœtus, and therefore a miscarriage on the part of the mother, or a want of proper development of the cells of the fœtus. In one sense one may say this is a direct action of alcohol through the mother upon the fœtus; that is to say, alcohol may directly affect the cells of the fœtus. There would seem to be some evidence for an increase of the consumption of alcohol in women. I know that it has been pointed out that there is not so much actual drunkenness probably among women as there was some fifty or sixty years ago. I think that is perfectly true. One perhaps does not see the actual amount of drunkenness in the streets of women as may have been the case then. But I am quite sure of this, that there is more actual alcohol drunk by women. That is particularly so amongst the upper classes; there is no doubt about that.

10713. The consumption of other things comes in too. Are not narcotics used more frequently, like chloral?—Yes, and cocaine, and various other drugs. But I do not think perhaps that touches the lower classes of which we are speaking. There is no doubt about it if there is alcoholism in the mother it does tend to affect in some way or other the child before that child is born; it has an effect on the embryo which is indirect in one sense and direct in another.

10714. And how does that show itself on the child when born, as a rule?—I would rather leave that to Dr. Jones. Then we come to the most important point of the whole of these things, and that is the indirect action of alcohol in producing physical deterioration through the environment. Personally, I am sure that this is the chief way in which alcohol does act, and that it does act very markedly.

10715. And it has a disastrous effect on the nurture of the child?—Yes, in its early days indirectly. First, with regard to the food, there are two ways of looking at that, the actual want of food, and then the want of proper food. The actual want of food may be brought about in quite the young infant by the fact that the mother's milk is really not food. There are many women who suckle their young whose milk is so poor from want of food themselves, and from alcohol, that, practically speaking, the child is being starved, and unless those children are put on artificial food they either grow up extremely weakly or die. I am convinced in my own mind that this is one of the sources of a large amount of infant mortality. It is often said that if a mother feeds her child, the child is all right. I do not think that statement can be borne out amongst some of the lower classes

where the mother's milk is not itself actually sufficient food. That deals with want of food and then the want of proper food results from the fact that the milk of the mother may actually be tainted with alcohol. Alcohol is excreted in the milk, and therefore the child may be actually taking alcohol with the mother's milk. It may be quite a small amount, but sufficient to react upon the child.

10716. We were told in this room that a child has been born with *delirium tremens*, do you think that is possible ?—I would not like to go so far as that. Then another very important factor is the want of proper hours for suckling amongst women who are addicted to alcohol, that is to say the child of a careless mother is liable to have milk at any time and in any way. Another very important factor is that there is a considerable increase in the artificial feeding of infants even amongst the poorer classes, and that this artificial feeding needs very great care in order to prevent dangers arising from it. That is well known even amongst the upper classes. I think we all know that when there is an alcoholic mother who is unable from an alcoholic condition to properly feed her children artificially, the children do suffer very considerably. One sees that, I think, to a very great extent in the extraordinary prevalence of rickets. I am not sufficiently old myself to say whether rickets is more prevalent now than it used to be, but it is terribly prevalent at the present time. One gets a history in many cases that they are hand-fed children, and I think in those cases where the mother says that she has nursed the child it generally means that the mother's milk itself has been so poor that it is tantamount to the child being improperly fed.

10717. The whole thing arises from a want of a proper supply of milk ?—Yes, in the mother.

10718. Or if the mother does not happen to have the milk, a proper supply from outside ?—That is so. There is no doubt that in towns the question of milk supply and infant feeding is one of the most important matters.

10719. Do the hospitals where a large number of children are treated do anything ?—They merely give directions as to how the child is to be fed, but they do not supply the milk.

10720. They have not attempted to organise a supply ? I believe that has been done in Paris with good results ?—Yes. In Paris and some other cities it has done it very largely. I am afraid we are behind-hand, although some municipalities are now moving in the matter.

10721. Do you not think that it is a thing which children's hospitals should take up ?—I would like to answer that in this way ; if mothers are unable to feed their children, then certainly the child ought to have proper milk, but I think we want to get a little further back and find out the reason why mothers are not able to feed their children. One does not want, as it were, to provide an easy way for mothers to avoid feeding children, because the mother's milk is *the* food.

10722. I suppose that would always be the most inexpensive, and from that point of view they would always prefer to do it if they could, because it must save money ?—Yes, they will, but the food given through the mother in the lower classes in towns is often improper. I refer to the towns because I have not had experience elsewhere.

10723. The staple food is fried fish, and very often in a rancid condition ?—I have seen a child nine months old eating shrimps.

10724. I suppose you look to some means being brought to bear which would equip mothers for the task of nursing their children to a much greater extent than is the case at present ?—One finds a mother who is of poor physique, and who in her earliest days had been a weakly child is never able practically to feed her children. It is not only the case amongst the lower classes but amongst the upper classes that women who desire to feed their children are unable to do so, and I think that this is distinctly increasing in amount.

10725. Still, I presume, there are fewer mothers of families among the lower classes now who suffer from want of food than used to be the case—I mean the amount of money at the disposal of the working classes is greater ?—Yes, if that money was really spent on actual food, and particularly on the food of the mother during pregnancy and during lactation, it would be a very great point in producing thoroughly healthy, efficient children, but I do not think it is. The money is spent to a very great extent on pleasure. There is a vast deal more pleasure amongst the working classes now than there was—I mean pleasure which requires money wasted on it.

10726. They stint their commissariat in order to provide their pleasures ?—They do to a very great extent, and they do not understand the proper provision of food, or the question of cooking ; they do not understand how to provide themselves with proper food. They may have plenty of food, but it is not proper food ; it is tinned food easily got, and badly prepared, and so on.

10727. You do not think the knowledge obtained by girls in schools has been of much value ?—I am afraid not.

10728. The knowledge they do acquire is, I suppose, lost in the interval between leaving school and the time when it is necessary to undertake such duties ?—Yes. I am afraid I am wandering away from the question of alcohol, although it does come in indirectly.

10729. You deal with the question of bad cooking here ?—Yes, that is particularly important in connection with children. Nothing upsets a child's digestion more than badly-cooked food, and food which is sometimes almost decomposing from want of proper care in its keeping. I can quite understand it. These poor people have merely a little fire over which they have to do all their cooking.

10730. They are not resourceful ?—They are not.

10731. I fancy one finds that the French housewife, who has, perhaps, very little better apparatus, will do a great deal more ?—Yes.

10732. Because she has the resourcefulness which the English woman is devoid of ?—Yes. Then with regard to want of clothing and warmth in childhood, in this climate nothing is more important than that children should be properly clothed, and should be housed in pure warmth, not the shut-up window and the heated lamp which are so often the sole way in which the warmth is produced among the lower classes.

10733. Warmth and polluted atmosphere are practically synonymous in the class we are speaking of ?—Yes. Then with regard to improper housing, I have merely noticed how alcohol may indirectly affect that. I do not believe, myself, that the actual alcohol drinking is the cause of the poor houses in the majority of cases. But I do believe that if the money spent on alcohol was spent on higher rent, particularly on model dwellings, there would be a great improvement.

10734. In Mr. Booth's book reference is made to the fact that drink is fostered by bad houses, and that crowding is the main cause of drink and vice ?—I agree with that entirely. I think there is the other side of the question also, that is the house is poor because the drink is taken. Alcohol does blunt the sensibility of these people to the squalor of their surroundings. Get them away from their alcohol, and they realise at once that they ought to have a better place. One does get a certain number of men who have been addicted to alcohol who go into some of the county council dwellings, and in better surroundings, and they realise that fact, and it is a considerable help to them.

10735. They are weaned from their vice ?—Yes.

10736. Alcohol deadens the desire for improvement ?—It does.

10737. Of course it is not necessary for you to dilate upon the effect that overcrowding has in producing deterioration ; that is, I am afraid, self-evident ?—Yes. Then with regard to disease, one does see quite a large number of children brought up to one at the hospitals by alcoholic parents, particularly the mothers. One can tell at once the parent herself is actually intoxicated when she comes to the hospital, and one sees evidence of disease which might have been arrested, and which has progressed simply and solely from the want of the proper care of these children. I will particularly instance the question of tubercle. It is appalling the number of cases of quite young children in which tubercle is allowed to progress slowly, apparently simply from the habits of the parents—paying no attention to the condition of the child. One sees quite a number of joint cases in which a child is just allowed to drift. You ask the mother,

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"Why did not you bring the child before?" and the answer is, "Oh, I have not had time: it was not convenient." That all means that the mother has not been alive to the effects of disease in the child.

10738. Do you think tubercle ought to be made a notifiable disease?—It is practically being made notifiable by many of the authorities now.

10739. They have power to do so, but I understand they only do it in Sheffield?—We are notifying it in St. Bartholomew's Hospital. Every case of phthisis which comes there now is notified.

10740. (*Dr. Tatham.*) Voluntarily?—Yes. Then, as you know, tubercle does affect so many just about the age when they are becoming efficient members of the community. I take it the contraction of tubercle in public houses is a very important factor, so far as the question of recruits is concerned.

10741. (*Chairman.*) Are there facts to prove that?—Very distinctly so.

10742. What order of facts?—First of all there are the facts that Dr. Tatham has brought forward; the actual workers in public houses are very liable indeed to the incidence of tubercle. I think Dr. Tatham put it in this way, that the mean mortality from tubercle being taken at 100, barmen and other workers in public houses have a mortality of 257.

10743. (*Dr. Tatham.*) Yes, that is ten years ago?—Then Professor Brouardel has proved conclusively that the deposit on the floors of public houses teems to an extraordinary extent with tubercle bacilli, as one would naturally expect from the expectoration in the public houses, combined with the sawdust which is often used. Perhaps one could hardly expect it to be otherwise. I think, myself, that the cleansing and the more strict sanitation of public houses would, to a very great extent, help to prevent the prevalence of tubercle. This is one of the factors in its dissemination.

10744. (*Chairman.*) There is a footnote by Dr. Brouardel in the book before me as to the filthiness of tenements being a factor in the progress of tuberculosis. I daresay you know the name of the author of this book—Dr. Henri Monod. It is a book upon public health in France. He contrasts the efforts which have been made to diminish tuberculosis in this country very favourably with what has been done in France; he holds this country up as a pattern?—May it always be so.

10745. He holds it up as a pattern of what has been done in that direction?—I think we are fully alive to the question now that prophylaxis is the great thing in connection with tubercle.

10746. He says that there is one country which has done more than any other to reduce the mortality from tuberculosis, and that is England?—That is very interesting.

10747. (*Dr. Tatham.*) With regard to this question of tuberculosis so far as it affects children, do you think that it is increasing amongst them?—It is very difficult to say one way or the other with regard to that, but it is an appalling number of cases that one has to deal with. On Saturday I was looking through one of our wards at St. Bartholomew's, in which there were ten children, and out of those seven were suffering from tubercle, which is a very large percentage.

10748. Of what particular form—tubercle of the joints?—They were all surgical—either the glands of the neck, or the joints; there was one case of peritoneal tubercle.

10749. You generally find a connection of so-called *tabes mesenterica* with joint disease, do you not?—In the later stages it may be present by general infection.

10750. The difficulty in the case of tuberculosis is to know really what is meant by some of the terms used. Take that unfortunate term *tabes mesenterica*, which may mean tuberculosis, or may mean simple atrophy. Our returns although carefully prepared are not the true measure of the amount of tuberculosis?—That is a very important fact, the question of *tabes mesenterica*. I am afraid we are entering into the medical question—as to whether or not infection occurs through milk, and therefore directly to the mesenteric gland, and consequently is bovine tubercle, or whether from infected sputum, through the lungs, and the tubercle in the mesenteric gland is secondary. Some pathologists hold very strongly that it is always secondary to tubercle obtained through the respiratory system.

10751. You are speaking now of genuine mesenteric tuberculosis?—Yes, of tuberculous affection.

10752. I was rather referring to the unreliability of the figures one gets?—Of course, the ordinary term, consumption of the bowels, which is so commonly used amongst the poorer classes very frequently means improper food, and is not tubercle at all.

10753. With regard to the feeding of infants, you speak of the increasing practice of using artificial foods of various kinds in place of milk, and certainly in place of mother's milk?—Yes.

10754. We have had it in evidence here that artificial foods are much more costly than ordinary milk would be for feeding infants; is that generally the case?—You are referring to tinned milk particularly?

10755. Yes?—Tinned milk is distinctly more costly than ordinary milk, but the fact remains that tinned milk is a rule is nothing like such a good nourishment as pure fresh milk.

10756. A great deal of it is separated milk?—Yes, and particularly that supplied to the poorer classes.

10757. And therefore there is no great inducement on the score of cheapness; in fact the inducement is the other way?—The inducement rather is on the score of facility, because tinned milk is so easy to get.

10758. It is through indolence?—Yes.

10759. With regard to milk which is obtainable in the poorer neighbourhoods, do you think there is a sufficient supply of good milk?—I am afraid I am not competent to give evidence upon that; it is beyond my province rather.

10760. We are very anxious to get to know, if we possibly can?—Would you not ask the medical officers of health with regard to that?

10761. We are asking everyone who comes here?—I am afraid my knowledge is not sufficient.

10762. Would you think that, generally speaking, children get any substantial supply of milk—anything approaching a sufficiency of milk?—I do not think the poorer clases understand the value of milk. One often hears a patient who is on milk alone being told that he is having nothing to eat. I do not think the poorer classes realise that milk should be the staple diet of young children. They think that unless a child is given something solid, biscuits or some kind of farinaceous food, it is having no food at all. One hears that a very great deal in hospital work.

10763. In fact they think milk is not sufficient?—It is not considered sufficient to support them.

10764. Is syphilis increasing?—I do not think it is. In the short number of years that I have had experience, I do not think one sees such desperate cases of primary and secondary syphilis as we did fifteen years ago. I can only recall two cases of *rupia* in the last ten years, and I am convinced I used to see a good deal more as a student. I think on the other hand the effects of gonorrhœa are increasing.

10765. You mean the effects upon the adult male?—The adult male and female also. I think one sees more gonorrhœal joints particularly in young men, and these joints tend to make that man incompetent. I have seen this year quite a number of cases of gonorrhœal joints in the hospital, and all have been under twenty-five years of age.

10766. With regard to women the results are even worse.—Yes. You know how it seals up the tubes and produces all kinds of trouble.

10767. These evil effects are all intensified by the use of alcohol?—Undoubtedly.

10768. With regard to rickets, I think you said that you would not care to state from your own experience whether that is increasing or not?—I really could not say. Of course, I happen perhaps to see it more particularly from the point of view of deformity because I have charge of the orthopædic department. One sees

every week from twenty to thirty children badly deformed by rickets, and that impresses itself upon one's mind very markedly.

10769. A great deal of that amongst individuals is due to improper feeding?—I am sure it is due to improper feeding—not by any means to want of food, but to want of proper food.

10770. (*Colonel Fox.*) Have you any remedies to suggest as regards the prevalence of alcoholism?—My great hope is with regard to education. I believe that if the young are educated to understand scientifically and properly the effects of alcohol it will be a very great help, and I think that is the feeling in the minds of the great majority of medical men. You know a memorial is being signed at the present time by the medical profession in England, Scotland, Wales, and Ireland, in favour of there being education in preliminary health and the effects of alcohol and other drugs, such as is being given in some of our colonies, where it has certainly worked with great benefit.

10771. The only places which the working classes have to go to to get any form of refreshment are the beer-houses?—Yes, practically so.

10772. Where they cannot get anything to eat?—Well, where they ought to be able to get something to eat, but where they do not. I think it is a very important point. If they had food with their alcohol it would probably do them far less harm, but I am afraid they would go for the alcohol even if food were present.

10773. Has it been brought to your notice that the cabmen's shelters have had a very good effect on cabmen?—Certainly, it helps them.

10774. In the old days it was a very common thing to meet with a drunken cabman?—Yes.

10775. Because the only place they had to go to for their refreshment was the public-house?—Yes.

10776. Now they have their shelters where they can provide themselves with anything they want?—Yes, with good, decent food.

10777. And tea, coffee, or cocoa. The result is you never see drunken cabmen. Would not the same thing take place amongst the working classes if they had well-conducted restaurants instead of these low public-houses?—I think it would have a very salutary effect.

10778. Would not that be one of the greatest remedies we could provide?—I am a little doubtful as to whether they would use it sufficiently.

10779. If they were there they would go there?—If they were there it would take away a part of the evil.

10780. (*Mr. Lindsell.*) Have you prepared these tables of Norway and Sweden?—They were prepared by Dr. Legrain of Paris, who has been particularly interested in the question of the relationship of alcohol to crime, and the rejection of conscripts. They were translated by Dr. J. J. Ridge of Enfield.

10781. Is the object to show the comparative amount of the consumption of alcohol per head of the population, or to draw further inferences from it?—It is to show that there is apparently some relationship between the consumption of alcohol and the various crimes, and particularly the question of the rejection of conscripts. That I think is the point I would chiefly allude to, and the actual number comes out very clearly indeed. Perhaps I might be allowed to add that in France the consumption of spirits containing 50 per cent. of alcohol in 1830 was 2·2 litres per head; in 1898 it had risen to 10·16 litres; the rejection of conscripts was 21 per cent. in 1830, and in 1895 it had risen to 32 per cent. *Mr. Eccles.*

10782. It rose *pari passu* with the increase of the consumption of alcohol?—Yes. It is merely suggested that there is a possibility of relationship between the two. In Sweden the consumption of spirits containing 50 per cent. of alcohol per head in 1830 was 46 litres. But, chiefly by legislation, it has been reduced in 1890 to 6 litres per head. The percentage of rejection of conscripts in 1845 was 34·46 and in 1885 19·61.

10783. In that Swedish table there has been a steady decrease apparently in the consumption of alcohol, judging from the table from 1830?—Yes.

10784. But all of a sudden that rapid decrease of consumption stopped—in 1860?—Yes, and it has since remained pretty steady.

10785. Was that the time when the Gothenburg system was adopted?—I cannot say. I think the Gothenburg system is more recent than that.

10786. I thought so, too, but there seems to be a sudden stoppage in the decline of the consumption in that year, and from that, onwards, it fluctuates within small limits up to the present time?—Yes; there are so many factors in the question of actual causation of the consumption of alcohol that it is very difficult to say what is the cause of the lessening. If you follow our own tables, as published, you will find that whenever there has been an increase in trade, and therefore an increase in the prosperity of the people, the consumption per head increases.

10787. I did not know whether you knew there was any reason for that sudden change in the Swedish people?—No, I do not.

10788. In Norway, although they have also adopted the Gothenburg system now the decrease seems to be continuous?—Yes.

10789. How do you define the alcoholic person—you do not say that anybody who uses alcohol in moderation is alcoholic. Is it merely a question of degree, or is there a stage reached at which the effects of alcoholism become apparent in the system, or is it that they are so slight in a moderate drinker that they are not perceptible?—I think we may take it like this—alcohol does affect individuals differently, but even a comparatively small amount of alcohol in one person may produce effects which can be distinctly recognised by a medical man, such effects being, generally speaking, the want of proper action of the cells. That person is becoming an alcoholic, even in spite of the fact that he may not show any of the grosser effects of alcoholism.

Dr. Robert Jones, M.D., M.R.C.P., F.R.C.S., called; and Examined.

10790. (*Chairman.*) You are specially prepared to speak with regard to lunacy statistics in connection with the evils effects of alcohol?—Yes. I was a member of the special committee summoned by Mr. Eccles to consider this aspect of deterioration, but my evidence is necessarily limited, for I deal with the effects of alcohol upon the poorer strata of the population, and I have collated my general experience into a special report which is now presented in this document.

10791. What number of insane persons do you give?—I think I say 114,000, but that is under the mark now. These figures deal with 1st January, 1902. Taking the annual average rate of increase, I believe that on 1st January, 1904, there will not be less than 116,000 insane persons in England and Wales. The proportion of insanity due to the effects of alcohol given in the second paragraph of my report is, for five years 1896–1901, inclusive, and it is calculated to be 21 per cent. of all the males and 9·2 per cent. of all the females admitted into asylums in England and Wales.

10793. Does that show a considerable increase in the number of admissions due to those causes?—When the average for England and Wales for a period of five years 1896–1901 is compared with the average for the last year for which statistics are presented, viz. 1902, there is certainly an increase, for the percentages for the former period are given as 21 per cent. for males and 9·2 per cent. for females, and for the latter 23·1 per cent. for males and 9·6 per cent for females. *Dr. Jones.*

10794. That is the five year average, as compared with the figures for one year?—Yes, but the statistics for the London county asylums may be interesting in regard to this, for during the ten years 1893–1902 inclusive, a total of 35,916 persons (16,356 males and 19,560 females) have been admitted as insane of whom 5,727 (3,497 males, 2,320 females) are alleged to owe their insanity to drink as a direct cause; a proportion of 21 per cent. among the men and 11 per cent. among the women. During the period 1893–1904 that the Claybury Asylum has been opened, and of which I have direct experience as medical

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officer, out of 9,544 persons admitted insane (4,251 males, 5,393 females) no less than 1,664 persons (965 males and 699 females) owe their insanity to the effects of alcoholic drinks—a proportion of 22·7 of the males and 13·1 of the females. I believe upon the lowest computation, and after making allowances for the improperly called recovery of some cases of drink insanity—and the improvement in many is rapid under proper treatment—also, after making the necessary reduction in respect to the deterioration and deaths in some forms of insanity, such as general paralysis of the insane, a disease which certainly bears an indirect relation to alcohol, I believe that there remain at the present time in asylums for the insane no less than about 11,000 males and 6,000 females—the figures are only approximate, but I think they are fairly correct—who are mentally decrepit directly or indirectly through the effects of alcohol.

10795. You have not any other quinquenniums of an earlier date which could be usefully compared ?—No I have only taken the last few years, but the statistics giving earlier quinquennia may be found in the previous reports from the lunacy commissioners to the Lord Chancellor.

10796. Does it show a progressive increase ?—Not quite progressive. The statistics for 1903 in the Claybury Asylum give a higher proportion than in previous years and a careful inquiry into the antecedents of 607 persons admitted insane relate a history of alcohol in 37 per cent. of the men and 22 per cent. of the women as a direct or indirect factor in the causation of their insanity. Insanity from drink in the poorer section of the population depends very much on the state of trade, it fluctuates very much with the condition of the working classes, and it has some bearing upon the occupation and the form of employment as well as having a geographical distribution.

10797. Does the weather have any effect ?—The summer is stated to produce more insanity than the winter months, and spring and summer to be more favourable to it than the autumn and winter.

10798. There is not more alcohol consumed in summer, is there ?—I should say probably there would be. I think the working classes would be more thirsty in very hot weather.

10799. But in very hot weather they would probably take less stimulating drinks ?—Although much spirits is consumed, practically the drink of the working classes is beer. It may be generally stated they do not drink much water.

10800. Is beer itself the cause of much alcoholism ? Is it not more spirits which is the cause ?—I think that women in proportion to the men drink more spirits, but the chronic indigestion from beer drinking is very common both in men and women. Beer drinkers are liable to a kind of acid fermentation with gastric catarrh, in consequence of which they are often unable to take food, and what they take is indifferently assimilated. This leads to ill-nutrition and to deterioration generally apart from special symptoms.

10801. Then you deal with the admissions into Claybury ?—Yes, and I have referred to the relation of alcohol to general paralysis of the insane, which is an absolutely fatal disease. It is now generally accepted by medical men that syphilis in some form is the cause or the main cause of general paralysis ; but there are some cases in which it is really absolutely impossible to get either a history or evidence of syphilis, and in these it may be that the syphilis was that of the parent. Even then the relation of alcohol to it is the same, for the loss of self-restraint induced by alcohol is a condition favour to acquiring syphilis. It is somewhat interesting in this connection that of 296 male patients received into Claybury Asylum in 1903, forty cases being a proportion of 13·5 per cent. were general paralytics ; and of 311 female patients fifteen cases, a proportion of 4·8 per cent. were general paralytics. These are the records of cases from London, the centre of civilisation so to speak, and they are higher than the percentage given for the whole of England and Wales, which includes rural as well as urban districts. Further, of the total male admissions 37 per cent. gave a history of drink, and among these the proportion of general paralysis was no less than 20 per cent. as against 13·5 of the total male admissions, showing the incidence of this fatal disease to be much higher among those in whom there was a previous history of alcoholic indulgence. Also among the drink cases in women general paralysis occurred in the proportion of 12 per cent. as against 4·8 per cent. of the total female admissions. These facts indicate very strongly to my mind that drink is favourable to the cause of general paralysis.

10802. Should you say there was more general paralysis now than used to be the case ?—My belief is that there is more, but the apparent increase is in part doubtless due to the fact that it is more accurately diagnosed.

10803. Cases are attributed to it which were previously overlooked ?—Yes ; and certainly among medical men in ordinary practice there is not sufficient special knowledge through practical experience among insane persons to enable them to diagnose these cases in the early stages. In consequence of this, cases are not infrequently sent for treatment into asylums as epileptics whose seizures indicative of their disease were those of general paralysis. Already the career of the medical student is much overburdened with detail but some of this might be thrown over to gain a practical knowledge of insanity.

10804. Are the seizures of general paralysis occasional ?—They are occasional, very much like epilepsy. It really requires some amount of medical education to diagnose them.

10805. You say it is a disease without hope of relief, but surely if it is only spasmodic in its occurrence it cannot be said to be hopeless ?—The disease runs a special course, and in this course certain seizures take place. These are only evidence of certain brain disturbances. They are outward manifestations of an internal affection of the brain, inflammatory in character and progressive in its march. The physical and mental deterioration proceed definitely throughout, but as an expression of occasional exacerbations, these fits occur, but unlike epilepsy when the mind may be clear and the health good during the inter-paroxysmal periods there is no alleviation in general paralysis. The disease lasts a year or two years or more, but during this period there may be a series of convulsions much like epilepsy, but the convulsions are those of general paralysis, and there is no relief.

10806. Those would be practically incurable ?—Yes, I think absolutely incurable at present.

10807. These attacks become more frequent in number and more severe until total paralysis ensues ?—Not quite that ; the attacks are the result of a gradual inflammation of the brain and its membranes and some cases of general paralysis may escape these altogether. They are epi-phenomena, and the disease goes on, but not evidenced in all cases by convulsions. I have stated that the disease is especially one of soldiers and sailors. Of the total male cases admitted who were suffering from this disease the occupation in 40 per cent. of these was that of a soldier or a sailor and this in equal proportions ; that is, taking the statistics of the Claybury Asylum during 1903.

10808. (*Colonel Onslow.*) Forty per cent. of soldiers and sailors actually serving, or ex-soldiers and sailors ?—Some serving and some who have completed their time. I have had some who have been invalided whilst on service and who are still among the reservists.

10809. They are invalided from the Army ?—Yes.

10810. Can you discriminate between the Navy and the Army ?—No. I get comparatively few naval sailors in the asylum, and I mean sailors generally as belonging either to the Navy or to the Merchant Service, but soldiers I take as service men. I have the last published statistics of the Yarmouth Royal Naval Hospital for lunatics, which has accommodation for 227 patients, and of the 157 then in residence 16 per cent. were cases of general paralysis, whereas 40 per cent. of all the deaths were deaths from this disease, which shows a very high percentage of general paralysis. The Royal Military Lunatic Hospital at Netley has accommodation for eighty-seven patients, but the admissions into this hospital for one year amounted to 442 patients, which shows that they probably change the whole of their population five or six times over every year. Of the deaths in one year at this hospital no less than 25 per cent. died from general paralysis, and I receive a fair number of soldiers into Claybury Asylum as reservists or pensioners and who are general paralytics. As a general statement it may be

taken that general paralysis takes about fifteen years to develop after the onset of syphilis, that is ordinarily speaking, so that a certain number of soldiers would be admitted into the asylum as ex-soldiers, i.e., after their time had expired or during the period of their reserve, and military statistics would not include these, nor probably all those who would be admitted into the public lunatic asylums.

10811. (*Chairman.*) Is that experience representative of most of the hospitals in the country ?—It is the general experience, I think.

10812. There is nothing special in the character of the patients treated at Claybury which would make that exceptional ?—No. But in regard to the effect of their treatment. Alcohol as a cause of insanity in some cases tends more or less to evaporate as it were, and these cases make a temporary recovery but their condition is always unsatisfactory. They are so unstable that they often soon relapse, and furthermore I have no doubt that drink induces a feebleness in the descendants of these, and that the children of drunken parents become affected.

10813. How far could those effects be got rid of by proper treatment in the case of the children: are they bound to carry those effects to the grave and transmit them to their offspring, or is there some hope from remedial measures in their case ?—I think the effects may be very considerably modified in the offspring by the influence of a new environment, and much may be done to assist the elimination of alcohol in the parents by better surroundings and treatment by abstinence. In this way the effects of the alcohol taken by the individual may be modified and to some extent the alcohol itself eliminated.

10814. You mean alcohol taken themselves, not transmitted ?—That is so. As to the transmission of acquired characters may be mentioned some very interesting unpublished experiments by Dr. G. A. Watson, of the Claybury Laboratory. He used *ricin*, which is a globulin obtained from the castor oil seeds and which is I believe the most poisonous vegetable substance known. He injected it into guinea pigs which were allowed to breed. The immediate offspring of these guinea pigs were immune to 1,000 lethal doses of ricin. Analogically one may reason that there is something similarly transmitted in regard to alcohol or any other poison, and if anything can be done to modify the self-poisoning which occurs when people drink to excess, it must of necessity have a good influence upon the descendants. I think in this respect that the poor often drink to get the effects of a good meal. They mistake the feeling of stimulation after alcohol for the feeling of nutrition.

10815. It gives them a sense of having a good meal ?—Yes. It gives them the sense of having had a good meal, but a good meal is expensive to obtain. It is also more difficult to prepare, it gives more trouble to select, to cook and to serve. The poor do not like trouble any more than the rich, although I think that the rich drink from quite other reasons, and the one which seems to me chief is the æsthetic reason. They drink for artistic effects, drink for them makes a good meal a better meal. I think that women are greatly responsible among the poorer classes for the excessive drinking among working class men, and it is an interesting fact that of the women who were admitted into Claybury during 1903 suffering from the insanity of drink, no less than 80 per cent. were married, and many had families dependent upon them; also, a large number, 36 per cent., when the birthplace could be ascertained, were country born. I feel very strongly indeed that the circumstances attending town life weakens the physique and the self-restraint of people who live in the slums.

10816. You have no evidence as to the age at which these women entered the town ?—I know the age at which they are admitted into the asylum, and I have found this to be mainly between twenty-five and thirty-five among the women, and thirty-five to forty among the men.

10817. Do you know the age at which they entered the towns ?—I have no statistics on that point.

10818. Do you think that the effect of town life upon adults is to reduce their power of self-restraint ?—Town life induces artificial desires, and there is less force from public opinion upon the individual in towns than there is in the country; moreover, the life of many women in the towns is a dull and monotonous indoor one and woman reacts sooner to the evil effects of drink. I can speak from actual experience of some of my own country men and women who have come to London. In Wales they attend their little conventicle, and at first in London they attend a Welsh chapel. Gradually this is given up, the husband finds the effect of stimulant an agreeable one, and one which dulls his sense of mental pain. He goes into the public house, but his wife at first remains outside, eventually she joins him inside and this is the commencement of a down grade course. *Dr. Jones.*

10819. They are not traceable by their friends and relations, and, therefore, they do not care ?—The weight of public opinion does not act upon them as it did before, and they become indifferent. Of course the quest of pleasure is more acute in town than it is in the country, and it is also easier for them to get drink as there are more public houses open to them.

10820. And drink is an important element in the pursuit of pleasure ?—It enables them to gratify that want. The feeling for a time after drink is one of well-being and exaltation, and no doubt it is a pleasurable one.

10821. I suppose the life of pleasure seeking is a very exhausting one, and leads to recourse to stimulants ?—Yes. Pleasure becomes a want in the towns and there is a consequent enervation as a reaction to pleasure which certainly leads to the taking of stimulants. This further results in the neglect of the family and the home. I have frequently been struck with the ill-nourished condition and the ill-clad look of the children of parents suffering from alcoholic insanity. These are general impressions and I am aware that many of these facts are not definitely measurable and cannot be put into statistics.

10822. That is an index of the class from which the patients come ?—And also the condition they get into. They themselves and their offspring are feeble, attenuated, and in poor general health and condition.

10823. Do you think there is a serious increase of alcoholic insanity in women ?—I think it is distinctly on the increase. My experience of a quarter of a century ago leads me to believe very strongly indeed that insanity from drink in women is much more marked than it used to be. There is a physical condition which makes it easy to diagnose—they suffer from peripheral paralysis much more commonly than men. My experience is that these local forms of motor paralysis are much more common now in women than they used to be.

10824. (*Dr. Tatham.*) Do you mean peripheral neuritis? —Yes.

10825. (*Chairman.*) To what do you attribute the increase of alcoholism in women ?—It is very difficult to say, but my impression is that grocers' licences have had something to do with it. They can get drink in their homes which they could not otherwise get without going to public houses.

10826. You think, to some extent, it is due to the strain upon their physique of factory employment ?—Yes.

10827. You adduce certain facts in Nottingham which seem to bear out that view ?—Yes. With regard to factory work, I have taken the employment of many of these women under my own care. They are box makers, envelope makers, feather curlers, French polishers, factory hands, leather stitchers, packers, weavers, etc. Those are largely factory hands, and 37 per cent. of the women admitted were single. The factory girls have more pocket money to spend when they begin to work; they have little to occupy their mind in a rational manner. They often live in apartments when single, and have no time to prepare food, or knowledge to guide them. When married they arrange to have no children—that is very often the case. It struck me very much how infertile the patients in Claybury are, compared with the general population.

10828. By design or accident ?—It is difficult to say which, but I believe that design has a good deal to do with it.

10829. Do they take drugs ?—No. I think the temptation to be without children is a selfish and a financial one, and the means openly advertised in many shop windows in London to ensure this must appeal to them. The man earns money, the wife earns a little, and together they are able to keep themselves fairly comfortably.

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The women without encumbrance are able to accompany their husbands in their pleasures, when drinking is the principal occupation of their leisure. Dr. Arthur Shadwell recently presented some interesting statistics in regard to this aspect of national degeneration. Some time ago he also investigated the Scandinavian system of licensing.

10830. Is that referred to here?—No, I do not refer to it.

10831. (*Colonel Fox.*) You mean the Gothenberg system of licensing?—Yes.

10832. (*Chairman.*) In Nottingham there is a good deal of alcoholic insanity?—Yes. I take these statistics from the Blue-book of the Lunacy Commissioners' Report, and they indicate what are the statistics of asylums generally. It struck me very much that the same condition of factory life obtain in Nottingham. There is more insanity from drink, which corresponds to the higher average of Claybury, which is the territorial asylum for the East End of London.

10833. You note a very high proportion in an asylum near Glasgow—there is a good deal of factory labour there?—Yes, but all statistics are controlled to some extent by the personal element. The experience in both these localities where there is women labour corresponds to my own.

10834. That factory labour does tend to alcoholism and to insanity as the result of it?—Yes. Their life is more assimilated to that of men, and they take their pleasures and their entertainments in the same way.

10835. And perhaps their organisations are not so strong, and therefore they suffer more?—Quite so, as may be noticed in the rural districts of Kent and Cornwall, where life is simpler, where also there is less excitement, and where there is no lowered physique from excessive drinking.

10836. Where there is much less lunacy?—From drink, yes.

10837. Then you refer to the loss to the community through alcohol?—Yes. I regard alcohol as perverting the moral nature. There is no doubt to my mind that that is so, that it affects the higher states of consciousness, attention, judgment, and discrimination, and it certainly affects the memory.

10838. And it enfeebles the will, I suppose?—Yes, it enfeebles the will. The impairment of memory makes it very difficult for these people to look after their children if they have any, and there is no doubt the children are very much neglected.

10839. It must be a great loss to their employers also?—Yes. With regard to skilled craftsmen, I have noted the occupation of a few under my care. They are mathematical instrument makers, turners; carpenters, joiners, draughtsmen, barometer makers, tailors, watchmakers, printers, file cutters—these men are unable to do any fine work afterwards. They probably sink to a lower grade. They have lost their special skill owing to the affinity there is on the part of alcohol for the highest developed motor aptitudes in the nervous system.

10840. Are they specially addicted to alcohol?—No, but alcohol affects them much more than it would an unskilled craftsman or unskilled mechanician.

10841. It affects the higher class of workman more than it does the lower?—Quite so. With regard to the effects of alcohol upon the descendants, I think I have covered that. There is no doubt in my mind there is a transmitted structural defect through alcohol.

10842. You think there is no chance of recovery in the child? Does it transmit the taint to a third generation?—No, I do not think that. I very strongly believe in the influence of environment, and I have interested myself very much in Dr. Barnardo's Home, which is close to Claybury. There are 1,000 girls there in the village colony and I may quote this from Dr. Barnardo: "My general experience tends to impress this one particular line of thought upon me—I have referred to it elsewhere—that apparently where drinking had begun with the parents of a child prior to its birth, where such drinking had become habitual and had been long continued, the effects seen in many ways on the child's organism were not necessarily permanent. But if the child is placed early enough in a healthy environment, the inherited evil tendencies and effects appear to diminish year by year. Where, however, drinking began two or three generations ago, say with the grandparent or great-grandparent, so that the child inherited a tendency to deterioration as the result of two or three generations, then the evils manifested were much more permanent, powerful and much more deteriorating."

10843. What age would be sufficient to give the child a chance of recovering?—From my own experience I have examined cases as they came in at seven years of age, and I have been surprised to see so many of those children with enlarged glands and with discharges from the ear; some were unable to wear shoes and slippers owing to chilblains; others had narrow deformed palates. The same children were kept till fourteen years of age and the results were marvellous. I was quite unprepared for them. I know the results of heredity, and how you can very often tell the relations of the patients when these visit the asylum without being previously informed of this from their great resemblance to each other, and although I am a great believer in heredity, yet I cannot help believing more in the great influence of environment

10844. The period you mention is more or less coincident with the entry of children into school and, therefore, would be a very favourable time for taking stock of the rising generation, and from that point of view you would strongly approve of the medical inspection of schools, so that children of this debilitated type might be got hold of and some effort made to improve their environment?—Precisely so, and I have been greatly struck with the value of the data furnished by Drs. Matthew Hay and Leslie M'Kenzie, whose investigations in this direction formed the basis, if I may say so, of the conclusions of the Physical Training (Scotland) Commission—a most valuable work.

10845. You attach great value to a system of anthropometric survey?—The greatest possible value. There are practically no statistics of this nature to work upon at the present time, and the need for such a basis is a great want.

10846. You think that is so?—Yes, but I do not think that teachers are the proper persons to carry out these investigations, although this has been suggested, for the details are extensive and they imply accurate measurements and much comparison.

10847. If they are employed to any extent it should be under the most careful medical supervision?—Certainly under special supervision. I do not think, for instance, that a medical man engaged in his own private practice could do it. He has not the time. I also believe it better not to give it to a great number of men, such as, for convenience, medical men who live in the proximity of the schools. The person appointed should devote himself entirely to the work, and if he had one, two, three, or four inspectors under him, these could do the work in a very large town and could collate the information obtained if specially qualified and with the least possible error from the personal equation.

10848. Who are specially selected for the task and who will devote their whole time to it?—Yes.

10849. But you think the results of such an investigation, properly conducted, would be invaluable?—I think they would be invaluable, and this is not my own opinion, but that of all who have taken an interest in the subject of deterioration. I should like now with your permission to answer a question in regard to phthisis, put by the chairman to Mr. Eccles, but only in so far as this pertains to asylums. Dr. Tatham is fully conversant with some statistics collected and published by the medico-psychological association with regard to the prevalence of phthisis in asylums for the insane. These pointed out that there is a good deal of this preventable disease in asylums, and that the ratio of phthisis deaths to total deaths is higher in asylums than it is in the general population.

10850. (*Dr. Tatham.*) Cases to deaths?—No. Deaths from phthisis to total deaths from all causes. In the general population the proportion of tubercular deaths to the total deaths is 10·40 per cent. In the asylums of England and Wales generally for 1902 it was 17 per cent., but the ordinary mortality in asylums is much higher than in the general population, and so the total deaths from phthisis would also be much higher, I believe it is ten times higher, but the relative proportion of deaths

from phthisis to total deaths in asylums is really not so high as is generally believed. In 1903 at Claybury this proportion of phthisis deaths to total deaths was very low, only 11 per cent. as compared with 10·40 in the general population, and some have come into the asylum with phthisis which healed there.

10851. You think it is only a small difference ?—I think it is smaller than anticipated, but cases of phthisis in asylums occur to a great extent from among those patients suffering from the varieties of alcoholic insanity, such as forms of melancholia and dementia. Of the male deaths from phthisis at Claybury in 1903, 44 per cent. were from drink cases. Of the females 33 per cent. were drink cases, and in the total cases of phthisis deaths, there was a heredity of drink. Phthisis or insanity in 56 per cent. With regard to deaths from intemperance, although there is a less total amount of drink consumed in this country now than of late years the deaths certified through intemperance as published in the mortality statistics have increased considerably. Since 1877, more especially, is this the case among women and I believe by over 40 per cent. among men and over 100 per cent. among women.

10852. The great difficulty we have to encounter as you will probably know is that it is difficult to get medical men generally to certify intemperance as the cause of death. I need not go into particulars as to why that is ; as a medical man you know how difficult that is. Therefore the statistics with regard to the mortality from intemperance at any rate are most untrustworthy ?—Quite so.

10853. It is therefore from statistics such as you are presenting to the Committee that we hope to get much more useful information than from the mortality statistics ?—Precisely, and a great part of the consumptive death rate is from cases of alcoholic insanity—a rate among this class which is much higher than among the general population.

10854. And amongst this particular class of patients do you think tuberculous phthisis is increasing ?—It is very high. It is very much higher among alcoholic cases than any other form of insanity ; I am sure of that.

10855. And alcoholic cases of phthisis I suppose are much less amenable to treatment than phthisis occurring in other persons ?—They are much less amenable to treatment.

10856. Then again as regards phthisis among general paralytics, is it notably more prevalent amongst them than among the general population ?—Much higher than among the general population. During the demented stage such patients are very liable to all forms of lung trouble, bronchitis, pneumonia, gangrene, and so on.

10857. I understood you to say that many of your patients go into the asylums actually suffering from phthisis ?—Some do.

10858. Which has been contracted outside ?—Yes.

10859. With regard to the relation of syphilis to general paralysis, do you think it more generally follows the acquired form of disease or the hereditary form ?—Much more the acquired. Juvenile general paralysis due probably to hereditary syphilis is comparatively rare and was not diagnosed until some few years ago.

10860. Do you think that whether or not a case of syphilis has been properly treated will determine whether or not general paralysis will follow ?—I am afraid that is the view, that if syphilis has been properly treated it is something beside syphilis ; it is really the result of the syphilis but it does not yield to ordinary anti-syphilitic treatment.

10861. It is syphilis plus something else ?—Yes, plus some toxin; it is para-syphilitic rather than syphilitic. I think possibly the toxin may predispose and that stress of some kind may bring on general paralysis, more likely of course in the person who has acquired syphilis.

10862. It has been stated that amongst several of the coloured races where syphilis is very common, general paralysis is by no means common, but is rare ; can you explain why that should be so ?—I should be rather inclined to question that statement, judging from Dr. Warnock s statistics of the Cairo asylum, where he has to treat Nubians and people like that ; he appears to state that it is not at all uncommon among the black races of the Soudan.

10863. With regard to alcoholic insanity among women is that always fatal or does it yield to treatment ?—In many cases it yields to treatment and the patients get well and go out again. I think there is no poison like alcohol for devitalising the nervous system. There is a something lost ; they have not the same inhibition, the same self-restraint afterwards. It is a very common form of recurrent insanity.

10864. With regard to the effect of either or both the parents being alcoholic in producing imbeciles and epileptics, will you kindly give us what you have to say upon that?—I was formerly medical officer at Earlswood Asylum, where imbeciles and epileptics and mentally deficient children were received. My experience leads me to think that the condition of imbecility is a somewhat complex one. I should not like to say very definitely that drink in either parent would cause imbecility. There is no doubt that it devitalises the parent, and anything which devitalises the parent does tend to affect the offspring. But I think it has been very well summarised on page 21 of the appended report by Dr. Shuttleworth and I agree with his remarks : "That intemperance *per se* is not so large a factor as has been sometimes assumed in the causation of congenital mental defect ; but that in combination with other heritable taints (*e.g.*, tuberculosis, neurotic, insane, and syphilitic), alcoholism is a prevalent though not altogether predominant cause of idiocy, imbecility, and feeble-mindedness." I think that is very temperate and as near as one can go. I agree that intemperance on the part of the mother appears to be more commonly assigned as a cause of imbecility than intemperance on the part of the father.

10865. With regard to epilepsy ?—As to the fact that alcohol does cause epilepsy, not in children but I mean in adults, I have had repeated examples of cabmen who have lost their licence through drink and become insane, and have come into the asylum where no drink is given, and have recovered and have gone out. So long as they keep from drink they are all right, but as soon as they take drink, epilepsy comes on and they return to the asylum. It is not an infrequent experience that alcohol is a very definite cause of epilepsy. Alcohol does cause grave pathological conditions in the nervous system, and epilepsy is merely an outcome of them, an expression of them.

10866. With regard to nervous instability; you have mentioned the effect of either or both of the parents being alcoholic in producing that ?—Yes, neurotic, thin, and ill-nourished children. That is very marked when the children of these people visit them at the asylum.

10867. (*Colonel Onslow.*) Is lunacy on the increase among the poulation ?—I think there is a disposition on the part of the Lunacy Commissioners to deny that, but I cannot help feeling myself—and I have been in very close touch with lunacy for twenty-five years—that lunacy is on the increase. It is not exactly an impression —I feel very strongly that it is so.

10868. Is it the fact that cases are now certified which twenty or thirty years ago would not have been certified ? —There is no doubt that there is more registrable lunacy now than there used to be, but I do not think that is quite a guide. I think the guide is mostly from the practice of alienists that there is more neurosis, there are more cases on the border line of insanity that really do not become registrable insanity unless there is something to precipitate it. There is far more neurosis generally in the practice of alienists than there was, and a larger proportion of cases which exhibit what is called "psychic trouble," cases which are really outside statistics, but which are evidenced more especially at the physiological crises such as puberty, childbirth and even the onset of the climacteric period in both men and women. These so-called "periods" cause many of these unstable and nervous people to be stranded. More, I think than ever occurred before in past years. Moreover, I think statistics show that there are more first cases of insanity, not recurring cases but first cases.

10869. I suppose that in addition to that insanity brought on by drink in some form would also show a tendency to be on the increase ?—Undoubtedly.

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10870. In reference to your remarks about soldiers and sailors, I have no information at all about the Army, but with regard to the Navy the number of cases treated for alcoholism, nervous diseases, mental diseases, and so on, are very small; therefore I was surprised to gather that you thought they were considerable?—I have referred to a certain form of incurable insanity, viz., general paralysis of the insane, as showing an exceedingly high percentage in both soldiers and sailors, and I have associated the special cause of this disease, viz., syphilis, with the loss of self-restraint caused by alcohol When referring to sailors I referred to all marines.

10871. You do not mean the actual Royal Navy?—No, but I have quoted the statistics of the Yarmouth Royal Naval Lunatic Hospital as given in the report for 1903 of the Lunacy Commissioners to the Lord Chancellor as supporting my statement in regard to this special form of insanity.

10872. The admissions to the Royal Naval Hospital Yarmouth are not confined to the active list by any means?—I suppose not.

10873. There were only 165 patients in one year altogether—that is 1902, the last report; there were 172 in 1901; and 183 in 1900. That is going down. Then, again, take these cases of alcoholism—the number of cases, the number invalided, and the numbers of those who died in the Royal Navy; the average strength has varied from 99,000 to 120,000 altogether on the whole Navy, and the numbers have been from alcoholism, in 1900, ninety-two cases; in 1901, eighty cases; and in 1902, seventy-seven cases; numbers invalided, in 1900, two; in 1901, none; and in 1902 none. Numbers who have died, in 1900, four; in 1901, two; and in 1902, one. —That seems a very small number?—I do not think that you can take the statistics of this hospital as a reflection of the total illness that occurs in the Royal Navy. Moreover, the statistics of the Royal Naval Lunatic Hospital in respect to lunacy would probably be below what actually occurs, as all cases of occurring insanity would not be sent there, but some would be sent direct to the county or borough asylum of the particular parish to which, when the settlement has been accepted, the patient would be chargeable.

10874. I was really referring more to the effect of alcoholism on men as producing mental diseases?—Are those lunacy statistics?

10875. No, these are simply the Medical Registrar General's Annual Report of the different diseases treated in all ships and hospitals of the Royal Navy during those years. The numbers there appear to be so small that when I read that account of yours I looked these figures up. Now, if you will turn to the nervous diseases just below, you will see the numbers are in 1900, 867; in 1901, 846; and in 1902, 881; mental cases, 147, 140, and 155. Taking the diseases, syphilis, primary and secondary, and gonorrhœa, we have the following figures:—first, taking primary and secondary syphilis together, we have in 1900, 5,543; in 1901, 5,403; and in 1902, 5,530. Those are cases?—It is fairly constant.

10876. Out of those there were 168, 165, and 167 invalided, and three, four, and two died. Then from gonorrhœa, 5,597, 5,790, and 5,951; invalided, fifty-one, fifty-four, and fifty-three?—It is very constant. These are gradual rises—158, 165, and 167.

10877. The total strength has gone up from 99,000 to 127,000, and these refer to all classes—officers and everyone?—Yes; but it is significant that at the Royal Naval Lunatic Hospital at Yarmouth, of the deaths that occur, there is a higher percentage, viz., 40 per cent., due to general paralysis than occurs in any asylum in the country; that is, of the form of insanity which is at present incurable and absolutely irrecoverable. There is also an exceedingly high percentage, 16 per cent., of cases of general paralysis among those actually in residence and under treatment.

10878. These particular cases, alcoholism, syphilitic diseases, and nervous diseases, would all point rather to the theory that alcoholism and mental defects had a great deal to do with each other?—Yes, they certainly have a very intimate relation to each other and a very high percentage of insanity is due to alcoholism. The statistics you have quoted show that alcoholism itself is a fairly constant factor.

10879. It is rather on the wane than otherwise, on the whole?—It may be so in the Navy, but the two services show a very high percentage of general paralysis and especially is this the case among sailors generally.

10880. (*Colonel Fox.*) You have said that the excess of alcohol drinking, especially when the stomach is empty, is one of the main causes of both physical and mental degeneration amongst the lower classes?—I say that the chronic form of indigestion due to drink is a very common element, I should say the most common cause of mal-nutrition among beer drinkers.

10881. It is one of the causes of both physical and mental degeneration in the lower classes?—Certainly, I believe so.

10882. Can you suggest any practical remedy for that?—I think to a great extent you can make men and women sober by Act of Parliament, and legal enactments to some extent will do this, but you may carry restrictive legislation too far, and thus encourage clandestine traffic in drink. The Chairman referred to the notification of contagious disease, you may by notifying defeat your object.

10883. I was speaking more of drink?—I think the same applies to drink. The main point lies in education, especially the education of women, who should be taught how to choose and cook proper food. If the poorer classes were better and sounder fed there would be less drinking. Education might also include a fuller knowledge of alcohol, and that it is not a food. The food question is certainly to my mind very important. I have visited places in remote country districts as well as in congested metropolitan areas, and I have seen provision shops retailing tinned rabbits, tinned fish, tinned vegetables, tinned milk and even tinned "madeira" and other cakes, most of which could be served fresh and clean locally by the house-wives. However good tinned food may be from certain places, it is not of the very best quality for the poor, it is often prepared from poor material, under insanitary conditions and is most often sophisticated with chemicals, which, if not deleterious in small quantities, have certainly been found injurious when long continued.

10884. Do you not think that the working classes are driven to drink owing to their being no other places of attraction for them but public houses where nothing else is sold but alcohol?—I am perfectly sure that many of the working classes go to public houses to get their comforts in the way of light and warmth, and to enjoy a club life, and they would not be induced to drink to excess if proper food were sold to them with drinks.

10885. With varied drinks?—Yes, such an arrangement would greatly tend to modify the evil from alcoholic drinking.

10886. Where they could get beer, coffee, cocoa, and so on—not to draw a line at any particular thing?—Precisely so.

10887. Would not that have the effect of making them much more sober, and start that fashion among them?—Such opportunities would have a very great effect in this way. I believe an out-door life to be a condition favourable to temperance, such as is obtained by athletic and other clubs. I also think the bicycle has had a very beneficial effect this way. It would be a great thing to set the fashion so as to help the people to acquire modified tastes in eating and drinking.

10888. (*Chairman.*) You want the restaurant to supersede the public house?—Quite so.

10889. (*Colonel Fox.*) Going away from the question of alcohol, and turning to the question of the feeding of infants, Mrs. Greenwood, who is one of the lady sanitary inspectors at Sheffield, when giving evidence before the Committee, said that a very large proportion of mothers in that town suckled their children. I see in a lecture which you gave a short time ago on physical and mental degeneration you quoted a statement made by a Sheffield medical officer in which he said that in that town only one in eight of the infants is brought up at the breast. Are you satisfied that that is actually the case, because it was rather disputed when Mrs. Greenwood gave her evidence?—Since I came into this room and you have shown me the special paragraph referring to this, a doubt appears to be thrown upon the statistics I quoted. They are not my own figures and they were made upon the authority of a medical observer. They had not been disputed to

my knowledge and I had taken no personal steps to verify them. I certainly think there is a disposition among certain communities, and statistics support these figures, more especially among those engaged in textile industries to evade the proper duties of motherhood.

10890. (*Chairman.*) It was suggested that that discrepancy might be reconciled by the fact that different periods after childbirth were taken as the basis of the investigations. Mrs. Greenwood's figures might have been on facts collected two or three months afterwards, whereas yours might have been on statistics collected five or six months afterwards ?—The statistics I quoted were asquiesced in at the time, although there were present at my lecture those who were in a position to question their accuracy.

10891. Am I to gather from what you said that you are not quite so satisfied in your own mind of the expediency of making syphilis a notifiable disease as Mr. Eccles was ?—I am not quite so emphatic upon the value of the recommendation, and I think it behoves me to be very careful in urging such a course. Syphilis is a foul and loathsome disease ; it implies a breach of the moral laws, it is indicative of a weakened self-restraint and public knowledge of such a disease will cause shame and reproach. The victim of such a disease, if the fact were known to his employers, would probably lose his vocation, and for fear of such consequences he will refrain from coming under treatment, or will consult quacks, who are unable to give him proper treatment, but will preserve silence and take his money. In consequence of this neglect of treatment the ravages of syphilis will probably work more havoc than they have ever done before and the victim may communicate the disease in a malignant form to innocent persons.

10892. Do you not think that the consideration which you expressed or rather hinted at would act as a most powerful deterrent—that he might lose his employment and so on if he announces the fact that he had a disease of that character ?—I think it might certainly prevent his coming under treatment, which is important to consider. I am not in favour of Lock Hospitals for dealing with these special cases. I should very much prefer that every general hospital should deal with these cases.

10893. We have been told there is very inadequate hospital accommodation for such class of cases ?—The great majority of such cases are out-patient cases who come to the hospitals for medicine and applications.

10894. We have been told so by everybody who has spoken on the subject—Sir Victor Horsley and Sir Alfred Cooper among others ?—My opinion is that any special accommodation which such cases may require should be provided for by general hospitals and I think could be, for some hospitals do it. Those who attend at a particular hospital for this purpose do it more or less clandestinely, and they have to be very careful for the reasons I have already advanced, but they can go to a general hospital without such fear of the consequences.

10895. I think they said the accommodation at large hospitals was inadequate ?—That was the opinion expressed by the Conference of Medical Men in Brussels some time ago—that it was important that there should be every opportunity for treating syphilis and that medical officers should make it known that even after a workman has come home from his work he should be able to be treated in the general hospitals, and not as now between certain hours.

10896. You do not deprecate its being made a notifiable disease, but your mind is not quite made up ?—I am not so emphatic as to the advantages as Mr. Eccles is.

10897. With a view to making mothers understand the nurture of children, and household management, do you think the attendance of girls at continuation schools, with special regard to such subjects, between the age of leaving school and seventeen, would be a useful thing ?—I think it would be most useful. I think this a very important and necessary part of their education. If you educate girls at this age it is a period in which they will take most interest in the subject, but I think the technical training now given is above them. They should be taught what to do with the after-joint, *e.g.*, bones, scraps, and such like. At present many of the poor have not acquired the taste for soup. They want to have the fashion set in it, so to speak, and be taught how to make savoury and palatable food with the remains of a meal, and with different vegetables. They are not resourceful as to food, and they do not know the qualities of food. This is the proper age to teach them how to bring up their young, for they could apply their teaching to younger members of the home circle. It is surprising how forgetful children are. In some districts in Suffolk when the boys who had reached the required standard were withdrawn from school before they were fourteen, they were found unable to read at eighteen. The training as to domestic work is not to be done at school, but after school.

10898. The ground work might be laid at school, but the superstructure must be built in later life ?—Quite so.

10899. Do you think it would be imposing too heavy a burden upon the constitution of factory workers to require them to attend two hours a week ? I think could be made so interesting that it might be a pleasure to them.

10900. It might prove recreative ?—Yes.

10901. Then with regard to the increase of insanity, which Colonel Onslow asked you about : you are inclined to argue that insanity is increasing because of what you hold to be the increase of those nervous conditions which place people upon the border line of insanity ?—I think that is so.

10902. You said there were more cases which came under observation ?—Yes, I think there is more general deterioration. That is my firm impression.

10903. Would not the fact of these neurotic coming under observation and under treatment tend to prevent their becoming insane, and to that extent arrest the progress of lunacy ?—Do you suggest any special way of dealing with them other than the present ?

10904. No, but the mere fact of their coming under treatment would tend to arrest the development of their neurotic malady in the direction of lunacy, would it not ?—Yes. This is quite true and an important factor, which has lately been realised more fully than before, as it is in the early or incipient stage of insanity that the disease is most amenable to treatment, I think this is of great weight, as the prevention of insanity is on all issues more important than its cure. Several of the metropolitan hospitals have established special departments, presided over by physicians experienced in mental diseases, where such persons can go for advice as to the ordering of their lives and to practice such precautionary measures as are suggested to prevent the occurrence of insanity. Some public asylums in some of the counties, notably that under Dr. Bevan Lewis, of the West Riding Asylum, give advice and medicines free to those threatened with an attack of mental breakdown.

10905. If that system were generally adopted it would tend to arrest causes of insanity ?—I think it would both directly by the treatment of individual cases and also indirectly by calling more attention to the subject.

10906. Is not the supposed increase of insanity to some extent a statistical increase ? A great number of cases are dealt with and are cured, and then after a time re-admitted, so that the re-admissions of the same cases appear in the statistics as if they were fresh cases ?—My answer to that is that there is more first-case insanity than there has been.

10907. There have been a great many cases treated as first cases which are merely renewed attacks, have there not ?—I believe this error to be quite the exception. Of course when nothing is known of a person who is alleged to be a lunatic, and he is brought into the asylum, it may be that for a time he is looked upon as a first case, but probably before long information is forthcoming as to his antecedents, and this would be properly incorporated in the annual returns. Even in London with so many foreigners there are not many whose antecedents do not eventually come to light in this respect or the person be able himself to give this information. Moreover, the statistics of all asylums divide their cases into first, second, or third attack, and when this is unknown it is so stated.

10908. Are they not all classed as admissions in the general statistics ?—Yes, as general admissions, but there is this further sub-division, which, when the statistics of all asylums are published in the report of the Com-

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missioners to the Lord Chancellor, enables the information to be given as to the increase or not in first cases.

10909. You can divide them?—Yes.

10910. The general result of your evidence is that the abuse of alcoholic stimulants is one of the most operative causes of physical degeneration generally?—Yes. There is no poison that I know which is capable of inducing—either by alcohol directly or indirectly by un-excreted products—so much arterio-sclerosis, fibroid changes in the organs, and premature senility. By education you might get public opinion to look upon drunkenness more as a vice and a disgrace among the working classes—they should have a black list of their own, so to speak. Now a drunken man is really an object of hilarity and mirth and not a disgrace. If a healthy "public opinion" among the lower classes could be encouraged, as among the middle classes where the effect of social ostracism is more felt, it would help to cultivate a greater inhibition in regard to alcohol. There is certainly less alcoholic insanity recorded among the private class than there is among the poorer classes. Alcohol as a cause of insanity in the former is given as 18·5 per cent. for males, and 8·8 for females, as against the higher figures already quoted among the poor, and there is a less sacrifice of ultimate good for immediate gratification in the better educated. If it could be inculcated that the use of alcohol was a dangerous thing and an improper thing, and if a proper public opinion could be formed among the lower classes it would be certainly operative towards temperance.

10911. (*Dr. Tatham.*) With regard to preventive measures as exercised by the State on the population, are you in agreement with the general opinion expressed at the Brussels Conference that it is not desirable to extend the Contagious Diseases Act to the population?—When in operation in garrison towns the Act was not a success; many reasons are given for this which it is not expedient that I should repeat here. Moreover, the recognition of vice as a necessity would be strongly opposed from many quarters. I do not think repressive measures in regard to this question are practical, and I prefer to encourage what is possible, viz., a better knowledge in regard to the injurious agencies upon the individual and a cultivation of higher ideals, with an appeal to reason, self-restraint, and self-respect.

10912. Can you imagine any improved system which would be effective really in reducing the amount of syphilis amongst the population?—If syphilis were notified it might work in this way, but I think it would prevent those affected by it from risking the penalty of publicity by coming under treatment. Even if you notified you could not prevent the conveying of contagion to another, and in any case such an allegation could neither be proved nor disproved. Prevention has not succeeded in those countries where it is made a notifiable disease.

10913. (*Chairman.*) Surely if they had to notify, there would be a penalty for neglect which they would hesitate to incur?—If they refused to be treated through the fear of notification they would certainly spread the disease. You would also probably have a great class of quacks ready to levy mail upon the victims of secret diseases. It is a very large question, and I am not prepared to make an emphatic recommendation in regard to notifying.

10914. (*Dr. Tatham.*) Can you conceive any possible arrangement under which you might bring at any rate under observation those persons who are the subject of syphilis?—Only if you made it possible that the person affected could be treated either by his own medical attendant or by any doctor whatsoever free of charge, but payment from the public purse would of necessity involve publication. I think that every general hospital should be free for the treatment of this disease at any time the sufferer can attend. I am for encouraging early treatment, and I believe if you make it a notifiable disease you run a very considerable risk of preventing the victims from coming under treatment at all.

Sir CHARLES A. CAMERON, C.B., M.D., F.R.C.S.I., called; and Examined.

Sir C. Cameron.

10915. (*Chairman.*) You have been Medical Officer of Health to Dublin for a considerable period, have you not?—Yes, for more than thirty years—a long time.

10916. And you have given a good deal of attention to the conditions that prevail among the population?—I have, and generally on the subject of sociology.

10917. And you have come to the conclusion that there is evidence of some deterioration in the physique of the population?—Yes, I believe that the physique of the population, taken as a whole, has undergone deterioration.

10918. Mainly owing to one cause?—Nearly all to that cause.

10919. Is it the aggregation of such a large number of people in the towns?—To the enormous increase, nearly a quarter of a million, every year added to the urban population, of England and Wales at least, and to the agricultural population either declining or remaining stationary.

10920. When you come to give those figures as to the shifting of the population and you mention the population of London has increased from 800,000 inhabitants in 1801 to nearly 7,000,000 in 1901; but that 6,000,000 or 7,000,000 is Greater London, which includes such healthy places as Wimbledon and Hampstead?—Yes.

10921. But there are no two healthier parts than are to be found in Wimbledon and Hampstead, both of which are included in your area, and, *ex hypothesi*, are condemned as unhealthy?—I mean as to the concentration of population.

10922. But you must make very considerable deductions from any general conclusions from that transfer of population?—Yes, and I also acknowledge that in the outer ring there is a very large proportion of the population well-to-do, and they have every comfort and plenty of food, and good houses and live well.

10923. And that is also the case with the suburban working class population to a large extent; it is not restricted to the suburban conditions of the better class, but also the conditions of the working class living in the suburbs?—Yes; making allowances for taking only the 4,000,000 of the more central parts, it shows that there is rather much more rapid increase in the suburban as compared with the rural population, in which practically there is no increase.

10924. But is it not the case that the death rate in London now is less than the death rate in the rural districts in the 18th century?—Oh, very much. I believe that there is an improvement in the physique even of the town population.

10925. But of course there has not been such a large transfer of the population of the country to the towns in Ireland, has there?—Not such a transfer of the population.

10926. You have only about four large towns in Ireland?—That is all. There are only two towns over the 100,000 inhabitants in Ireland.

10927. This diminution of the rural population may arise from other causes rather than the transfer from the country to the towns?—Yes, it may.

10928. Has not the increase of the population of Belfast been largely due to Scottish immigration?—To some extent—not very largely. The greater number of the inhabitants of Belfast are not Scotch. In fact it is a comparatively small number. They are recruited from the northern counties of Ireland. There is a rapid growth of Belfast; the population 100 years ago was not 40,000, and it has increased to nearly thirteen or fourteen times that in 100 years.

10929. What facts have you to lay before us as to the improvement in the physique of the town's people?—Well, I attribute it to improved water supply, improved systems of main drainage and sewerage, and to better conditions generally from a sanitary point of view of the towns.

10930. I suppose the more careful attention that is paid to the conditions of factory labour would be one of the causes, would it not?—I am speaking not with regard to Dublin, but generally speaking with regard to towns throughout the United Kingdom; there are certainly very marked improvements under which the conditions of various factories are carried on, and markedly so.

10931. And I suppose there has been some improvement in the condition of the housing, has there not?—Very considerable improvement.

10932. Though it leaves room for further improvement?—Yes. And there has been a thinning of the density of the population in most of the towns.

10933. Would you say as regards housing Dublin is worse or better situated than the average large towns in England?—No. I think that Dublin has not a much denser population than any other English town. I think it is less dense over the whole area.

10934. But are there parts of it very densely populated?—The old city part of the town would be something like 65 to the acre, which is not so dense a population.

10935. Are there any quarters in Dublin which would come under the designation of rookeries now?—Many. Dublin is to a very large extent a decayed city. There is hardly any city that I know of that is placed in exactly the same circumstances. In Belfast I think the average number of persons per house is not much more than about 5·5, but in the City of Dublin it is about 12 per house.

10936. How many rooms do you suppose there are in those houses?—The number of rooms in a very large number of tenement houses varies from six to twelve. The larger number of tenement houses in Dublin were occupied originally by a single family, and now many of those houses are occupied by eight, ten, or twelve families.

10937. How many rooms to each house?—The number of families in one room in Dublin would be a little over 37 per cent.

10938. You have not 37 per cent. occupying only one room?—Yes.

10939. How many in a family under those conditions?—The average in Dublin would be 4·3 or 4·4; take it in round numbers at 4½.

10940. In one room?—Yes.

10941. And 37 per cent. of the houses in Dublin are so occupied?—What I said was that the average number of persons per family in the city at large would be that. Perhaps there would not be quite so large an average where the 37 odd per cent. are occupying each a single room, because a certain number would have only one person or two persons. The very large families would have to take more than one room, though many of them up to ten in number occupy a single room. Some of the rooms are of an immense size.

10942. Do the council in Dublin attempt to fix any minimum at which houses are considered uninhabitable?—We have not fixed that, which I think we ought to have done, the number of families in a distinct house.

10943. Do you require any number of cubic feet?—Yes. The usual cubic space is 400 cubic feet for adults and 200 for children.

10944. Are you right there? Is not pure air more important for children than adults?—It was the same as the original 300 cubic feet per person; and now we have made it 400 cubic feet for each adult and 200 for a child.

10945. Is that a sensible distinction?—We found it impossible to ask for a large amount of space on account of the enormous number of families living in those houses.

10946. You shrunk from it because of the difficulty of exacting the observance of proper conditions?—It would be better if each individual had 400 cubic feet, undoubtedly.

10947. But you have not attempted to say that any single room should not be occupied by more than three or four people or anything of that sort?—There are rooms of the tenement houses as large as this room. The houses of the nobility—some of them I think larger, as far as I can judge many of them, than the houses of the corresponding periods in London. The houses of the nobility were of immense size, with five and six windows in extent, and the rooms are as large and even larger than this, and they are now occupied as tenement houses; for instance, the house where the Countess of Blessington wrote some of her novels, has about a dozen families in it; that is in Henrietta Street, and the houses in that street are of an enormous size, and are now all converted into tenement houses.

10948. Are the sanitary arrangements adequate for the occupants?—It is extremely difficult to provide proper sanitary arrangements in the case of a large house for one family being converted into a residence for a dozen families.

10949. Is any attempt made to do it?—We are attempting as far as possible to increase sanitary accommodation.

10950. Are the statutory powers in operation in Dublin on all fours with the Public Health Act which is operative here?—With the London Public Health Act?

10951. Is that Act in operation in Ireland?—It is not.

10952. You have a similar Act?—We have a Public Health Act, and the Dublin Corporation Act is to a certain extent ahead in sanitary matters and it contains some provisions which are not in the general Acts.

10953. Should you say that the public Health Acts which are in operation in Dublin exact the observance of similar precautions as the English Acts?—In the main they do; but there are some exceptions. For example under the English Public Health Act you can deal with the abuse of sanitary accommodation in a house where there are two or more families occupying the same sanitary accommodation, but there are houses in Dublin with twelve or fourteen families occupying each house, and if there is an abuse of the sanitary condition we cannot deal with the tenements, whereas if there were two small houses but having sanitary accommodation in common we hold them both responsible. We require to have powers to deal with that, and I have suggested over and over again that in an abuse of sanitary accommodation in any place where there was more than one family residing they should be held responsible.

10954. I suppose the conditions, such as you describe would be unfavourable to the health of the younger children?—Very. We have a very large mortality.

10955. In your memorandum you have not given us any figures as to the mortality of children under one year of age?—No.

10956. Do you know what the mortality of children in Dublin is, under one year?—Yes. The mortality of children under a year old for the last ten years has been slightly under the average of thirty-three English towns—thirty-two excluding London.

10957. What is it?—About 160 per 1,000.

10958. Not more than that?—No, I can say positively what it is in relation to English towns. It is not quite so good as London; but it is something better than the big towns excluding London.

10959. It was 160 in London in 1900?—Yes. It is frequently more than that in London.

10960. And 175 in Paris?—We never go up to 180. You may take it for the last ten years that the death-rate of the children in the Dublin metropolitan area is well below that of the average of the large English towns excluding London—decidedly below, and very little above that of London.

10961. But the fact that such a mortality exists, as you indicate here, among the children of the poor, suggests that a large proportion of the survivors are deficient?—They are undoubtedly. I think I mentioned here that last year the mortality of the children of labourers under five was 13·3 per 1,000 of the population of that class.

10962. It is 13·3 of the population in your memorandum?—Yes, as against 1·6 per 1,000 amongst the well-to-do class—an enormous difference. I believe that the children are not thoroughly fed. I find that their food is not only deficient in quality, but not sufficient in quantity.

10963. Have you any figures showing that there is more infant mortality in rooms that are occupied by the whole family than where the family is distributed in two or three rooms?—No.

10964. You are not so certain about the condition of the rural population, you do not feel absolutely certain that there is a deterioration with them?—No; but it is far below the figure that I have mentioned, it is very moderate. The rural death-rate in Ireland is a very moderate death-rate, it is lower than in England.

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10965. But still you are inclined to think that the physique of the rural population has diminished?—Well, if it has, it is very slight.

10966. But you do note certain changes in the dietary of the Irish peasant which is not favourable to the nurture of the children?—There is a remarkable change.

10967. You do not think it favourable?—I do not. I think that the substitution for food which used to be baked upon what are called griddles in Ireland, and in Scotland girdles, which is merely a sheet of iron, is not good. They take the bakers' bread and take tea, which is generally very inferior, very washy and boiled out, and everything taken out of it during the long time that it has been drawing, that constitutes the practice very largely throughout Ireland. In Dublin, amongst the children of the poorer classes, and partly amongst the children of the better classes too, they are nearly all fed upon bread and tea and very little animal food.

10968. We were told by one witness who came from Ireland that Indian meal had taken the place of porridge in the rural districts, at any rate in the West of Ireland?—Yes, but it is not liked.

10969. Is it merely taken because it is cheaper?—It is cheaper but it is not liked, and very often when farm labourers are offered it they resent it. There is less Indian meal used now than formerly.

10970. You think so?—I am certain of it.

10971. And then we were told that there was a kind of cake made of a combination of potato flour and Indian meal very largely used?—Yes, the better class of people take it, it is rather a favourite. It is a hot cake—a sticky kind of cake and it sticks to the palate. I have often eaten it myself.

10972. Is that a useful article of diet?—I cannot think that it is as useful as the ordinary cake. There is less nutriment in it. I do not approve of potato cake.

10973. Is there any attempt to instil into the Irish people a knowledge of the articles of food that are best suited to them?—There is very little attempt to do that. There is an attempt in the primary schools, especially those managed by the Roman Catholic sisters. In some of the Dublin schools they have kitchens in which they have cookery, and they show the best way of cooking things, and the most nutritious articles, having regard to price. But it has not been on a sufficiently large scale to be worth much.

10974. Does not that new department which is under Sir Horace Plunkett's supervision take it up?—Yes.

10975. Because it might be considered a very important branch of education; could they not give the young women and mothers some knowledge of the duties of housewifery?—I am sorry to say that in Dublin cookery amongst the working classes is at an extremely low ebb, you can hardly call it cookery at all. In the first place they have no means of baking articles. The vast majority in fact of the tenement houses only have a little fireplace and no oven, and no way of baking, and their food is very monotonous. They have nothing except cabbage and Swedish turnips, and they hardly ever use peas or beans, or celery, or any of those things, it is always cabbage. In fact for the Sunday dinner, very often, the meal consists of bacon and cabbage. I do not know any country in the world where so much bacon and cabbage is eaten.

10976. Bacon is not a bad food, is it?—Not at all. My idea is a physiological one, that the desire for fat bacon which is found all over Ireland—servants in the farmhouses would infinitely prefer it to beef steak or cutlets—is due to the fact that the potato contains no ready formed fat—it has something like ·2 per cent. as against 4·5 per cent. of fats in oatmeal; and therefore the dry potato destitute of ready formed fat naturally produces a desire to have a properly formed substitute, which is the fat of bacon, and that desire for bacon has become a kind of instinct now, as it was when the potato diet was almost the exclusive diet of the greater number of the people.

10977. The potato does not form a prominent part?—No, bread stuffs have increased enormously in Ireland. I remember a time in my youth when a farm labourer would take three meals of potatoes—potatoes for breakfast, potatoes for dinner, and potatoes for his evening meal.

10978. But that is all in favour of physical development, is it not?—Well, it was said that is was a deficient food, and that it was deficient in albuminoids, but as a matter of fact it is not deficient in albuminoids.

10979. But it is in fatty matter?—The experiments show that in the majority of foods used by the lower animals and which have an analagous composition to food taken by man, albuminoids are in excess instead of being deficient—there is not an excess of the carbohydrates and other fat-forming food. It is found that there is an accumulation of a larger percentage of carbohydrates stored up in the animals than of the albuminoids, showing that there is not a deficiency of the albuminoids. I think myself that the potato is a very fine article of food, especially when, as in the good old days, Cobden described the potato in one of his works as being floury and dry.

10980. Does fish enter largely into the food of the people?—Yes, and it is supplemented by milk and butter.

10981. Do they get much milk now?—They do. They use the separated milk a good deal.

10983. Is that of value?—It is very valuable except for young children.

10984. Do the children suffer from the absence of a proper milk supply in big towns?—I think that they do. In the city of Dublin I think that the children do not get sufficient milk.

10985. Are the Irish mothers unwilling or unable to suckle their own children?—The vast majority suckle their own children and many of them suckle them till they are over a year old.

10986. Is their milk of good enough quality?—I do not think that it is, and I am sorry to say that many of the women are taking a great deal of whisky and porter.

10987. That must be extremely deleterious to the child?—Yes, I remember as a boy a drunken woman would attract a crowd and be considered a *rara avis*, and now a large number of drunkards, nearly one-third, are women.

10988. And are they generally mothers?—They are generally mothers that are drunkards.

10989. Is it the care of the family that drives them to drink?—Yes, sometimes. I am sorry to say that there is a great deal of intemperance in Dublin.

10990. And do you say they live in advance of their wages?—Yes. Many of the working people in Dublin, by far the larger proportion of them, spend much of their wages in drink.

10991. Men and women?—Many of them do, the greater portion.

10992. But if, as you say, there is not much female labour how do the women get hold of independent resources on which to drink?—They drink the money given to them by their husbands for household purposes and deprive their children of it. There are constantly cases in the police courts where you find domestic affairs come up. The man is charged with beating his wife, and his excuse was "that she was drunk and she had no dinner for him the other day; a man said every article in his house was pawned."

10993. That is a great evil?—I should say the same thing prevails in English towns, but is on an alarming increase in Dublin.

10994. You give some facts as to the extent of pawning of clothes. Will you tell us about that?—It is a very common practice. A large proportion of the working classes, especially those engaged in trades, live in advance of their wages. I made an inquiry some years ago in reference to the procedure of pawning the clothes of the tradesmen and other workers. I ascertained that it was a common practice to pawn the man's clothes on Monday or Tuesday every week, and to redeem them the following Saturday night. Up to twelve o'clock on Saturday nights the pawn offices are crowded with females "releasing" (that is the word they use for redeeming) their own or relatives' clothes so that they may be able to wear them on Sunday. In one year 2,866,084 pawnbrokers' tickets were issued in Dublin to a population of less than a 250,000. The loans to which they referred amounted

to £547,453. I have gone myself into those places on a Saturday night and seen the struggle to get near the counter to get out the bundles of clothes, and I have seen over and over again the women bringing in on Mondays or Tuesdays clothes tied up in a handkerchief, or clothing of some kind, and the pawnbroker's assistant did not open them to see what was inside—it was the usual weekly customer, and he took the bundle of goods without looking at it, and gave the money—10s. or 15s., and sometimes £1, and that would go on until the clothes were not worth one-half the money.

10995. (*Colonel Fox.*) You know they take a month's interest for a day?—Yes, for an hour. In fact, for enabling them to live one week in advance of their income they have to pay a sum of several pounds in the year, and that is going on still at the present time in Dublin.

10996. (*Chairman.*) Having got into that way of living it is almost impossible to extricate themselves, is it not?—Yes, but even if some kind friends would give them money and say; "Do not pawn any more," they would simply spend more in drink. It would not go into keeping them out of the pawn shop.

10997. It is hopeless improvidence?—Yes.

10998. (*Colonel Fox.*) And the same thing exists amongst the English people?—Yes, I am sure that it does.

10999. It is a common thing to get them out on a Saturday night and put them in on Mondays?—It is to a very large extent in Dublin.

11000. (*Chairman.*) You have been concerned in a good many anthropometrical records on your own account?—That was some years ago.

11001. That was to establish some sort of comparison between the urban and rural population?—Yes. The most unfortunate thing happened to these weights and measures. I had an immense number which I took in the schools, and other places, and I intended to have published the records of the results some years ago; I kept on accumulating them, and unfortunately the book in which they were recorded, a good thick book, disappeared—was taken away, and I have searched in vain for it. I remember perfectly well weighing and measuring the boys in the Agricultural Institution of Glasnevin—a Government institution—and comparing their weights and heights with the town boys of the same age in the national schools, and there was a most decided difference in favour of the country boys.

11002. Did you find, yourself, the height and weight?—Yes.

11003. Not chest measurement?—No, merely height and weight. There were some thousands in fact.

11004. You mention some similar records that have been taken lately in the Royal Hibernian Elementary School, Phœnix Park?—Yes.

11005. Will you state the results?—I was asked some time ago to inquire into the sanitary condition of the Royal Hibernian Institution for the sons of soldiers, and I made inquiries. I am not going to refer to anything except the one point which is before this Committee, because my investigations were mainly with regard to other points in connection with the schools, the drainage, and the disposal of sewage and so on. But inquiring into the physique of the boys at different times, I found the records kept for a very long period of time as to the height and weight of the boys. I found for thirty years past the height and weight had been declining, and a little more than a year ago it had fallen by 0·8 of an inch as regards height, and 7·5 pounds as regards weight. That is the boys at the last, weighing 74·7 pounds, on the average, fourteen years being the age selected; and the former weight thirty years ago was eighty-three pounds; so the falling off was a very serious one as regards weight; and besides that, the whole of the conditions of the school had been improved; the diet has not fallen off.

11006. To what do you attribute it?—To hereditary causes, to the fathers of those boys not being as tall or as heavy as they were formerly.

11007. Do you think that they were drawn from a lower class?—I do. I believe if men and women are placed for a long period of time under unfavourable circumstances, as has been proved over and over again, there would be deterioration of physique and their children, then, will suffer corresponding deterioration.

11008. But what I want to get at is this. Is it the case that those children whose later measurements were recorded are, in all respects, a fair subject for comparison with the children whose measurements were recorded thirty years ago? May it not be as they were the sons of soldiers in both cases, that latterly the soldiers, themselves, have been drawn from an inferior class?—That is what I do mean.

11009. So that it does not imply a general deterioration so much as the fact that they are drawn from another class?—Not at all.

11010. That the soldier is recruited from a lower type of man than was the case thirty years ago; that is what you want to establish?—Yes. My theory is that the soldiers of modern times are recruited chiefly in the towns, whereas in the Peninsula War at the time my own father served, I have often heard him say that nearly all the men were countrymen.

11011. They are the wastrels of the big towns?—Yes, they are the wastrels of the big towns, and their children, therefore, will not be as vigorous as the children of a person who is brought up in the country, in the purer and better air of the country.

11012. You have some suggestion to make as to the improvement of this state of things, have you not?—I do not think that the population of towns is deteriorating.

11013. No, but there is a class on the lowest rung of the social ladder which is more depressed than ever by poverty, and from that class the army is largely recruited?—Yes, and that lowers the general average of the country at large. Might I get this figure down, which is rather interesting, because my whole theory is based upon the facts?

11014. Yes?—In 1851, the population of the urban and rural districts were almost exactly equal. I need not say that from my friend Dr. Tatham I have got these statistics, and, therefore, they are easily checked. In 1901 the population of the urban districts was 25,058,355, and of the rural districts only 7,257,239. There is a rapid increase in some years—a quarter of a million of people added in a single year to the towns of England and Wales alone—last year it was over 200,000.

11015. The urban population in England is now 77 per cent., whereas 100 years ago it was only 50 per cent.?—Yes. It is simply in the towns the population is increasing rapidly, and the other is remaining stationary, and that, at all times, the townsman was not physically equal to the countryman.

11016. And the dregs of the town are even worse than they were fifty years ago?—Yes.

11017. Because the effects of heredity are more fully felt?—Yes. And I am greatly afraid that there is a greater increase in the lowest stratum than in the well-to-do portion.

11018. But surely the conditions under which those people live tends more to sterility or to the early deaths of such children as are born?—I know as a fact, in Dublin, that the portion of the population which is the very lowest, notwithstanding the enormous death rate amongst their children, are increasing to a far greater extent than is the case with regard to the upper classes.

11019. And multiplying more?—Yes. That proves that this population is increasing. Why, in Dublin 100 years ago there were very few slums. I see by the residences of people in the early part of the last century they were living over nearly the whole of Dublin, and now they are confined to a very small portion and the purlieus are everywhere. You cannot go a hundred yards in any direction from the most fashionable quarter without passing through the slums. They are at the backs of squares which were formerly mews, and now they all nearly are tenements with an enormous increasing population.

11020. Are there many back to back dwellings in Dublin?—Not many.

11021. Are there any people still left in cellars?—Very few, hardly any. There are some still where the bye-laws can be complied with, that is, the height above the ground being sufficient, and sanitary accommodation provided, but, speaking generally, that is not so. We closed 500 of them. Since I became medical officer we have closed

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as unfit for human habitation 3,500 houses, of which about 1,000 have not been rebuilt. Under local conditions there is not sufficient space on which to rebuild the houses. About 700 houses closed as insanitary remain in ruins.

11022. They have not been demolished?—No. I am urging the Corporation to get powers to deal with those places, to take possession of them and make decent houses.

11023. Or leave them as open spaces?—Yes. All through the streets of Dublin the insanitary houses have been closed.

11024. Should you say that the municipal authority in Dublin is as active as it might be in the pursuit of public sanitation?—If I said that of that corporation, it would be very doubtful, or of any other corporation which exists, that they were as active as they might be; but they have done a great deal.

11025. The standard of competence varies very greatly in the different towns?—I think that they have done a great deal considering the resources of the city. They have expended a great deal of money in providing dwellings. I have said, and it is a very grave thing to state, but I have not hesitated to do so, although I am a servant of the corporation, that they have done very wrong in providing dwellings and for which they charge 5s., 6s., and 7s. per week.

11026. They charge too much you think?—I would not provide that class at all. Of the clearances made in Dublin—a great many of them—I have never known any instance where the families who have been cleared away ever went back again. A different class of persons occupied the houses that were put up instead of the insanitary houses, and that is what I have been publicly declaiming against; you improve the actual purlieu but not the people.

11027. What becomes of them?—They go to demoralise other places.

11028. No clearance could have the effect that it should have unless a provision is made, you think, for placing the people elsewhere under conditions where they need to live in accordance with higher standards of decency and comfort?—I take this view of that question. I find that there are 300 or 400 people occupying an insanitary area. I would like to keep those people on that area under proper sanitary conditions.

11029. You would improve the conditions but not sweep the people away?—I would not sweep the people away, but keep them under better sanitary conditions.

11030. Are not the conditions so bad that such an alternative is not open to the authorities?—I do not know of any such case.

11031. From the view of expense it would naturally be the preferable alternative?—The expense would be a little greater no doubt in providing for the very squalid people in those insanitary areas. There might be a little more loss by putting up a better class of dwellings than those you displace. But you are not doing any good to that class by replacing the insanitary houses by dwellings suitable for a higher class of persons, because they can provide it themselves, but the people that you drive away have not that power; they are placed in exactly the same insanitary conditions elsewhere, and you do no good. If you lose a little money you at any rate promote the health of the population.

11032. Are there open spaces outside Dublin which are within the administration of the local authorities, so that the population which is removed from those central rookeries could be resettled in the suburbs?—Yes. There has been an increase in the area of the city by the annexation of three suburban townships; there are plenty of places now.

11033. They are under the administration of the Corporation of Dublin?—Yes. People do not like going out far, they like to be near their work.

11034. Have not you a system of tramways radiating from the town?—We have—and very cheap too—and you can get a long way for a penny. I am not at all in favour of sending the very poor people out of the city, I would rather have them placed near their work in proper dwellings. I do not want more waste spaces through Dublin, as some do who are arguing in favour of sending those people into the country.

11035. Do not you attempt to take action against the owners of insanitary properties?—I think to a greater extent than almost any other corporation, as you may gather from the closing of the houses that I have spoken of. All those houses have been closed under the provisions of the Public Health Act and without any compensation to owners.

11036. The owners would not rebuild?—It is the last remedy. We serve notices and notices, and summonses and summonses on the owners of those houses, and they will do nothing; and the last means is to get a magistrate's closing order; now nearly 700 houses are closed in that way in Dublin; they soon become ruins, and they are taken away. They are generally stolen; as a rule the roughs of the neighbourhood carry them away in a few months, and they will disappear, and every brick and door will be taken away.

11037. Have you any difficulty in identifying who the owners of this class of property are?—Yes. A great many of them live abroad, some in Australia and some in America.

11038. Would not it be a very good thing if in all big towns a register of property owners were made, right through the length and breadth of the town?—It would. In Dublin this is a general state of things. There is a ground landlord, and a man who represents the man who built the house originally, and he lets it to somebody else, and somebody else lets it to somebody else, and very often we find four persons interested.

11039. If the register indicated the conditions of tenure, it would be a good thing, you think?—Well, you see, we have a register. The law can only deal with those where the rack rent is two-thirds of the valuation. We go against the person who receives the rack rent.

11040. Is it always easy to discover him?—No; sometimes it is not easy. We cannot find out where he lives very often. In that case we go against the occupying tenants, and, if you cannot get a closing order upon the owner, you can serve the closing order upon every individual tenant, and we have to do that very frequently and turn out every individual family.

11041. It would be preferable to get at the owner if you could, would it not?—Yes.

11042. Besides what may be done in the direction of public sanitation, you look to the cultivation of the physique of the people, do you not?—Yes.

11043. As offering great opportunities for improvement?—I think that it does.

11044. I mean public gymnasia and swimming baths and so on?—Yes.

11045. Is there any lack of such provision in Dublin?—We have swimming baths. They do not pay. They hardly pay anywhere.

11046. You do not expect them to pay?—We lose a little by them; we have two very large swimming baths and other baths, and reclining baths are very much used. I made a strong recommendation to the Public Health Committee to convert those swimming baths into gymnasia for the winter, and they have adopted that suggestion, and I hope next winter we shall use them for gymnasia.

11047. Is enough done in the schools to form the basis for physical training afterwards?—There is the ordinary work done.

11048. Is it under systematic instruction?—Not very much; but we have playgrounds through various parts of the town, and Lord Meath has got up several in the part of the city where he is ground landlord, and there are then the usual fixtures for the children.

11049. You do not believe that school life has anything to say to increased deterioration?—I think that it has not.

11051. You say that "I believe that the greater education of children in recent years has been assigned as one of the causes of the physical deterioration. I cannot subscribe to this belief"?—No.

11053. You do not think that there is anything in the conditions of school life which is one of the causes of physical deterioration?—I think they have improved. I do not think the deterioration of the children is due to that cause. But at all times I think that school life was not a healthy life. The children are all crowded together in school and stooping over desks, which certainly is not calculated to improve their condition physically. I mean that there is an improvement in the schools now with regard to space, but I do not think that school life is calculated to develop the muscular system.

11054. If sufficient attention was paid to the physical side of it, it might be?—Quite so. I remember reading a paper by Mr. Darwin showing that the most successful men at Oxford were the most successful in athletics, sports, and boating.

11055. Do the children attend the school too early?—I do not think so in Dublin.

11056. You have no compulsory system in Ireland?—Yes, we have.

11057. We had it stated by a witness who knew the rural districts that it would be much better for the children if they did not attend till they were five years old?—I quite agree.

11058. That they would be better running about and opening their lungs than being in school?—I think that a child from five to ten would learn as much as a child from four to ten, if not more.

11059. Or even six to ten?—Yes, I am not in favour of children being taught too early.

11060. (*Dr. Tatham.*) With regard to the sanitary condition of Dublin, you have been working for its amendment very hard for the last thirty years?—Yes.

11061. The result of your work there with the approval of the corporation has been to vastly improve the sanitary condition of the city?—There is no question of that. Every one now admits that the sanitation of the city is greatly improved; even hostile critics of the corporation admit that.

11062. So that the death rate of the city of Dublin, which used to be (I hope I am not libelling it when I say this) very high indeed, you have reduced to what is fairly normal in large towns?—I think that we are still in excess of English towns; our general death rate is certainly in excess of English towns—it was lower last year than ever it was before. Our infantile death rate is slightly below that of towns in England; our zymotic death rate is slightly below that of the large towns; but the adult death rate amongst the 85,000 or 90,000 of the class belonging to what is described by our Registrar-General as the labourers and porters class is very high. We have a very high adult death rate amongst that class.

11063. You have a system of estimating the mortality amongst classes of the population?—We have, and it is very high among that class.

11064. And that does not obtain in England at present?—No.

11065. With regard to the birth rate, is that rapidly falling or not?—No, it remains much the same, twenty-eight to twenty-nine per 1,000.

11066. And it is not falling?—Oh, no, it is almost stationary.

11067. You were speaking just now of the closed houses in Dublin, 700 or 800 under the Public Health Act?—There were 3,400 altogether closed, but many are rebuilt and repaired and re-opened; but still there are 600 to 700 which remain in ruins. The ground on which they existed is there, but there are no complete buildings.

11068. And is your experience that of many other gentlemen, that sometimes the closed houses are a greater nuisance than those not closed?—Yes, they are places for all kinds of filth to be dumped in.

11069. That is also my experience. But hitherto the corporation of Dublin has not dealt with those areas by a scheme like that under the various Acts put into operation in England—I mean the housing of the working classes?—Oh, yes, they have very largely. They began with a scheme that cost £26,000—the Coombe area; and then the Plunkett's area, which cost very much the same; and the Bride's Alley, which has cost £90,000; and then the King Street area, which has cost about £20,000; an area off Dorset Street, Eccles Lane and White's Lane, which cost about £24,000, and another big scheme costing about £70,000 now going on in one of the worst parts of the city; altogether getting on towards a quarter of a million.

11070. But your objection to those schemes for what is called the rehousing of the working classes is, that though you may turn poor people out of those wretched areas, when the new houses are built, ostensibly for their use, they are not occupied by them at all, but by a superior class who can take care of themselves?—Yes, and the rent is doubled or trebled.

11071. And the very poor are driven into the other crowded districts and make the condition of those places even worse?—That is the invariable rule in Dublin. But there is a great improvement now for the very poor, the rents having been brought down to 1s. 6d. and 2s. per week.

11072. You spoke of having advised that some scheme should be adopted whereby suitable houses should be provided?—Yes, on the derelict places.

11073. Do you mean by that that the existing tenements should be repaired and put in order?—What I mean is, dealing with the 600 or 700 places actually in Dublin now, that where a place has been derelict, say, for ten years, I would not give compensation to the owner. We have had to light and clean in front of these houses for years without getting any return, for there is no unoccupied house tax. I would put houses on these sites to be occupied by the very poorest people.

11074. Such houses as the poor people could afford to pay for, 2s. per week say?—Yes, and only that kind of people I think should be provided for at the expense of the municipality.

11075. With regard to the prevalence of infectious disease, you were saying that the mortality from the chief epidemic diseases is considerably reduced in recent years?—Yes. When I became first medical officer of health in the first two years it was 9 to 11 per thousand of zymotic diseases, and last year it was 1·5, but still we have too high a death rate in Dublin. I mean the general rate last year was 24·5; or 23·8, taking out some deaths that were not chargeable—that is too high.

11076. With regard to the disease which used to be called the disease peculiar to Ireland, typhus, what do you say?—That is very rarely to be seen now; and smallpox only occurs now and then; we had it as an epidemic last year, and we stamped it out in about three months.

11077. To what cause do you attribute the practical disappearance of typhus. Dublin used to be called the home of typhus?—Yes. I attribute it to the greatly improved condition of the tenement houses. Wherever it does occur now it is always in a crowded tenement house, in which the people of the very poorest and most degraded class live.

11078. And you mean where there is most poverty and destitution?—Yes. I do not know any tradesman who has had typhus fever in Dublin. It is confined to the poorest and half-starved people.

11079. The representatives of destitution?—The representatives of destitution and overcrowding.

11080. With regard to pulmonary phthisis. We have heard here that pulmonary phthisis is very prevalent in Dublin. I mean tuberculous phthisis?—It is. We have a very high death rate from phthisis—3 per thousand. It is very high and very largely amongst the poorer classes.

11081. Is it amongst the men?—Men and women. You see poor fellows working in nearly the last stage of consumption.

11082. Infant mortality you say is not so high?—No.

11083. Can you account for it?—The mothers nurse their children; that is one way of accounting for it.

11084. There is very little hand feeding in Dublin?—There is very little hand feeding. The large majority of women suckle their children, and that is the only thing that makes for the moderate death rate, but the death rate is very moderate amongst the well-to-do classes—

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very moderate. But amongst the very poor, as I mentioned already, there is a very high death rate of children under five.

11085. Is that due to a large extent to forms of tuberculosis other than phthisis?—Yes, meningitis and tubercular meningitis—that is very common—we have some hundreds of cases in the year.

11086. Is rickets increasing?—I very seldom see any rickets, notwithstanding that we have very soft water. It was predicted that in Dublin, with its water containing two degrees of hardness, the children would be full of rickets, but you do not very often see rickety children.

11087. You can get lime from food as well as from water?—I never believed that theory.

11088. Is syphilis on the increase?—There is a great deal of venereal disease in Dublin.

11089. Is it hereditary syphilis as well as the primary?—Yes. I am a governor of the Lock Hospital where the disease is treated, and the wards are always full. There is a large garrison in Dublin.

11090. Does your experience agree with that of several other witnesses that wherever syphilis exists it is not of the same virulent order that it used to be?—That is so. The terrible chancres of my student days you do not see now.

11091. Have you the notification of diseases?—We adopted it the moment it came out and we had measles and whooping cough, but have given up both now. We found there was no use in their notification, as is the case all through the United Kingdom.

11092. Was notification applied to measles and whooping cough?—Yes. It was applied for three years to whooping cough, but for the last seven or eight years it has been dropped, and I never found any results from it. Measles has just ceased to be notifiable. We made the epidemic meningitis notifiable for a year, and chickenpox notifiable when smallpox is apprehended.

11093. But it is not ordinarily notifiable?—No. chickenpox is not.

11094. Is smallpox?—Oh, that is in the Act, but I mean we have made from time to time additions to the scheduled diseases.

11095. With regard to the substitution of very white bread, the baker's bread, for the old fashioned rather browner bread that one used to have in one's earlier days baked in one's own house—do you think that the substitution is good or not?—I cannot really agree to what are rather extravagant statements made as to the removal of the phosphates. If I were a prisoner and had to live on bread and water, and the weighed measure of the bread was limited, I would rather take the white bread than the brown.

11096. Even irrespective of what it is made of. You see a great deal of the white bread is not made of wheaten flour; there are other things besides wheaten flour in it?—The Public Analyst ought to be down upon them. We examined the bread, and I never found anything wrong with the Dublin bread. I know that rice used to be put in, and Indian corn.

11097. And potatoes?—No, potatoes are dearer than bread. We examine annually about 3,000 articles of food, and there has been no adulteration of bread for twenty years past. I cannot agree that the brown bread is very superior to the white bread. The poor people in Dublin do not like the brown bread, but the whitest bread they can get. Brown bread and second class flour will not go down in Dublin at all.

11098. You spoke just now of the practice being very common in Dublin, amongst the very poor, of pawning their clothes once a week?—It is very common.

11099. And you gave figures to show the enormous extent to which that practice obtains in Dublin?—Yes.

11100. Can you trace the spread of infectious disease through it?—Yes, in the last epidemic it was traced in a most remarkable way. There was an epidemic of smallpox, and we had a prosecution. A woman pawned the clothes of a boy who had smallpox, and the result was that the attendant in the pawnbroker's shop, in a part of the city where there was no smallpox, got smallpox, and the same thing occurred in a second pawnbroker's—there were two cases that occurred which were traced to the clothes that had been pawned. The case was brought into a police court, and convictions were got, so that we were able to establish the fact that those cases were due to infected clothes.

11101. I suppose that the pawnbroking business is a profitable one?—It is profitable. But Lord Iveagh, to whom we are indebted for a great many improvements in Dublin, and who, lately, spent nearly a quarter of a million in improving the slums, and gave a quarter of a million some years ago for the same purpose, is now providing an old clothes market in Dublin, and the place is to be provided with a disinfector so that all the old clothes will be disinfected. I should like to mention an interesting thing—it has nothing to do with the physical degeneration of the population, but it has something to do with this particular matter that we are on. The recruits in the depôt of the Royal Irish Constabulary, in Phœnix Park, Dublin, have been for years past peculiarly liable to scarlet fever, and there is a ward in the Dr. Stevenson Hospital, in Dublin, which is set apart for the Constabulary, and it is paid for, and is always there for the service of the Constabulary. For more than thirty years there has been an average of twelve to fourteen, and sometimes nearly twenty cases in a month admitted into the hospital. No month ever passed without there being some cases—it might go down to as low as two, and even go up to fifteen and sixteen. About three years ago I was consulted, amongst other things, as to the extraordinary occurrence of scarlet fever amongst the recruits, and not amongst the men stationed permanently, and ultimately I came to the conclusion that it was due to the new clothes supplied to the recruits, which were furnished by a contractor residing in Dublin, who gave out nearly all the work, which was done at home. I found several cases of scarlet fever in the places where clothes were being made. I spoke to the authorities of the depôt—the Inspector-General—and said it would be desirable to sterilise all the new clothes before admission to the depôt, and that was done, and in April, 1900, the last cases occurred. We began to disinfect, or sterilise rather, so that there might be no infection of clothes; this was at the end of April—no case occurred during the rest of that year, nor the next year—not a single case occurred. But last year two or three cases did occur. That might occur under any circumstances, but the fact remains that, with the exception of two or three cases which perhaps occurred by the recruits going to see friends, there has not been any case since. The authorities pay so much a year to the Public Health Department to sterilise all the clothes. I sent round a circular to all our tailors in Dublin, suggesting the same, because I have got a suit of clothes with a smell of bad tobacco on them. If you get clothes saturated with the smell of tobacco, might there not be infection as well in them. Only two or three tailors have adopted the suggestion, but, I think, it is not a bad suggestion, for it would be a desirable thing that all new clothes, before being sent home, should be subjected to sterilisation. It has, and completely stopped scores of cases that would have occurred within the last three or four years.

11102. With the view of preventing disease, would it be any hardship to compulsorily sterilise all their clothes?—No. We are trying to get them to do that in Dublin. I am now so impressed with the results of that experiment with the constabulary depôt, that, I think, a great deal of disease might be prevented by disinfecting new clothing, and especially second-hand clothing.

11103. We have heard from, at least, one witness that lunacy is unquestionably increasing in Ireland; is that your opinion?—There cannot be a shadow of a doubt that there is an increase, and there is an increase in one form of insanity. I remember, as a student, I hardly ever saw it, but I saw plenty in England—the general paralysis of the insane. I remember, in St. Patrick's Asylum for the insane, commonly known as "Dean Swift's," there was not a single case of paralysis of the insane, whereas in the Bethlehem, Dr. Savage's, in London, nearly every fourth case appeared to be general paralysis of the insane. I mentioned to Dr. Savage, who was treating a friend of mine suffering from that disease, that there was hardly a single case in St. Patrick's Hospital for the insane, and there were 150 cases of insanity, but now I notice that it is increasing.

11104. To what cause do you attribute that?—I say it with some hesitation that it is partly owing to excitement going on in Ireland, on the question about the land

and politics, that causes a considerable amount of cerebral excitement, and that is a new cause.

11105. (*Chairman.*) That is a new cause ?—Yes.

11106. (*Dr. Tatham.*) Do you think that it is due to syphilis ?—No, I do not think so.

11107. It has been said that the increase of lunacy may be to some extent due to the fact of emigration ?—That the people do not want to support their lunatics ?

11108. No. The general deterioration of the people of the population of Ireland by emigration ; that the very best blood of Ireland goes to other countries, and therefore what remains behind of the population is of a very inferior character, and in that way lunacy is more prevalent ?—I do not think that there is much in that theory. Dealing with my own limited experience, personally, I have found that the most stupid people were the least likely to become insane, while some of my most talented friends have gone off their heads.

11109. You do not think there is anything in it ?—I do not think so.

11110. (*Colonel Fox.*) Don't you think that the most talented are the most addicted to drink—both amongst the lower and upper classes ?—Undoubtedly the best workmen are the greatest drinkers.

11111. Are not the greatest drinkers the best workmen ?—Well——

11112. (*Dr. Tatham.*) That portion of insanity which is regarded as alcoholic—is that owing to the consumption of inferior spirits or liquors ?—No. I do not think so. I do not think it is. I think it is due to taking too much of the spirit, for I think that there is a great deal of insanity due to alcoholism. I know lots of good workmen that have gone into asylums from repeated attacks of *delirium tremens*, and they often become permanently insane.

11113. Is a very large quantity of illicitly distilled liquor consumed in Ireland ?—I do not think that there is very much, I do not think that potheen is consumed on a large scale. The police are too watchful.

11114. We have had a witness who told us that it was not generally consumed, for the simple reason that it was more expensive than excise spirit ?—Yes.

11115. That's your own opinion too ?—Yes. It is a very bad kind of spirit. I have recorded in one of the medical journals the case of a whole family becoming insane, through drink. One was a clergyman—I will not say of what particular denomination—but he and his whole family, in an obscure part of Ireland—the west of Ireland—getting the spirit in the neighbourhood, and the habit of drinking growing upon them, they ultimately, every one of them, became insane. I published the case. The whisky was of an awfully vile quality, and a specimen was submitted to me. The alcohol that was found was the propyl and amyl kinds—it was shocking whisky. I do not know how anyone could like potheen. It was described, you know, as like a torchlight procession down the throat.

11116. With regard to the beer, do you think that that is very largely adulterated now ?—I do not think that beer adulteration is worth speaking of in Ireland.

11117. Have you no substitution for hops ?—In Ireland there is not much beer used. Porter is the principal thing. I know as a matter of fact that the ingredients in making porter in the breweries consists simply of malt and hops, really nothing more than that. They do not use treacle, or rice, or glucose.

11118. They do not use glucose ?—No. The quantity of glucose is quite insignificant, and it is used in making jams. Nearly all the jam makers use glucose. They say the jam won't keep without a little glucose.

11119. But as regards the Dublin porter and stout ; you believe that is simply pure ?—Simply pure. I have examined hundreds of specimens.

11120. (*Colonel Onslow.*) In your statistics about the boys of the Government Agricultural Institution, Glasnevin, you took the weight and height, not the chest measurements ?—Quite so.

11121. Is that because you did not lay sufficient stress upon the chest measurement ?—Indeed I did not. I took some, but in general merely the height and weight.

11122. You had not time to take it ?—I had not the time ; that was it principally.

11123. About the height of the chest, how do they compare relatively. Do you think that weight follows height ?—Weight does follow height.

11124. Necessarily ?—On the whole, undoubtedly.

11125. You might have a short, sturdy man ?—It followed in the case of the boys of the Royal Hibernian Military School, as they decreased in height they decreased in weight, and the two went together, *pari passu*, I have no doubt. I think that a little man might be as heavy and as strong as a big man.

11126. That is what I was coming to. Is the little dapper, the sturdy thickset small man, say of an average height of five feet six inches, on the whole better than the long, thin, and perhaps broad-chested man of five feet ten inches ?—I think for many purposes he would be.

11127. So that the matter of actual height is not such a serious consideration ?—No.

11128. Provided the growth in other ways is sufficient ?—Yes.

11129. The fact that, as a race, we are shorter than our forefathers—take the army recruit ; it has been necessary to lower the standard—that is no proof that there is physical deterioration in the race, is it ?—We know that the Japs were able to beat a much bigger people ; but then the Japs have been always like that. I do not, at all, think that a race shorter and lighter than another race might not be in physique far superior.

11130. The smaller man, as a rule, can stand the strain better than the big man ?—Well, my father was a soldier, and he always said that the big men in the Cameron Highlanders were always the first to fall out on the march.

11131. That is the general experience ?—That is the general experience, and very tall men do not live so long as men of moderate height—that is well known.

11132. So that if you have got, say, 100 men of an average height of five feet nine inches and 100 men of five feet six inches, there is no reason why the latter should not be as good, if not better, than the former ?—It would depend upon other conditions—upon their muscles, for instance ; but it always appears to me that too much stress is laid upon the fact of height.

11133. It is admitted, generally, that amongst the general classes the race is growing bigger ?—I am absolutely certain that the girls of the middle and upper classes are quite unlike what they were in my boyhood—pale, anæmic girls, not allowed to take any outside exercise under the penalty of being called tomboys, and now they are almost excelling the men in all kinds of outdoor games.

11134. And even the shopboys and young clerks are better than they used to be ?—They are better than they were.

11135. You think they are much better than they were ?—I think that they are. I said so to the Chairman—that I believed that the town population shows no deterioration. On the contrary, they show an improvement.

11136. But at the same time the lowest orders, who are badly fed, appear to be going down the hill ?—They are the very lowest part of the population, but I think that that class is increasing.

11137. Now, at the first stage of the inquiry, we had much evidence of children not improving in height in the Board Schools, but that the Jews, up to a certain period, did improve in height ; it was said that at twelve years of age the Jewish boy was invariably taller than the Gentile boy and better nourished ; but at sixteen the Jew boy stopped, and the Gentile boy would go on more or less on the average. Have you had any experience of Jews ?—We have little experience of them. I think the Jews appear, in London, to be physically in a very much better state. We have nearly 3,000. They are mostly Polish and Russian Jews. I gave the prizes away to the schools, and there were about 500 or 600 little boys, and I was astonished at the gymnastic exercises, and at their intelligence and the performances they went through.

11138. Were they better than the Irish boys of the same class ?—I think they were.

Sir C Cameron.

11139. If those little fellows are so small, even then, provided their weight and chest measurements were fairly good, there would be no reason why they should not turn out as physically fit in after life as to grow up to a fair standard of height?—That is perhaps true, but on the other hand, let us take the population of a country of a certain height and a certain weight, and physically a good population—take the case of the Swedes, say, who are the tallest men in Europe. Supposing we find that the Swedes were steadily going down in weight and height, would not we think that a sign of decay? If the race were originally a small race like the Japs it would be different.

11140. Take some of the Irish Militia—some Militia that I happen to know that came from the north of County Cork. They were not a big lot of men, but essentially country people—thick-set, good physique. Now, has County Cork always produced that class of men or were they a taller race in the north of County Cork—what is called the North Cork Militia?—The North Cork Militia I know, for they were stationed in Dublin at one time.

11141. They came from the north part of County Cork. They are thick-set men and not tall?—No, they are not as tall as the Tipperary men.

11142. Are they typical of that part of Ireland; is that the reputation of that part of Ireland, that they are rather thick-set men?—Yes. They have big, pale, long faces and big noses. The Tipperary men were so tall that they were the same height as the Foot Guards, and strong representations were made some years ago to convert them into a regiment of the Irish Guards on account of their great height. Look at the police recruited for the constabulary; many of them are over six feet.

11143. They do not come from one part of Ireland?—No, they come from all parts of Ireland. They are very tall; I quite agree that height and weight are not everything. The only thing is that when you have a race declining in height and weight I assume that they decline generally, and for the same reason, when the longevity of a people is increasing and they also increase in size, I assume that they must be improving physically in every way. It has been noticed when people have been placed under very bad hygienic conditions and when not supplied with sufficient food they deteriorate in size. For instance, about the Bosjesmans a very large amount of scientific evidence has been produced to show that originally they were a tall people; they belonged to a tall race; the Hottentot race were rather big men, and yet they dwarfed down because of bad conditions with regard to food and lodging. I have read several essays with regard to the degeneration of the Bosjesmans, and it was always attributed to bad conditions of life.

11144. (*Colonel Fox.*) You were saying just now that you found that the physique of the boys of the Hibernian School was not as good as it was thirty years ago, I think?—Only the statistics show that.

11145. That is according to the statistics?—Yes.

11146. And you attribute that to the decline in the physique of the recruits of the present day as compared with those of times past?—Yes.

11147. Now I happen to have got those statistics for the last thirty years back of the Hibernian School for boys, and I have compared them with the statistics taken more than thirty years ago of the Duke of York's School, and I find that in the latter school the physique was decidedly better than that of the Hibernian School; notwithstanding that they came from the same stock. The physique of the boys of the Duke of York's School was decidedly better than that of the Hibernian School in every way, although they came from the same class?—Not from the same race; they are all the sons of Irish soldiers.

11148. Consequently, they ought to be bigger, because we find the Irish race is bigger—the Irish boys ought to be bigger because they come from a bigger race?—In the Duke of York's school are the children of the same social position?

11149. Yes?—And they show no deterioration?

11150. There is no deterioration even going back thirty years. Latterly they have filled out; they have fluctuated, but now they are just as good as they were thirty years ago, and they have better physique than the Hibernian boys, and very markedly so?—Quite so.

11151. That rather tends to show that it is their mode of living. For instance, there was a time when they had more work and less play and less sleep; and now they go out into the air more and have more sleep and less hard work, and they find that the physique has gone up in consequence in the Duke of York's School?—I know. I read the Report of the Commission on the Duke of York's School some years ago. There was a sameness in food, and their health improved when the diet was altered.

11152. I had a letter from the Commandant of the Hibernian School, and they are going to give them more sleep and less hard work, and milk instead of tea?—I am aware of that.

11153. They found that there was no nourishment in the tea, and they were going to give them milk for their breakfast, and they considered that by these means they would bring them up to the standard of the Duke of York's boys?—Yes.

11154. Therefore I do not think the falling off in the physique of the Hibernian boys is due to the decline of the recruit?—No.

11155. The men who are the fathers of those boys—either they or their wives—must be short-lived people?—But still if the decline of the Hibernian School boys is regularly going on—and that it goes on practically every year for thirty years, and every couple of years there is a decline, the diet and the hygienic conditions could not be steadily deteriorating in the same way.

11156. It is more the way they have been treated than the way their fathers have been degenerating?—Yes, but they must be treated worse and worse every year. That is what I understand. With all the improvement in connection with the school and its drainage and the water supply, and the increased space, the boys that came in there and then were less. It is only when they are there a short time that they are weighed or measured. I cannot think that it is due to local causes in the schools.

11157. That is what the Commandant seems to think—that they have not had enough food and sleep and periods of rest, which has stopped rather their growth. Then you stated just now that so far physical training has not been made compulsory in the schools of Ireland?—Perhaps the result of your Commission will be the means of doing it.

11158. Is there any possibility of large gymnasia being built in the principal towns where instruction in physical training could be given?—If it was shown to be that there was decided benefit to be derived from it, I think they would be established.

11159. People would take an interest in it and push it?—Yes, I am sure that would be the case.

TWENTIETH DAY.

Wednesday, 23rd March, 1904.

PRESENT.

Mr. ALMERIC W. FITZ ROY (*in the Chair*).

Colonel G. M. FOX.
Mr. H. M. LINDSELL.
Colonel GEORGE T. ONSLOW.
Mr. JOHN STRUTHERS.
Dr. J. F. W. TATHAM.
Mr. ERNEST H. POOLEY (*Secretary*).

Dr. KELLY, Lord Bishop of Ross, called; and Examined.

Bishop of Ross.

11160. (*Chairman.*) I suppose you have lived in the rural districts of Ireland all your life?—Practically all my life in rural districts and small urban centres.

11161. Your observation covers about thirty or forty years?—Yes, my observation will cover fully forty years.

11162. You have come to some definite conclusions as to the existence of deterioration and its causes?—Yes.

11163. You think that there is ground for believing in the deterioration of certain classes in Ireland?—Yes.

11164. Do you think it is very general, or only partial?—Amongst the classes concerned, which are considerably more than half the population in Ireland, I fear it is rather general.

11165. You think it is rather general?—Yes.

11166. And you say it is much worse now than thirty years ago?—Yes; and considerably on the increase.

11167. You do not think any ameliorative tendencies are coming into play, the effect of which has not yet been fully felt?—I do not think so; on the contrary, I do think that the degeneration causes are only now commencing to produce their effects, and that in some years to come the effects will be much more marked than they are at present.

11168. Coming to the causes, would you kindly enumerate what you think are the principal ones?—With your permission, I would wish to give some reasons why I think there is deterioration; some illustrations of what I consider to be the deterioration, and that course will fit in, to some extent, both with the causes and the facts. I fear I shall have to lay down what will appear at first to be contradictory propositions, and yet they work themselves together as a harmonious whole, and I think I shall be able to satisfy the Committee that there is harmony in my position. No doubt in Ireland we have amongst the peasantry and the working classes a very large proportion of fine specimens of manhood and womanhood, also in feats of athleticism the Irish have been more remarkable, in my opinion, in recent years than at any period in the past. The death-rate has not risen in Ireland.

11169. It has rather fallen, has it not?—Yes; and some evidence which I shall have to give would show that it ought rather to rise than to fall, and this is one of my paradoxes. Typhus fever, and scarlet fever, and smallpox, and some other diseases of that class, the class of zymotic diseases, have very largely decreased in Ireland. Those observations tend to show that there was considerable physical improvement. With regard to the zymotic diseases, the decrease, in my opinion, is attributable to the fact that there is much more care taken in recent years to isolate those cases. When typhus fever or scarlet fever breaks out in a rural district at present the dispensary doctor is very particular in having the cases removed to the neighbouring hospital.

11170. Is the hospital accommodation in Ireland insufficient?—Well, it is reasonably sufficient. There is a hospital attached in Ireland to each workhouse, and we have 158 unions in Ireland, and therefore we have 158 of those what I may call rural hospitals.

11171. Infirmaries we should call them in this country?—Yes. Then in our cities and towns, the larger cities, and what we call cities in Ireland, but what you would only call towns in England, we are particularly well equipped with hospitals. Dublin, Cork, Limerick, and Waterford are perhaps better equipped in proportion to the population than any centre in England. We have a great many charitable agencies in Ireland and a great deal has been done in the way of hospital accommodation. The cases of scarlet fever and typhus, smallpox, and other such cases are isolated at present.

11172. There is very little typhus in Ireland?—Very little, and in the year 1902 we had only one case of smallpox in the whole of the country.

11173. Both those diseases were great scourges some years ago?—They were great scourges. I attribute decrease in those cases to the isolation and to the more careful attention to them, not to any improvement in the physique of the people, and as to smallpox it has been got under, in my opinion, by vaccination. I think it is true that the Irish are the best vaccinated people in the world.

11174. But the effects of these diseases in times past must have tended to depress the condition of the population. If they do not suffer from those diseases to any extent now there may be some reason to hope that there is some improvement?—No doubt one cause of deterioration, and a serious cause, has been removed, but you may have other causes that would counterbalance the removal of that cause.

11175. Quite so?—The symptoms which I observe as an ordinary layman of deterioration are first amongst the children; as a bishop I have to go round my diocese confirming the children.

11176. At what age do you confirm them?—Between eleven and fourteen, as a rule; those are the ages that I have prescribed. Of course there will be some variation beyond those limits, but as a rule I try to have them between eleven and fourteen. The confirmations occur once in three years, and I suggest that no child should be presented to me under eleven, and therefore no child ought to be over fourteen.

11177. You have opportunities triennially of comparing the children of Ireland?—Yes. Of course this opportunity of comparison does not date back very far, for I have been a bishop only seven years, and consequently that opportunity of observation does not carry me to any very distinct conclusion. I have been dealing, of course, as priest with children in schools, and boys at school, and girls.

11178. Where were you a priest, where was your cure of souls before?—In the town of Ennis, the capital of the County of Clare. I was born in the County of Tipperary, and reared in that county up to the age of fourteen or fifteen, when I went away to school, and then during my vacations, both as a schoolboy and afterwards when I was at college, I returned annually for my vacation, so that I was able to observe the peasantry there pretty intimately up to my ordination, which was at twenty-five years of age. Then I spent twenty years in the County of Clare, and I have been seven years now Bishop of

Bishop of Ross.

Ross ; my diocese lies along the south-west sea border of the County of Cork. Of the children present, both at the confirmations and in schools (I frequently visit the schools) a large number are very pale and have a washy, unhealthy appearance.

11179. Anæmic ?—Yes, anæmic, and this is more marked amongst the girls than the boys. A great many little girls look red and chubby up to eleven or twelve years of age ; after that when they go on to be fourteen, fifteen or sixteen they appear particularly pale and washy, and the lines come out on their features as if they were old women rather than girls.

11180. It is not want of fresh air they suffer from in Ireland ?—No ; there is plenty of fresh air in Ireland, and it is not want of fresh air. Then the teeth of a large number of the children are exceedingly bad ; it is not an unusual thing to see a child whose teeth are all perfectly rotten. Then amongst the grown up population there is a growing disinclination in Ireland for hard manual work. No doubt there are plenty of causes for that, but in my opinion one of the causes is that there is really less capacity, less endurance for severe toil.

11181. Is it not partly due to the fact that subsistence is easier, and therefore they do not think it is necessary ?—I regret to say subsistence is not easier ; a portion of my evidence will go to show the reverse is the case. There are a considerable number that live to an old age, in fact the country is rather remarkable for longevity : there were 665 persons that died in 1902 who were over 95 years of age, and 160 of those were over 100. While that is so, still when disease breaks out, in my opinion they resist the disease less than they have done in the past.

11182. Have you noted the effect of any recent epidemics which confirms that impression ?—Influenza since 1890 rushed through them with very great rapidity. We had a severe outbreak of influenza in Ireland in 1890, and it has recurred almost every year since. It rushes through them with very great rapidity. When measles break out it seems to rush through the people more rapidly than formerly, and I have been told by medical men that they believe there is less power of resisting disease now than formerly.

11183. You are talking of the rural poor ?—Yes, I am talking of the rural portions of the country. I do not speak of the cities, for I am not familiar with the city life of Ireland. Then consumption in Ireland has been greatly on the increase. In some parts of the country it is quite alarming. In the part of the country where I live there is real danger of consumption blotting out the entire population. I know families in the district where I live which have been practically blotted out in the last few years by consumption. In one case the father and mother and three or four children died. A young man a member of the family came back from America and took up the little holding. He married, and within twelve months his wife died. There is an island in my diocese called Hare Island with a population of about 200 people. I do not think there is a single family in the island that has not got infected with consumption, so that it is fearfully on the increase, more perhaps in my district than in other parts of the country, but in the whole of the country it is considerably on the increase. I see that by the returns——

11184. (*Dr. Tatham.*) Are you speaking of the Registrar General's returns ?—Yes.

11185. Have you them here ?—No, but I have the notes from them here.

11186. (*Chairman.*) Will you give us the increase in tuberculosis ?—I can give you the number of deaths from tuberculosis in 1902. The population has been decreasing.

11187. (*Dr. Tatham.*) The increase will be sufficiently near ?—Yes. I have not had the Registrar-General's return for all those years, but I have the figure which will give you the increase. Between 1864 and 1902—that is a pretty long period—deaths in Ireland from tuberculosis worked up gradually from 2·4 to 2·7 out of a population of 1,000—2·4 to 2·7 died of tuberculosis out of each 1,000. In England, during the same period, the figures worked down from 2·3 to 1·9 ; and in Scotland the figures worked down during the same period from 3·6 to 2·3. In Ireland in the year 1902, the total deaths in the country were 78,000 ; of those 10,000 died from old age ; and of the 68,000 who died from disease, 12,000 died from tuberculosis.

11188. Will you allow me to ask you one question with regard to that. You speak of a large number of persons, 10,000 out of 78,000, dying of old age ?—Yes.

11189. Have you reason to believe that at least some of those who were returned as dying from old age really died from some other disease, but inasmuch as they were not attended by medical men, the deaths were returned as old age ?—That is quite possible ; but tuberculosis, as popularly understood, means the death of rather youngish people. I know tuberculosis may break out in very old people, but as we popularly understand the thing, perhaps wrongly, we regard it as affecting rather youngish people.

11190. But as a matter of fact that is not so, if you take the country generally ; tuberculosis increases in fatality as age increases ?—I can quite understand its increasing in fatality, but does the susceptibility to catch the disease increase ?

11191. That cannot be proved, because we have no registration of sickness ?—That is the idea I have in my mind, that susceptibility does not increase, but on the contrary decreases. I speak merely as a layman, but that is what one observes as one goes through.

11192. You think it is quite possible at any rate that a great many of the deaths which were returned as from old age were really deaths from some definite disease ?—That is possible. In the Registrar-General's returns, you have the figure 12,000 as dying from tuberculosis and 8,000 from bronchitis.

11193. Some of the deaths from bronchitis may be really deaths from tuberculosis, may they not ?—Yes ; I suppose there is a connection.

11194. (*Chairman.*) Do you know the total number of deaths of those children under five and under one year old, respectively ?—10 per cent. of the deaths are of children under one year old ; I do not remember the exact figure between one and five.

11195. Are the deaths of very young children increasing in proportion to the total deaths ?—I do not think so, though a number of young children get diarrhœa.

11196. From improper feeding ?—Yes ; or something of that sort ; 3,500 died of pneumonia, and 7,500 of heart disease, so that nearly half the deaths were set down as attributable to tuberculosis, bronchitis, heart disease and pneumonia ; it would seem to me that the prevalence of those diseases would go to show a lessening of the vitality and the physical stamina of the people.

11197. Have you anything further to say in illustration of that point ?—Insanity is greatly on the increase in Ireland.

11198. Yes, we have had evidence before us to prove that. That you take to be a sign of deterioration ?—All nervous diseases seem to be on the increase, such as neuralgia. A number of young children suffer from neuralgic pains ; of course this may come partly from bad teeth, but the face gets inflamed and pains run up into the head.

11199. We have been told that the ferment of political agitation through which the country has passed has had something to say to that ; do you think so ?—I do not think so at all. Insanity is very much on the increase. I am a member of the Asylum Committee of the County and City of Cork, which is the third largest asylum in Ireland. We have, unhappily, to provide for 1,700 patients, and have recently established an auxiliary asylum to accommodate 400 ; and we still will be in want of accommodation.

11200. You agree that a large number of persons are now classified as insane who, twenty, thirty, or forty years ago would not have been considered as insane ?—Yes ; they are classified as insane, and also a number of persons are taken into asylums who in former years were left at large.

11201. What extent of increase do you think that accounts for ?—Within my own recollection, if a case of insanity broke out in a family, everything possible was done to conceal the fact. Now that sentiment has dis-

appeared, and the people quite freely, in the immense majority of cases, send the patient to the asylum. That will account for a considerable increase in the population of the asylums, but this change of sentiment that I speak of has been in existence for several years now—this willingness to commit people has been in existence for several years—in my opinion practically the number of lunatics at large was committed many years ago, say ten, twelve, or fifteen years ago, and yet within the last ten years the increase has gone up quite as much, the increase is quite as rapid as it had been for thirty or forty years before, and therefore I think there is a real increase. As far as one can judge from one's own observations amongst the people, the number of families that are affected is constantly on the increase.

11202. (*Dr. Tatham.*) At what ages do you observe the greatest increase?—There is a very considerable increase in young people.

11203. Idiots?—No, young girls.

11204. Acute insanity?—Yes, among young girls from eighteen to twenty years of age: a large number of them.

11205. Not connected with child-birth?—Oh, no.

11206. Because there is a form of insanity, as you know, unfortunately very common amongst girls under those circumstances?—No; I mean the cases of unmarried women of that class.

11207. (*Chairman.*) Are a large proportion of those cases incurable?—Unfortunately the return of cured cases is very small.

11208. (*Dr. Tatham.*) Is general paralysis of the insane the type of insanity frequently returned—it is a common term in lunatic asylums?—The number returned from that cause is not very great. In 1880 the total number of lunatics under detention in Ireland was 12,982, and that worked out at one in every 400 of the population.

11209. That is in 1880?—Yes.

11210. Have you corresponding figures for 1902?—Yes.

11211. (*Chairman.*) That is 1 in 170, is it not?—Yes. In 1902 there were 22,138 under detention, and that works out at one in 200. And, furthermore, there were lunatics still at large which were returned in the census of 1901; and including those lunatics who were at large the figure works out at one in 170.

11212. (*Dr. Tatham.*) That is a decided increase?—Yes; that increase cannot be accounted for, or even any substantial portion of it, in my opinion, during those twenty years, by the committal of cases at large.

11213. (*Chairman.*) Except that the returns for the last year have been pulled up from one in 200 to one in 170 by the inclusion of persons who were at large?—Yes.

11214. So that there may have been in previous years a good many at large of which we know nothing, who were in subsequent years brought into the returns?—I rely on my own observation with regard to the sentiment of the people; forty years ago there was a decided disinclination to admit that there was a lunatic in the family

11215. (*Dr. Tatham.*) Was that for fear that the lunatic would be removed to an asylum and there be unkindly treated?—No; that was not the idea; the idea was that it brought considerable disgrace and discredit on the family to have a lunatic in the family, and that it interfered with the prospects of the other members of the family, the prospects of the female members with regard to marriage, and the prospects of the male members with regard to various positions in life.

11216. (*Mr. Struthers.*) Has that feeling really died out?—It has practically died out, even amongst the poorest people. Lunacy has become so common that it is, practically, no longer a disgrace; there are so many families affected.

11217. Is there a feeling that there is a certain risk in having a person from a family in which lunacy has manifested itself?—Yes, there is still that feeling, but there are so many families affected, and it is so difficult to get a family that is not affected that the men are practically compelled to marry into affected families. I have a very serious difficulty in that way, because, according to the Canon Law, I am bound, as a bishop, not to admit amongst the clergy any person who is affected with insanity, and if I draw a line very strictly I would exclude practically all the applicants, so that I cannot draw the line too strictly.

11218. (*Chairman.*) Do you say that you are admitting lunatics into the priesthood very largely?—You misunderstand me. I said that I am bound by the Canon Law to exclude from the priesthood any young man whose family—that is, not merely the immediate family, his father and mother, and brothers and sisters, but near relatives, cousins, and so on—would be affected by lunacy. I say that I cannot draw the line very tightly. If I find a family where the father and mother, or brother and sisters, are affected I exclude the candidate, but I have to admit candidates whose uncles and immediate relatives are affected, otherwise there would be practically nobody left.

11219. Would you say that there is not a family in Ireland who has not some near relative mad?—I am not quite prepared to say that, but I do say that in the part of the country where I live myself the larger proportion of the families have some immediate relatives, relatives within the second degree, who are affected with insanity. As the figures have increased for the whole of Ireland, though things may not be so bad as in my particular district, yet evidently lunacy is very much on the increase.

11220. Is there anything in the circumstances of your particular district which would account for its being worse than the rest of Ireland. Has it been more affected by emigration for instance?—It is very much affected by emigration. Then the district is rather a poor one—not the poorest district in Ireland, but well on the poor side rather than on the wealthy side—and hence the feeding and housing of the people are on the low scale rather than on the high scale.

11221. (*Colonel Fox.*) Is not alcoholism very much on the increase in Ireland?—Yes, I will come to that afterwards.

11222. (*Chairman.*) Are you prepared to touch upon the causes yet?—From those facts I conclude that there is physical deterioration amongst the people.

11223. Shall we go through the causes *seriatim* now?—Yes.

11224. The first point you notice is the change for the worse in the dietary?—Yes.

11225. Is that due to a diminution in the financial resources of the people, or to their preferring easier methods in the preparation of the food rather than ones that give them greater trouble?—Both causes are at work, but the latter perhaps more than the former.

11226. The disinclination to labour has something to do with it?—The disinclination to labour and also false ideas about the value of foods.

11227. Why have their ideas become more false of late. One would have thought that a people would cling to its traditional dietary unless some good reason was presented for changing it?—There was, of course, a very great reason. The traditional dietary of the country was interrupted by what I may describe as a social cataclysm.

11228. You mean the potato famine?—Yes.

11229. That is going back sixty years?—Yes. I think in order to get a proper idea of the question we should start from that point.

11230. You think the change in the dietary of the Irish people has been steadily in progress since that time?—Yes, quite steadily. Previous to the potato famine the potato was the staple food of the country, amongst of course the classes I am dealing with now, and, as I said, these classes are considerably more than half the population of Ireland. Previous to the famine the proportion was still higher. I might remark here, perhaps, that in England three-fourths of your population are urban and rather less than one-fourth rural.

11231. Seventy-seven per cent. are urban?—In Ireland we have the reverse figures: very nearly three-fourths are rural, and very little more than a quarter is urban. Previous to the famine the proportion of the rural population to the urban in Ireland was still higher. Still a higher number would belong to the rural population. Then the famine came caused by the failure of the potato, and during the famine years the food of the people became largely porridge or, as it is called in Ireland, stir-about, made with Indian meal.

Bishop of Ross.

11232. Indian meal superseded oatmeal?—In the famine years.

11233. The introduction of the Indian meal dates from the famine?—Yes. So that the food of the people became very largely Indian meal during the famine years, and after the famine years it was a large element in their food.

11234. And has remained so ever since?—No, it has not.

11235. Have they gone back?—When I was a boy, looking back to the period of the late fifties and early sixties the food of the peasantry consisted of potatoes for one meal, Indian meal and oatmeal for two other meals, as a rule, and there was very little bread used. Now in some sense the food has been improved, and hence I am going to propound the paradox that while the food used is a better class of food, yet the people are worse fed. Wheaten bread has become of very common use in Ireland, and has almost entirely superseded the use of both Indian meal and oatmeal, and to a very large extent the use of the potato. No doubt wheaten bread in itself is better food than potatoes or porridge.

11236. Opinions differ upon that point?—Where the defect comes in, in my view, is this: Milk was used in great quantities, with potatoes and porridge, and I think that potatoes and porridge and milk were a more sustaining food than the present food, which is exclusively bread and a very bad form of tea.

11237. Very strong tea, I suppose?—Yes, a considerable number of families in Ireland practically all the year round have no other food at present than bread and tea for all the meals of the day.

11238. (*Dr. Tatham.*) Tea taken in the place of milk?—Yes.

11239. (*Chairman.*) Do they have tea without milk?—It is often without milk—not commonly, but often.

11240. Is it because their taste for milk has been lost, or that they cannot get the milk?—It is largely because the taste has been lost, and to some extent because they cannot get it.

11241. The first is the principal cause?—A false sentiment will work. The peasantry and the labouring classes have got to regard bread and tea as a higher and better class of food than potatoes and milk, or porridge and milk. That sentiment grew up, and still exists, and is getting more obdurate every day.

11242. Do the priesthood share that sentiment?—They have great influence with their flocks. Could they not do something to counteract that?—The priesthood do not share that view, and I may say that a number of priests try to counteract it. At confirmation time, when confirming the children, all the people of the parish attend, and I have spoken over and over again in connection with the education and the management of the children very strongly, and appealed to the mothers, and insisted that the children should get milk.

11243. Without much success?—It has had some success.

11244. Are your efforts seconded by any of the local authorities?—Do they ever distribute leaflets to the poor, explaining the best forms of diet for the nurture of children, and so on?—The local authorities have not done much up to this time, but the new Department of Agriculture and Technical Instruction is making a considerable effort in that direction. I may say that we have an Agricultural Board in Ireland, consisting of twelve persons for the whole country, eight of whom are elected by the County Councils of Ireland, and four are appointed by the Government. I am one of the eight elected by the County Councils of Ireland to represent them on the Agricultural Board, and hence I am somewhat familiar with this class of work. The Department of Agriculture and Technical Instruction has been doing a considerable amount to spread knowledge in this direction, and we have domestic economy teachers opening classes in the various places.

11245. Is not that having some effect?—It is having some effect, but the effect really has not made itself felt yet, and will not make itself felt for a considerable time.

11246. You hope it will?—Yes, but in the meantime the causes are vigorously at work. I regard it in this way, that the causes are like a torrent sweeping away the population, and the remedies are only like a drop, and it will take a very considerable time before we have the current on the other side. I may say in this connection that I have been making an effort myself to train the teachers of the girl schools in this matter. In the towns and cities in Ireland, the education of the Roman Catholic female population is very largely conducted by nuns. In the three principal centres of population which I have the female schools are conducted by nuns. A lady came over from Scotland, who had studied in the Scotch Domestic Economy schools, hygiene, and all those subjects, and I gathered a number of the nuns from each convent and established a training school, and that training is going on at present the moment. It began on the 1st July last, and will end on the 1st July next. They are getting a twelve months' course of training, with a view of teaching in the schools. I also expect that from those schools the information will spread out to the female teachers around the country. I am afraid that I am going away from the causes to the remedies. We have disposed of the point of the children in Ireland being largely fed upon tea. I have known of my own knowledge young children only a few months old being fed on bread and tea.

11247. The mothers in Ireland suckle their children to a large extent, do they not?—The practice is dying out very quickly.

11248. Is that because they are unable to from physical weakness, or because they are negligent of their duty?—I think both causes are at work. The number of women who suckle their children has fallen very much. I could not give an estimate, but I doubt if half of them suckle their children at present.

11249. And perhaps they do not suckle them long enough even when they do suckle them for a time?—I sometimes speak to them about not suckling their children, and they tell me that they are recommended by the doctor not to do so, and they are sometimes prevented by their husbands from doing so. Sometimes I quite approve of that, because where you have consumption or insanity, it is, in my opinion, safer for them not to suckle their children. Very often doctors forbid the mothers to suckle them for these reasons. Then you asked if the difficulty of getting milk had something to do with the change. It *has* something to do with it, and perhaps a good deal.

11250. You referred to the establishment of creameries?—Yes, that has drawn the milk to the creameries. When milk was used it was principally skim milk.

11251. Does not the separated milk come back from the creameries?—Separated milk comes back from the creamery, but there is a very great difference between separated milk and skim milk.

11252. The separated milk has some value, I suppose?—The skim milk was a very agreeable, palatable drink, pleasant to the taste, and also nourishing, because it contained not only all the milk solids, but a considerable proportion of fats; the skimming did not remove all the fats. Now the separated milk is very unpleasant to the taste; it is almost undrinkable.

11253. (*Mr. Struthers.*) It is very thin, is it not?—It has a disagreeable taste.

11254. (*Chairman.*) Which it acquires in the process?—Yes, partly, I suppose, from machinery and also it would seem to me as if there had been a sort of molecular disintegration of the milk itself. It comes out quite frothy. Then it takes a considerable time to get back into the liquid state, and it would seem as if the molecules had been almost disintegrated. Then it contains very little fat, and on the whole it is practically undrinkable.

11255. Cannot it be used for cooking?—No, I do not think so.

11256. With porridge, and so on?—Do you mean in cooking porridge?

11257. (*Mr. Struthers.*) Instead of water?—The porridge was always made with meal and water, and not with meal and milk.

11258. It might be a useful substitute for water?—The use of porridge has died out. Then when you have the porridge cooked you require milk to use with the porridge in the eating of it.

11259. (*Chairman.*) Still you say that the Irish peasantry can get the milk if they like. The principal

cause of their not having it is their distaste for it ?—The great majority of the Irish peasants have milk, but they cannot afford to take the whole milk. They require either to convert the whole milk into butter at home or send it to the creamery and convert it into money. They never used new milk, or whole milk, except for babies. They used to have the skim milk, but now they only have the separated milk which is undrinkable ; they are practically excluded from the use of milk to a very considerable extent. It is a very great difficulty. If the Irish peasantry were somewhat better off, if they could afford to use a portion of the whole milk for their own food, it would settle the question, but in the present state of the wealth of the country I am afraid that is hardly possible.

11260. Tea is not a cheap drink, is it ?—It is cheaper than the milk, it is a very much cheaper drink. A quart of tea is much cheaper than a quart of whole milk.

11261. (*Dr. Tatham.*) Have you any idea of what the price charged for whole milk is ?—The creamery price is only 4d. a gallon or 1d. a quart. That is the cost to the peasant who sells his milk. He can of course have his milk for food at a penny a quart.

11262. (*Mr. Struthers.*) His tea will cost him more than a penny a quart—that is high priced tea ?—I do not think so. The cost to the labourers who buy milk is 1½d. or 2d. a quart. Those who have milch cows would not sell it at the same price, principally because there is a difficulty about payment.

11263. (*Chairman.*) Peasants in this country would be very glad if they could get milk at 1d. a quart ?—Certainly, but I shall have to come later on to the wage question as between Irishmen and Englishmen—the question of means—which makes a very serious difference.

11264. (*Dr. Tatham.*) But the poor are charged a higher price because of the difficulty of getting payment ?—Yes.

11265. (*Chairman.*) You attach very great importance to the effects of emigration ?—Yes, very great importance.

11266. Do you think that is a well ascertained cause or do you think it is of the nature of a speculative cause ?—I think it is a cause about which there is no philosophic doubt whatever.

11267. You divide the population into the strong who emigrate and the weaklings who stay behind—is that an absolutely accurate division ?—It would not be absolutely correct to divide the population into two bodies and say that all the strong emigrate and all the weaklings remain behind : that would be quite incorrect ; but it is quite correct to say that the total of those who emigrate are strong and vigorous.

11268. The average of vitality is much higher among those who emigrate than among those who stay behind; you would not put it higher than that ?—I divide the population of Ireland into two parts—the strong and vigorous on the one side and the weaklings on the other. Then out of the strong and vigorous division I take the large number who emigrate.

11269. Would you say half of them, or a third ?—I could not give you a reasonable estimate as to the number of weaklings in Ireland as against the number of the strong.

11270. What is the proportion of strong people who go ?—All those who go are strong.

11271. What proportion of the strong of Ireland go—surely there are strong types left behind ?—Certainly.

11272. A very considerable proportion ?—Yes, a very considerable proportion.

11273. It is not only the weaklings who are left to propagate the Irish race ?—I do not say so ; we have some strong men and women to breed from, but I say that we have an undue proportion of weaklings to breed from. There are some features of the emigration that I wish to emphasize. Emigration began a very strong flow out of Ireland in the famine times and immediately after the famine, but at that period it was the emigration of whole families. I know in various parts of Ireland there were whole families which went to a foreign country during the famine or immediately after the famine. That had no effect on the physique of those who remained behind—it left things *in statu quo*. Then for several years afterwards a considerable number of families did go. When the younger and more vigorous members went to America or Australia, after some years they were not satisfied until they finally took out the old father and mother and the young members of the family. So that although the numbers emigrating were larger it did not affect the physique of those remaining behind. But for a considerable number of years it has been only the strong and vigorous that go—the old people and the weaklings remain behind in Ireland. That has arisen from several causes. One of the causes is that the authorities in the United States have become particularly strict about the physical condition of the immigrants into the States; they have a stricter medical examination when the immigrants land, and if they are not found physically fit they are sent back again.

11274. That has had a tendency to check Irish emigration ?—It has a tendency to check the weaklings from emigrating, but it has not a tendency to check the vigorous and strong. Then the shipping companies, finding that they had to carry back *gratis* those emigrants, have become very particular, so that before a shipping company in Ireland will take an emigrant, the emigrant has to make a solemn declaration that he is not suffering from tuberculosis or scrofulous glands or insanity or diseases of the eyes. The emigrants very largely have to get themselves medically examined before they leave home at all. So that the present flow of emigration, though smaller in volume, has a much more serious and deleterious effect on the physical condition of the population of the country. Now as to the number of emigrants: from 1851 to 1901, 3,846,393 people emigrated in those fifty years, an average of 77,000 in the year. For the last twenty years the average would hardly reach 50,000. I could give you the particular figures, but they will not interest you. The taking away of 50,000 strong, vigorous men and women every year from the country has a very serious effect. According to the Registrar-General, of those 50,000 on an average who emigrate, 81·5 per cent. of the total emigrants are between fifteen and thirty-five years of age. Therefore of the 50,000, over 40,000 were between the ages of fifteen and thirty-five.

11275. The flower of the race ?—Yes.

11276. (*Colonel Fox.*) Do you find many come back again ?—Not many ; of course some do, but the numbers coming back are only counted by tens as compared with the thousands who emigrate. On my way over to London I picked up this statement in a newspaper. There has been in Ireland recently an anti-emigration society—they published their annual report on the 21st of March.

11277. (*Chairman.*) Under what auspices has that society been established ?—It is a voluntary society.

11278. Has it been supported by prominent persons in Ireland ?—Yes. The chairman of the society is Cardinal Logue, and amongst the committee is the Lord Mayor of Dublin, Dr. Douglas Hyde, who is president of the Gaelic League ; and Dr. Cox, a prominent doctor in Dublin : and John Sweetman, the chairman of the Meath County Council ; and several chairmen of county councils. In this report they say, "In the space of the last twenty years, according to the report of the Commissioner-General of Immigration, Washington, no fewer than 910,000 men and women emigrated from Ireland to the United States alone. Of those 755,000, or 83 per cent., were in the prime of life, between the ages of fifteen and thirty-five." In Ireland at the last census, in 1901, the whole number of persons between the ages of fifteen and thirty-five was only 1,500,000. So that the loss of our young population to our country alone in the last twenty years was fully one-half of the present adult population of the country. That figure of 83 per cent. fits in pretty well with the Registrar-General's figure of 81 per cent. out of the total emigration out of Ireland. You see you might have a somewhat higher proportion of the young people going to the United States than coming here to England, for instance, or going to other countries.

11279. (*Dr. Tatham.*) Is there any compensating immigration into Ireland ?—There is immigration of Jews.

11280. Only Jews ?—Yes.

11281. Where do they come from ?—I think they arrive in Ireland from England. How they have traversed Europe I do not know.

Bishop of Ross.

11282. Are they mainly Polish Jews ?—I do not know.

11283. (*Chairman.*) They do not come into the rural parts of your diocese ?—Yes, a few of them go round and do very great harm—they go round peddling.

11284. (*Mr. Struthers.*) Gombeen men ?—Yes; they sell tea of the vilest character; they go to the doors of the peasantry and sell them the tea and other articles. It is nearly impossible to keep the people from dealing with them. That is one of the causes of physical deterioration, because they are getting the vilest stuff from the Jews.

11285. (*Colonel Fox.*) Are they foreigners ?—Yes, there are no Irish born Jews.

11286. I mean those who immigrate ?—Yes, they have simply learned a little English.

11287. There are a vast number of English Jews, but what I wanted to know was whether those particular Jews you are speaking of now were foreigners ?—I think they are principally foreigners.

11288. They are Poles, Roumanians, and Russians ?—Yes, they have generally stayed a little in England first and learned a little English.

11289. I mean they have originally come over to this country as foreigners ?—Yes.

11290. (*Chairman.*) Another of the causes which you attribute is the raising of the marriage age. Of course, to some extent that is a good thing. That has been quoted here as one of the counteracting influences against physical deterioration, that whereas the age at which people contract marriage used to be much too young, now a great many postpone it to a more suitable period of their life ?—I only directed attention to that matter; I have not formed any opinion on the subject myself.

11291. You appear to think that at present the Irish marry almost at the outset of senile decay, or pretty nearly so, when they are really getting past the powers of reproduction. —Yes, a large number of them do.

11292. Why is that ?—It is the want of means—

"Before you marry,
Be sure of a house wherin to tarry."

11293. That is a sign of the providence of the Irish race ?—It is a sign of increasing providence.

11294. Would moral improvement of that sort be likely to be the outcome of a physically degenerate people; would you not expect some correspondence between moral and physical characters ?—I am not quite sure that it is a very high state of improvement.

11295. We understand that the Irish people are extremely virtuous and chaste, and if they postpone marriage to the age at which you affirm they do it surely argues most extraordinary powers of continence and self-restraint on the part of the Irish race ?—Yes.

11296. Which are very valuable moral qualities ?—Yes; those qualities have been in the Irish race back for generations.

11297. I desire to speak of them with the most profound respect, but can you say that moral qualities developed to that high point are in correspondence with decaying and degenerate physical characters ?—These moral qualities were equally pronounced and equally powerful when the Irish people were marrying at a younger age than they are now.

11298. If marriage is postponed to the late period which you describe, this continence must be of a higher character than it was in the past ?—The continence is more severely tried, but it does not follow that it is of a higher character.

11299. Surely the continence which stands a higher strain is evidence, so far as it goes, of a higher type ?—I quite admit the evidence, but I do hold that if the continence fifty years ago had been submitted to the same strain it would have stood the same test.

11300. That may be so ?—The married age has gone up, and the result is, that the birthrate has fallen very much in Ireland; we have the lowest birthrate in Europe at present.

11301. (*Dr. Tatham.*) And it is still falling ?—It is really keeping pretty evenly at this low rate—it is keeping rather steady. Our marriage rate is low also, but the marriage rate and birth-rate are keeping rather steadily at this low scale.

11302. (*Chairman.*) The postponement of marriage and the existence of small families are unusual circumstances in a country where the influence of the Roman Catholic Church is strong, are they not ?—They are unusual.

11303. Brittany, where the influence of the Roman Catholic Church is stronger than in any part of France, is the only part where the population is showing an increase ?—That is so I did not explain with regard to the moral improvement of the people what I think is the cause of the late marriage. The standard of living in Ireland has been going up. There is more seeking after physical comforts than had been the case. People are not satisfied with the same wretched hovels as they have been in the past. They are not satisfied with as cheap food as they were in the past. Potatoes are a much cheaper food than wheaten bread, but they are not satisfied with potatoes at present, and the result is that when the standard of living, or aiming at a higher standard of living, has gone up, and when the revenue of the country, the income of the country, has not increased, but diminished, it is a necessary consequence that the population must go down, and a necessary consequence that fewer people can marry, and that they must marry at a later age.

11304. In this country, we have been told that the aspiration towards a higher standard of living has come with improved pecuniary resources, but, according to your theory, it has come with diminished pecuniary resources in Ireland ?—The resources have diminished.

11305. Is it not strange that *pari passu* with diminished pecuniary resources the aspiration towards a higher standard of living should set in: is that consistent with general experience ?—Whether it be inconsistent or not, it is an indisputable fact in Ireland.

11306. It is one of the paradoxes of the Irish people, we may presume ?—I do not regard that as a paradox, because you had the Irish people living on a dietary and under conditions that were not only uncomfortable, but were, I venture to say, inhuman, and as people advance a little in education they are not satisfied to submit to inhuman conditions.

11307. And yet, at the same time, you testify to the increase of drunkenness in Ireland, which is hardly a sign of a higher civilisation ?—I think it is pretty evident that potatoes as a staple food, without bread or flesh meat, or any other substance, is not a condition which people will submit to. I do not wish to talk politics, but yet, if we want to form an exact opinion of the state of the country, we must not forget the history through which it has passed. I believe it would be just as wise for a physician to try to treat his patient by excluding all reference to the life history of the patient. In Ireland the struggle of the people for nearly two centuries was a struggle *pro aris et focis*, and while making that struggle they really were perfectly oblivious of food or drink. That struggle went on, and afterwards when we began to achieve a reasonable amount of religious liberty and afterwards of civil liberty and political liberty, the people then naturally began thinking about other things of a more physical and bodily character. That was particularly accentuated by the large emigration to America and to England. Ireland is situated between two countries that have, perhaps, reached the highest standard of living of any countries in the world.

11308. That is hardly the case in this country as far as the poorer classes are concerned ?—There is scarcely a family in Ireland which has not relatives in England or America, constantly writing home to them about the American working man having flesh meat four times a day; the brother at home is not contented with seeing flesh meat only at Christmas. Then a number of the American emigrants come back to visit their friends, and while they are at home on the visit they insist on being treated pretty much in the same style as they live in America.

11309. It must be a severe tax upon the resources of their relations ?—They generally make gifts to the friends, and that teaches Irish people a higher standard of living. The standard is creeping up while the resources of the people are going down. This puts us in a particularly awkward position.

11310. I suppose the diminution of their resources is partly due to the amount spent in intoxicating liquors?—I will come to that afterwards. Our marriage rate in Ireland for the last twenty years varied between 4½ and 5 in the 1,000.

11311. Do females in Ireland more largely outnumber the males than they do in England?—I do not think so. I have gone back over the figures for perhaps thirty years, and the male children in Ireland considerably outnumber the female children.

11312. (*Dr. Tatham.*) It is generally the case with births, but they die more rapidly?—I do not know why.

11313. (*Mr. Struthers.*) Is not the balance of emigration largely male?—We have a very large female emigration from Ireland. I think it is quite as large as the male.

11314. (*Chairman.*) Perhaps you will state what you wish to say upon this marriage rate question?—The birth rate has fallen in the last twenty years from 24½ to 23 per thousand; in England the birth rate is about 30, and Germany about 40. The marriages being fewer and being contracted when the people are more advanced in years has a very serious effect upon the birth rate. There are more parents childless, and the number of children in each family is much smaller. Whether those children born when the people are advanced in age are less vigorous I cannot say; I have not observed that they are less vigorous.

11315. They are better than the children of the very young I should think?—I think when I was a boy at school I read in Bacon's *Novum Organum* that the children of the very young are defective. Bacon was one of the earliest in investigating things of that sort. I merely call attention to the fact, I do not wish to draw any conclusion.

11316. Would you say that the increase of drunkenness among the women may have much more to say about the debility of the offspring than the late marriages?—Yes. There is an increase in drunkenness in Ireland, particularly in the towns.

11317. You use a very strong expression in your précis; you say, "The drink demon has seized on many women of the poorer classes, especially in the cities and towns, and is working sad havoc in the health of their progeny"?—Yes. That is especially the case with the wives of the artisans—carpenters, masons and smiths.

11318. Due to the fact that they have better wages and have more to spend upon stimulants?—Yes. The wages of the artisan classes in Ireland are very good—carpenters, masons and plasterers—these men have quite sufficient wages.

11319. And it is amongst the wives of that class that there has been a great increase in drunkenness?—Yes, and I am afraid amongst the women of the towns and cities generally in all classes.

11320. But you do not think there is more drinking among the rural poor?—I do not think so.

11321. (*Colonel Fox.*) May I draw attention to this point in your *précis*; you say, "In proportion as the creature comforts of the home are unsatisfying so the attraction of the public house becomes the greater." I take it that means when they have less wages. That is exactly the opposite to what you say now?—Your reasoning would be that because the artisans have sufficient wages they ought to be able to give greater comforts in their own homes and therefore that the drink ought to lessen.

11322. Quite so. If the wages are increased their homes ought to be more comfortable, but yet you say in your précis what I have just quoted?—The wages of the artisan classes are quite sufficient to keep comfortable homes, but the women are not sufficiently educated; they do not know how to keep comfortable homes. The artisan classes are only a small number amongst the total population and it is not easy for a small number of people to strike out on a new line and a new system, so that the wives of the artisans are generally satisfied with the same class of home as the wife of the farm labourer or town labourer. One man earns 30*s.* per week and the other man only 9*s.* or 10*s.* The result is that the artisan's wife, who has no higher ideal of housekeeping than the labourer's wife, finds herself with surplus cash of 20*s.* in hand and it is largely spent in the public house. Of course the creature comforts could be kept if she had sufficient knowledge or sufficient taste, but as I say, it is not easy to get a particular set of people to rise above their surroundings.

11323. (*Chairman.*) That is the first thing you suggest—the want of knowledge of this sort and the means by which it can be disseminated?—Yes.

11324. Do you think that must be done in the school or after school age?—I think that problem should be attacked in both places.

11325. You think the foundation should be laid in the school?—Yes. And the problem worked out after school.

11326. By what sort of organisation—the county councils?—The foundation should be laid in the elementary schools, and then afterwards the work should be completed through the department of Technical Instruction which works hand in hand in Ireland with the county councils.

11327. It is doing a very valuable work, is it not?—Yes, in the schools themselves the female teachers of the little children could do a great deal not by way of formal classes or formal instruction, but by way of infusing sound ideas into the children. Then afterwards my view is that the children should be allowed to leave school as they do about fourteen years of age and work in the homes for two, three and four years, and then bring them back to classes in cookery and hygiene, and laundry and other classes of that sort.

11328. Could not they attend those classes between the ages of fourteen and eighteen usefully?—I do not think so.

11329. Could not they be collected from their homes twice a week for the purpose?—I do not think they could usefully attend. As I look at the problem, first, before you can make a really good house-wife you require the mind of the person to be developed almost into the mind of a woman, and you require also that she shall have a certain amount of experience of home life. If you try to teach a girl of fifteen or sixteen I think your teaching will be to some extent wasted on her. Her mind is not sufficiently developed to take teaching in beyond mere theory; she has very little practical knowledge of home life and when she tries to apply her theory afterwards she fails and gives the theory up.

11330. You could not bring any compulsion to bear upon her later, could you?—I do not want compulsion.

11331. You merely want to give them an opportunity in the hope that they would avail themselves of it?—I am entirely opposed to compulsion in school matters. In Ireland, where we tried compulsion, we gave it up very quickly because of the moral influences that lead our people—an Irishman will be led but he will not be driven.

11332. There is no compulsory attendance in Ireland?—There is machinery for compulsory attendance.

11333. But it is not used?—It is not much used. It is found to be somewhat useful in the large cities, but in the small towns and the rural districts it has had the very opposite effect; it has set up the backs of the people against education altogether.

11334. (*Mr. Struthers.*) The point is that the compulsory law in Ireland is optional so to speak, that is to say, it depends whether the local authority chooses to apply it to a particular district?—Yes.

11335. It is not a law common to the whole country as it is here?—That is so. The adoption of the law is optional, but once it is adopted the law is compulsory. It was adopted in the town in which I live myself, Skibbereen; the local authority, the Urban Council, adopted this law. They worked it for five or six years and found that it was having a very bad effect and they dropped it, and fell back upon the old method which was the visit of the priest to the home and to the schools.

11336. (*Chairman.*) This question of course touches the further suggestion you make that much might be done to develop the industrial resources of Ireland?—Yes. I might remark perhaps with regard to those nuns whom I have under training in domestic economy and hygiene at present, I intend those ladies when they return to their various schools shall adopt two sets of classes, one set for the ordinary school children in order to give them the first elements of knowledge, the knowledge of

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the uses of fresh air, the advantage of cleanliness, some knowledge of the value of foods, and general knowledge of that kind; then afterwards when the children have gone away from school for a few years they will be brought back two or three days in the week to attend classes for a session, say, six months or possibly twelve months, in the higher knowledge. It is in that way that I intend to work it.

11337. You think they would be willing to come?—I know they will. We have had some experience already, and we find they will be willing to come. Then I make a suggestion that to carry out this improvement we would require to train the female teachers of the national schools. At present they go through a course of training of two years in the training colleges; the training is purely literary, with a little of what I might describe as mechanical work of sewing, but they have no knowledge of the ordinary work of a housewife. In fact the female teachers of Ireland have much less knowledge of housewifery than the ordinary woman. Their history is this: a little girl of fourteen or fifteen is appointed monitress in the school. After her appointment it becomes a sort of unwritten law of the family that she is not expected to wet her hands afterwards; her mother and sisters do all the housewifery, and in fact they do the personal work for this child; she is supposed to devote herself exclusively to books. She serves five years as a monitress, and when eighteen, nineteen or twenty years of age she is sent to a training college in Dublin, and spends two years there exclusively at literary work with the exception of needlework, which is part of the course. Therefore she comes out with no knowledge whatever that a woman ought to have with regard to housekeeping—with far less knowledge than her mother or her sisters—and she is set then to teach the girls of the parish. There is no fountain of knowledge from which knowledge will emanate. If she herself appreciated this information and had the information in her mind even without any formal teaching of the children, in my view there would be a sort of magnetic current passing from her to the children which would greatly improve them in these matters.

11338. The Agricultural and Technical Department in Ireland might take this up?—I think the National Board of Education should take it up.

11339. Do you not regard the principles of hygiene and the management of children as a branch of technical instruction for women?—We suffer in Ireland a great deal from what we call red tape. This is just one of the points where red tape comes in. In Ireland the enormous bulk of the population are educated in the national schools and have no other opportunity of education whatsoever. Then if you want to get at the population through the Technical Board of Education you will have to cover the country over with a second set of schools, which would of course be an enormous waste of money and be quite an impossibility. The work of the National Board of Education costs something like £1,250,000 a year, and the Technical Board of Education for the whole country has got the noble sum of £62,000 a year; so that it is quite absurd to rely on the Board of Technical Education to do this work.

11340. Not in the case of the older girls—the young women?—How will you get the young children—how will you enable the young girls of ten, eleven, twelve, thirteen and fourteen years of age to get any knowledge whatever of those subjects?

11341. (*Mr. Struthers.*) Do you think you are quite fair to the National Board in this matter. Have you enquired into what they have been doing lately in the matter of instruction in domestic economy and cookery?—Yes.

11342. You know that about three or four years ago they brought out a revised programme as the result of the investigation of a Commission on practical training?—I am quite aware of that.

11343. And that Commission recommended—and I understood at all events that the National Board had carried out the recommendations—to have an arrangement for having domestic subjects taught throughout the country?—Yes.

11344. And also that training in domestic subjects should be made part of the training college course?—I was not aware of the latter part.

11345. That was the recommendation and I understood it was carried out?—It may have been, but I am not aware of it. That is the very thing I recommend should be carried out.

11346. Also you know the training college under the direction of Archbishop Walsh?—Yes.

11347. And even at the time that this Commission of which I was a member was making inquiries there was instruction, if I remember rightly, in domestic economy, and domestic subjects being given in that training college because of Archbishop Walsh's influence: his own particular views were being carried out there, so that I should think there is a considerable amount of direct preparation of teachers for giving this kind of instruction, and more than that, there would be the actual instruction given in the schools in a good many districts in the country?—What you say is quite correct that there is a change of programme, and as the result of a change of programme, a change in the system, and there was some effort in the national schools, some attempt to give the girls more information on the subject; but quite recently the National Board has abolished that programme and they have gone back to their old lines, so that any attempt at cookery and domestic work in the national schools is now given up.

11348. When was this change made?—Within the last six months.

11349. That is news to me?—It was quite recently. One of the reasons for the change, so far as I know, was that the teachers were incapable of doing any good from want of some knowledge themselves. They were incapable of doing any good in domestic work. Therefore, I think, if we are to approach the question with any hope of success, we should commence with the teachers, and in their training classes give that instruction, and then gradually the thing would spread over the country.

11350. As I say, I understood that was carried out?—It may have been. I am not aware of it. I never heard that it had.

11351. (*Chairman.*) I do not understand you to say that that part has been abandoned at any rate?—If that was ever adopted, I have no knowledge that it had been abandoned.

11352. (*Mr. Struthers.*) Do you know anything whatever of what has happened with regard to another recommendation of the Commission which, I understand, has actually been carried out, namely, that there should be a certain number of instructresses in Domestic Economy, highly qualified women, such as the lady you have got over from Scotland to instruct your own nuns, who will be stationed at certain centres in different parts of the country to instruct the teachers of a given district at the centre with a view that these teachers, in their turn, might teach the children in the schools. That was the recommendation made by the Commission, and I understood that it was to be carried out by the National Board: Was it carried out?—It was carried out. The instructresses came for a few weeks to the various centres, and the female school teachers of the district had to assemble one or two days in the week for a few hours, and the instructress gave them certain information with a view to get them to start this work in the schools. That was actually done, but you will very well understand that if a woman of thirty, forty, or fifty years of age has not had much domestic knowledge up to that time, a few lessons will not get her into what I may describe as the housekeeping groove.

11353. First of all most of the women are younger?—I have known women of sixty years of age under that course of instruction, and I have known them in their schools actually trying to carry out the instructions. I quite approve of the effort, and I regret that it has been given up, but you see very well that effort cannot have very much efficiency. If we really want to get at the thing in an efficient way, I see nothing for it but to give young women in the training college a twelve months course in domestic economy, laundry, hygiene, and other work of that sort, so that you really form their minds.

11354. We certainly recommended that this was to be part of the training college course, and I thought it was

carried out ?—I do not personally believe in mere dabbling at a subject of this sort. If in the training colleges you take one hour in a week for domestic economy subjects, I do not believe that will ever influence the mind of the teacher in any very serious way.

11355. (*Chairman.*) You want it to be continuous and practicable ?—I would be satisfied with a six months course, provided they could devote their whole time to this and nothing else, and that they had no literary work whatever to do, in the hope of getting their minds into a particular groove.

11356. (*Colonel Fox.*) Do you not think it is better to have it once a week spread over two years, so as to keep it perpetually in their minds ?—No, I prefer the other system. If you take it only once a week the main object of those girls will be the literary work. The old tradition is that they should do literary work and nothing else, and if you take them over a two years course the main object before their minds will be the literary work, and this lesson once a week will simply be regarded as a sort of extra, just as they would regard a lesson in physical drill or something of that sort. It will never leave that impress upon the mind that you want.

11357. (*Chairman.*) It will not give it sufficient prominence, in fact ?—That is so. If you devote a certain portion of the course to it, suppose it was thought too expensive to add a year to the course, I would take six months off the two years, and give them one and a half years at literary work, and six months exclusively on this work.

11358. (*Mr. Struthers.*) Have you tried to impress these views on the National Board ?—No, it is the first time I have brought this point out publicly.

11359. I think it would be well worth while bringing it before them ?—A great many of my other views have come out publicly on various occasions, but with regard to this one this is the first time I have mentioned it publicly.

11360. (*Chairman.*) Are the National Board of Education obdurate to influences from outside ?—Rather.

11361. More so than the Education Departments of England and Scotland ?—I cannot institute a comparison. You must know both terms before you can compare.

11362. Is not a great deal being done for the development of the educational resources of Ireland by the Technical Board ?—As a member of the Board of Agriculture, I am bound to say in self-defence that we are doing a great deal.

11363. It is doing a great deal more than the National Board of Education is doing in its sphere ?—I say we are working very hard, but we have have not made much impression on the country so far, and it will take a very long time before we have made very much impress. Then with regard to the resources at our disposal, we have to develop a nation with thirty-two counties, and we have for the purposes of developing the agricultural resources of that population £100,000 a year, and for the whole industrial work, the technical education of the female population which we have discussed, and the technical education of the male population, the establishment of industries and factories, etc., £62,000 a year. That does not carry one very far.

11364. You think you are proceeding on the right lines, and what you want is development ?—Yes. Up to this our money was quite sufficient for us, because we were only making a beginning and simply directing the mind of the country into this particular groove. I think we have been making very considerable progress in getting it into this groove.

11365. Will not your resources be increased commensurate with the amount of work you have to do in future ?—I hope so, otherwise our work will be hopeless.

11366. (*Mr. Struthers.*) Could not the National Board of Education spare you some of the £1,250,000 ?—I do not think so; the salaries of the teachers in Ireland are paid by the National Board, and that absorbs the greater portion of the money. The schools in Ireland are maintained on the grant outside the school buildings. Most of them were erected in Ireland by the voluntary contributions of the people. In later years they have been erected by a two-thirds grant from the National Board; but in former times they were erected exclusively by the voluntary contributions of the people. At present the schools have to be kept in repair by the voluntary contributions of the people. Then whatever fuel there is in the schools has to be procured either by voluntary contribution or the children take it themselves. It is not an uncommon thing for the poor little children to have to take a sod or two of turf on a winter's morning to school. I might set it down as one of the causes of the poor physical development in Ireland that the school children are unfairly, in fact I might say cruelly, treated in the schools themselves. I see now many of these little children going to school all the winter barefooted, and in some instances they go to a school where there is no fire. The country children have to travel a couple of miles to school; a great many of them have no cloak or shawl, or anything to cover them. Ireland is rather a rainy country, and they go wet into the school and sit down there shivering all day.

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11368. (*Chairman.*) Does not the National Board insist upon the schools being properly warmed ?—No; there is no means of warming them except when the manager of the Catholic schools, who is the parish priest, or the manager of the Protestant schools, who is the rector of the parish, make parochial collections amongst the people.

11369. (*Mr. Struthers.*) You speak of this money which is given by the National Board being required for the proper warming and lighting of the schools, because otherwise they have to depend on voluntary contributions; that is because you do not levy a rate for the support of the school in any part of Ireland ?—Yes.

11370. In England, besides the Government grant there is a rate levied in the locality which gives as much money ?—Yes, I am aware of that. I will discuss that on the next point, the over-taxation of Ireland, and I will show that so far from being well-treated in that matter it works out exactly the other way.

11371. (*Chairman.*) I am afraid we cannot go into the question of the over-taxation of Ireland—I do not know that it touches the points we are concerned with except so far as it affects the individual Irishman. Can you show that taxation renders it impossible for the Irish peasant to reach even the lowest standard of human comfort ?—Yes, it is from that point of view that I look at it.

11372. In what respect is he so heavily taxed ?—Taxation in Ireland is almost entirely indirect taxation—I think 75 per cent.

11373. Tea, whisky, and tobacco ?—Yes.

11374. As you note whiskey and tea as being two of the most deleterious things, if he leaves them off he is taxed very little ?—Tea and tobacco are the most serious taxes upon the great bulk of the people of Ireland.

11375. (*Mr. Struthers.*) Those are not necessary things ?—Metaphysically they are not, but if you take the habits of the people they are necessary.

11376. You wish to change those habits ?—I am not a smoker myself, but I regard tobacco as a necessary of life at present, taking the habits of the people into account—tobacco and tea.

11377. (*Chairman.*) I should have thought you wanted them to be made prohibitive ?—I would be quite satisfied if the duty on tea were perhaps a little prohibitive. If you were to tax tea at 10s. a lb. I would be delighted.

11378. You would not advocate its being lowered at any rate ?—Certainly, I advocate its being lower.

11379. That would lead to the people drinking more tea ?—No, I hold that is quite illogical. The tax on tea is sufficient to drain the unfortunate labourer's wages away, but it is not sufficient to prevent him from drinking tea, and it is not sufficient to make him go to other foods which are cheaper and better than tea, so that the tax is high enough to injure him and is not high enough to protect him. The same with tobacco. Tobacco is taxed at present at something like 3s. a lb.; if you put it at 20s. a lb. I am quite satisfied; but the Chancellor of the Exchequer is not likely to do that; there is a point beyond which the tax is not productive.

11380. (*Dr. Tatham.*) Before you leave the question of schools I want to ask you whether you have not noticed that children come to school either imperfectly fed or practically half-starved, and have to learn their literary

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task, although they have been very insufficiently fed—is not that commonly the case in Ireland?—Yes.

11381. Should you think that that is one of the causes of physical deterioration?—Of course the mental strain, added to insufficient feeding, has a very bad effect, I suppose.

11382. I suppose there are no provisions of any kind by means of which the children may receive any food at all?—No, there are no State provisions. Really from charitable sources there are provisions, but I confess, although it may seem strange, that I am strongly opposed to such provisions.

11383. You do not want to pauperise the people?—No. I think that if the children come to school and if they get food at the school, instead of relying on their parents to feed them, it has a very demoralising effect.

11384. I am quite sure you will agree with me that if a child is brought to school compulsorily—is dragged there if you like, it is almost inhuman to keep that child there and to expect intellectual work from him during the day unless you feed him?—It seems so.

11385. (*Mr. Struthers.*) I have been told that the schools are voluntary?—Yes; the attendance in Ireland is voluntary—but even in the case you make, Dr. Tatham, I would hesitate a long time before I would agree with you.

11386. Would you accept the alternative?—I quite admit the physical hardship and the cruelty to the child, but I attach so much importance to the moral feature—the character of the child—the sense of self-respect, the sense of self-reliance, and all those other virtues, that I really think I would prefer physical hardship and cruelty on the one hand by leaving them hungry, rather than demoralising them on the other.

11387. (*Dr. Tatham.*) It does not mean mere hunger—it means starving and dying in fact, from my point of view as a medical man?—It would be very hard to see them die.

11388. It is killing them by inches?—Even physical death might be preferable to moral degeneracy—at least, looking at it from a high race point of view. Of course I know that is rather a hard doctrine to lay down, especially for a Christian clergyman.

11389. (*Chairman.*) Have you anything further to say upon the question of taxation?—The way it works out in my mind is this. This is not the first time I have given expression to these views in public. In Ireland we cannot have a strong, healthy, and vigorous population except we have them fairly well fed, and fairly well housed and clothed. The means are not there for the sufficient feeding, housing, and clothing of the people, and in order to supply the means there must be two things done; we must try and increase the production of the country on the one side, and on the other side we must try to lessen the drain on the country. We must then try and widen the margin of living. Now the margin of living is narrowing instead of widening. The price of agricultural produce of all kinds has gone down and is still going down.

11393. Meat?—Yes, certainly.

11394. Has it gone down within the last twenty years?—I myself remember distinctly paying 11d. and 1s. for beef and mutton in Ireland.

11395. (*Dr. Tatham.*) When was that?—In the '70's I paid it myself. Now I can purchase the same beef and mutton for 7d. and 8d.—that is a serious fall.

11396. To the consumer?—I purchased butter in the '70's for 16d. a pound. I can purchase exactly the same class of butter at the present time for 8d. a pound. The average price got for creamery butter last year by the creameries was about 10½d. as against 14d., 15d., and 16d. a pound in the '70's.

11397. (*Chairman.*) Is that for consumption in Ireland, or for export?—10½d. is the export price for which it is sent to England, but it is that price which rules the prices in our markets in Ireland, so that there has been a very serious drop. Taking all the agricultural produce, altogether in thirty years there has been a decrease of 25 per cent. on the income of the agricultural classes, so that their margin of living is narrowing while taxation is increasing The late Mr. James M'Cann, M.P. of the Stephen's Green Division, a great authority on statistics, holds that the total income in Ireland at present is not more than about £45,000,000 for 4,000,000 of population, which would give £11 a head. To my own knowledge, with regard to the labourers of Ireland, who are a considerable class, and the smaller peasantry, the total amount of means in the year on which they have to support their families is not greater than £20 for a family of five, that is £4 a head.

11398. Prices according to you have fallen, but in different proportion; you instance the great fall in the price of food: that ought to be of assistance to the people?—That labourer and that peasant are not interested in the price of beef or mutton or butter, because from year's end to year's end they do not taste those commodities. There are plenty of labourers and peasants in Ireland who never in their whole lifetime saw a morsel of beef or mutton in their houses.

11399. Is bacon dearer or cheaper than it was?—Bacon has kept a more average price than the other articles. With regard to bacon, formerly the classes with whom I am dealing had not meat except about Christmas time; now in the poorer parts of the country most of them would have a little bit of pig's head or some cheaper class of bacon for their Sunday dinner, and in other parts of the country, where the peasantry are a little more substantial, they have bacon almost daily for dinner. But you see the margin of living in Ireland is exceedingly small. The wages of farm labourers are only about 9s. a week. That is a matter I have gone into. In England the wages are from 15s. to 17s. a week for farm labourers. Five is the average family of the labourer. The 9s. a week will be reduced by wet, and when the labourer is sick, and so on, so that I am rather above the mark when I say £20 a year.

11400. What rent does he pay?—One shilling a week for his cottage.

11401. (*Chairman.*) That is very much less than the English agricultural labourer.

11402. (*Colonel Onslow.*) Is that rate of wages general all over Ireland?—Yes.

11403. In certain parts of England the labourers' wages are only about that amount?—The question was investigated quite lately in connection with the Irish Labourers' Bill which is now before Parliament.

11404. In some parts of England the labourers' wages are only 9s. a week?—I saw in some return that the average wage of England was set down at between 15s. and 17s.

11405. (*Chairman.*) The fourth point is the reduction in the number of public-houses?—Yes.

11406. To that extent, of course, you think that all agencies, religious and other, ought to work together?—Yes.

11407. And bring such pressure upon the people as to restrain their consumption of alcoholic liquors?—I think the first pressure should be brought on the Government. I fight these questions very hard myself; I make speeches, I attend meetings, and I preach sermons. I use all the influences I can.

11408. Is it the rural districts or the towns where there are this large number of public-houses?—Both.

11409. I do not suppose the reduction of public-houses in the town would have much effect. More people would go to those that are left?—It would have the greatest effect in Ireland. I am as convinced of that as I am of my own existence.

11410. It is rather a speculative point?—It is a question I have well considered and examined.

11411. It has not had that effect in England, where it has been done?—I am quite prepared to admit that, if you wish, but I am perfectly certain it would have the effect in Ireland.

11412. Why?—The reason is this. In the town in which I live myself the population of the township, part of which is in the country, is 3,208. In that town we have sixty-two public-houses; there is one for every fifty. The population of the town itself is hardly 3,000. Then those publicans are selected by the brewers from the families that will have a number of relations, and they are by preference young girls. They are selected specially with a view to draw the relatives and friends to bring custom to the public-house. You probably know that in Ireland we are a very clannish race, and the relatives will stick

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up for one another; the result is that they will all gather round the new publican for the purpose of maintaining him to their own destruction. In the course of three or four years a publican very often becomes a bankrupt, and the brewer squeezes him out and brings in somebody else of a similar class. In the meantime the relatives and friends of the outgoing publican have become fond of drink, and when their friend goes out they continue the practice, and with a new publican a new set of people is corrupted. If I could reduce the sixty-two houses to twenty it would have a great effect on the drink.

11413. If it is a matter of the personal relations of a publican with his *clientèle*, that puts a different complexion upon the subject?—Yes. Lately I discussed that matter in the newspapers; I fought it in the licensing courts at my own expense. There were two licenses given against my opposition by the canvassing of magistrates, bringing them in, and I intend to take one of the licences to the King's Bench. It is rather an expensive process, and I am not a very wealthy man, but I intend to fight the matter. Skibbereen is a market-town, and there are six contiguous rural parishes whose people frequent the fairs and markets. It has been said that the sixty-two publicans are largely supported by the country population coming into the fairs and markets. I have gone over the six parishes, these purely rural parishes, and in the six purely rural contiguous parishes there are sixty public-houses scattered over the country. Roughly, the population of the parishes would be about 18,000—3,000 a parish They have sixty rural public-houses for their population without giving any assistance to the publicans in Skibbereen.

11414. Is there no restriction placed on the granting of licenses in Ireland?—Yes, two years ago there was a restriction placed that no new licence should be granted.

11415. Nothing has been done to diminish the number that are at present held?—No, I regret to say that the present Government want to restrict the magistrates in England from reducing them, and that will do us enormous harm in Ireland.

11416. By its moral effect?—Yes, I am quite satisfied that the efforts of the temperance reformers in Ireland are helpless so long as we have that number of public houses. Over the whole of Ireland we have one public-house, taking the whole country together, to about every 220 persons.

11417. (*Dr. Tatham.*) Is potheen the illicit still liquor used?—No, it is practically dead.

11418. Why is that?—For several reasons, the vigilance of the police had a good deal to do with it, also the clergy made a great effort against it, because it was found that not only was there the injustice of defrauding the revenue, but the moral effects on the family and on the neighbours were very bad; they all became drunkards from drinking the illicit whiskey. Therefore all the saner agencies in Ireland set their mind against the practice. Personally I have never come across illicit distilling.

11419. We have heard here that it is because the risks attendant on illicit distillation are so great that the price of the commodity is raised, and it is cheaper to buy the exciseable article?—That is the chief cause. There is one remark I wish to add which was suggested to me by a doctor in connection with decayed teeth. This gentleman suggested that it would be most useful if dentistry in Ireland were made a part of the medical charitable relief that was given, and that a dentist should be paid fees just as the medical officer is paid fees for attending to physical illness. Amongst the poor people in Ireland the dentist's charge of 5s. for dressing each tooth becomes an impossibility. A labourer in receipt of £20 a year for the maintenance of his whole family could not possibly spend £1 or 25s. on a child for improving his teeth. If the teeth were improved, it might be the means of preserving the health and even the life of the child. Just as the medical authorities will give relief in physical disease, so the dentistry should be made part of it.

11420. You spoke just now of the notable decrease of typhus within your memory; is that exclusively in the town or city, or is it in the rural districts also?—It is more marked in the rural districts than even in the towns. I have heard myself old priests say—men who were priests in the 'thirties and 'forties—that there was never any period of the year that some part of their parishes had not typhus fever; now there is very rarely a case of typhus in the country districts. When it does break out, it spreads very rapidly.

11421. It used to be said that Ireland was the home of typhus?—Yes, it has died out very largely.

11422. I suppose when it does occur in a crowded dwelling the tendency is for it to spread now just as much?—Yes, there has been some slight improvement in the dwellings but the improvement is not much.

11423. Do you know whether the district of Donegal is a typhus district?—I am not familiar with Donegal, and I have not come across any statistics with regard to it.

11424. With regard to enteric fever, is that within your knowledge a very prevalent disease in the poorer districts of Ireland—typhoid as it is commonly called?—It is not very prevalent. Some years we have a good deal of it. After a particularly dry and warm summer, I know we have a great deal of it. What strikes me is that water courses and wells get dried up during the summer and cattle and other animals go in, and there are droppings, and then when the rains come in November it breaks out.

11425. It goes into the shallow wells?—Yes, about November and Christmas and that time of the year. A few years ago we had a wet autumn in the country—I think 1895 or 1896—after a particularly hot summer. It comes periodically like that.

11426. It is mainly water-borne?—I think so. It generally comes from November to Christmas—at the fall of the season.

11427. I suppose the water supply of the country is mainly from shallow wells?—Yes, practically exclusively so—by streams and wells.

11428. You spoke of a large number of persons dying at just over 100 years; do you know at what period the registration of births became compulsory?—In 1863, I think.

11429. So that practically you would have to depend pretty much upon guess work in determining the ages?—To some extent, but, curiously enough, the Irish people are very accurate about ages and dates; they are exceedingly fond of genealogical information and discussion in Ireland and they are very accurate about dates. I notice the Registrar General remarks that he investigated several cases of those high ages and satisfied himself that they were correct. It is my opinion that the people are very correct about them.

11430. And you think it is pretty safe to conclude that there is not very much error?—I am quite satisfied that you have a number of those people at very great ages.

11431. (*Mr. Struthers.*) Is emigration still keeping up to its former figure, or is it falling off?—It has shown a tendency to fall off.

11432. Not more than a tendency?—It goes up and down generally according as there is agricultural prosperity or agricultural depression in Ireland. The 'seventies were a particularly prosperous period in Ireland and emigration in the 'seventies fell very low. Then we had a diminutive famine—not so great as the famine of 1846—in 1879; it was the cause of that very fierce political agitation which grew out of it, which you all remember in 1879-1881. The emigration then, in consequence of that famine, went up enormously for three or four years again. Then when there was a little more agricultural prosperity it began to fall again. It has been going up and down in that way. But of course the total numbers for the last twenty years have been considerably less than they had been at earlier times. In fact the sources are becoming largely exhausted. Then, as I pointed out earlier, the fact of the strictness of the United States authorities with regard to emigrants has checked emigration considerably.

11433. (*Chairman.*) Has it sent them largely to England instead of the United States?—Not very much. There is a kind of political antipathy which keeps our people largely out of England.

11434. There are a great many in Glasgow?—Yes, Glasgow, Liverpool and Manchester—in the large seaports and in the large industrial centres you have a very large

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Irish population. It is the same in South Wales, Cardiff, and Swansea.

11435. (*Mr. Struthers.*) Would you say that emigration in Ireland is distributed over the country as a whole, or is it confined to special districts?—At present it is rather confined to districts. A great part of Leinster and a considerable part of Munster have become exhausted. The population has been drained out and the emigration has practically ceased in those districts. The same process of exhaustion is going on in the more populated districts. The district I live in at present is very much more populous than a great part of Ireland. If you take the number of people elsewhere the population of my district is much higher. Emigration from there is very active, and will continue very active until that district and other districts like it exhaust themselves down to the level of the rest of the country.

11436. You are using exhaustion in rather a figurative way, are you not?—You mean bringing it down to a reasonable number of people per square mile?—I do not hold it is a reasonable number of people per square mile, because we have got gradually beyond that point in Ireland.

11437. Take your own district of Skibbereen and its neighbourhood, there is still emigration going on in the district?—Yes, actively.

11438. But is not the population in that district slightly beyond the natural resources of the country?—I do not think so. It is beyond the actual resources of the people to live, but it is not at all beyond the resources of the district.

Mr. David Crichton Lamb, called; and Examined.

Mr. Lamb.

11439. (*Chairman.*) You have been an officer in the Salvation Army for some years?—Yes.

11440. That position has given you peculiar facilities for observing the habits of certain classes of the population?—Yes.

11441. Is it practically the lowest stratum of the population which you come into touch with more than any other?—Undoubtedly.

11442. And from the ramifications of the society your information of that class is pretty extensive?—Yes.

11445. What opinion has it led you to form as to the existence of physical deterioration?—I have not made it a special study.

11444. I merely wish you to state your impression?—My impression is that the conditions under which many of the poor are forced to live is very much against their physical and moral development.

11445. Are those conditions worse now than they were when you began your work in connection with the Salvation Army?—The conditions of the other classes have improved so much more.

11446. You mean relatively they are worse?—Yes, relatively they are worse.

11447. But are they absolutely worse?—No. On the whole, I believe, they are better.

11448. And you say that absolutely there is a larger class in this lowest stratum than there was?—I would not like to express an opinion upon that.

11449. I suppose you would confirm the opinion of most of the witnesses that we have heard, that ignorance as to the selection and preparation of food and overcrowding were the principal causes of that deterioration?—Yes.

11450. Of course that presses with special severity upon the child population?—Yes.

11451. You have some experience of the efforts which have been made to feed school children?—Yes.

11452. Has that been done in a way which has in any sense demoralised the parents?—No.

11453. By sapping their sense of responsibility?—No. We have recognised that danger, but our view has been this: that the children are there and they are hungry. Forced to go to school, yet incapable of learning while starving. We realise that we must not do anything to remove parental responsibility, nevertheless as practical humane people we say this state of affairs cannot exist. With one hand we are doing this work of amelioration—with the other we are fighting to alter the circumstances which bring about the necessity.

11454. Have you conducted the feeding operations in connection with the school managers?—Yes, and frequently distributed the tickets in conjunction with the teachers, but largely through our own people who know the poor people. It is not always those who make the loudest cry about their poverty who are the most needy.

11455. You think, as a rule, relief has been given to the most deserving people?—Yes. Then we have created what you might call a mild fiction by giving them 1½d. worth for ½d. or ¼d. as the case may be.

11456. They have contributed something in all cases?—Yes.

11457. Do you do anything to inculcate amongst the very poor some knowledge of the best way of feeding young children when you get the opportunity?—Yes.

11458. You look upon that as part of your *modus operandi*?—Yes, particularly in our slum work and rescue work.

11459. Which is directed generally to elevating this class as far as it can be elevated?—Yes; for instance, our slum officers in visiting often find the greatest waste going on very often amongst the poor. They would start and direct the youngsters, or the woman herself, in the house to make broth from the scraps which may be about; then she goes and cleans the baby or pays a visit next door, returning to see what is going on.

11460. You think some good has resulted?—Yes.

11461. And in regard to the housing conditions, bad as they are, I suppose they are better than they were. A great deal has been done within your experience to remove some of the worst plague spots from the map of London?—Yes, but the conditions in many quarters are still very bad.

11462. Are the new borough councils doing something towards the amelioration of those conditions?—I do not think they have done much so far. You see the model dwellings are, in many instances, even worse than the old areas.

11463. In point of density of occupation and squalor?—Yes.

11464. Are those model dwellings under the regulations of the county council?—Yes; they are bound to be under the general regulations.

11465. But they are not run by them?—No.

11466. Only built in accordance with plans which they have approved?—Yes.

11467. And you find the conditions as gross and pitiable as in some of the worst rookeries they have displaced?—Worse.

11468. Why?—That is a very difficult question to answer, but you have at once the congestion in a small area; the children are thrown more together in the courtyards and on the stair landings instead of being out in the street.

11469. They are on the balconies and passages and stairways?—Yes; which are badly lit very often. And then you have dust bins and other things getting out of order, and you have the whole population thrown more closely together.

11470. That has added to the density of the people?—Yes. There are many model dwellings which are a great improvement on the old slum areas, but nevertheless, there are dangers in many of the model dwellings.

11471. But they are dangers which with intelligent supervision might be guarded against to a great extent?—Yes.

11472. Many of them have not that intelligent supervision?—That is so.

11473. Is not there a porter, or someone who has some sort of general contral?—Practically there is, but after all

he is a mere hireling, and wants to get done with as little work as possible.

11474. And he is not armed with sufficient authority ?—He is a type of man who would not care, and who would not have the ability to do the work.

11475. Do you think, strictly speaking, insanitary conditions are reproduced in those buildings of a worse character ?—I could not say from my own knowledge.

11476. Surely they are built on a plan which should secure fresh air in perhaps greater quantities than are to be found in some of the low slum dwellings ?—Yes; that might be admitted.

11477. You think the standard of morals in some of them is very bad ?—I know it is.

11478. From the mere fact that so many families being herded together with easy access to each other ?—Yes; and the moral contagion. If you have more people in a given area the risks are greater.

11479. It tends to depress them down to the lowest level rather than raise the worst to the upper level ?—That is the tendency. Then if you have one bad woman or bad man in the neighbourhood your risks are greater than if it were in a street where there would be less likelihood of contact.

11480. I should have thought it might often happen that her own evil tendencies or habits might be to some extent controlled by a better opinion round her ?—It would if the right people were round her.

11481. But they are very susceptible to evil influences to begin with ?—Yes; it is like the old story of the bad apple and the four good ones round it.

11482. In regard to these conditions of overcrowding which you describe here, you say one of your nurses recently attended a confinement, and that the father and mother and six children were in one room; that was not in a model dwelling ?—I could not say; it was reported to me.

11483. There is some kind of minimum standard of health which the county council apply to the occupants of rooms; they aim at insisting on a minimum cubic space? —Yes, but it is not applied.

11484. But it is applied in certain cases. You think it might be much more stringently applied than it is ?—Yes. Of course you would have a serious displacement of the population.

11485. Would it not be better to face that ?—I think so definitely.

11486. I suppose a large number of them would by the ordinary operation of supply and demand find some place to go to ?—Undoubtedly.

11487. And the worst would have to be dealt with by some exceptional means ?—Yes. I have an idea which I have talked over with several people. Some of them think it is impossible; others think it should be tried—the taking over of one of these worst areas and uniting all the social reformatory agencies there are about and putting in a resident magistrate who would enforce the law. Take the case where this woman was. The doctor, or the nurse, or the sanitary inspector would report that, and the magistrate would go down if necessary and satisfy himself, or take a report. In another case if there were sickness he would inform the nurses who were in the district, and he would also go or send to some employer of labour and invite his cooperation and say, 'This person will have to be shifted, whatever the consequences are," because of the existance of an evil which could not be tolerated. My idea was that if it were reported to me that a woman was drinking and neglected her children, the Society for the Prevention of Cruelty to Children should report that and the woman should be warned. If the conditions were bad or doubtful, the magistrate should put on his hat and go and look into the matter for himself.

11488. You do not think there is information enough of what is going on ?—There is information enough, but the machinery is cumbersome and there is a difficulty about getting the right information to the right man.

11489. At the same time the law provides for bringing home responsibility of that sort ?—Yes, but it is too cumbersome.

11490. It is not direct enough in operation ?—No Then there is a certain helplessness about it, that is to say, unless this resident magistrate was specially dealing with this whole question, the woman would come up and say, "I cannot get a house," which is perfectly true; then the other agency would have to come in and find room. At present the magistrate takes that into consideration and gives time. The landlord may want to get a family out, but the thing drifts, and what can the officials do ? *Mr. Lamb.*

11492. Nothing is done and they remain there ?—Yes.

11493. Do you think the owners of this class of property would wish to get rid of these people very often if they could ?—I think the first tendency would be to lower the rents, but I do not think that should stand in the way.

11494. I suppose the rent question is the great difficulty ?—Yes. Then when you come to certain classes of the people it is not only that, but there is the fact that the woman cannot go and look after a house, and the man cannot, and they must drift on, and deterioration sets in.

11495. Would you charge it upon the local authority to find a place to which these people should be transplanted ?—No; I would not ask for new powers, because I do not think you would get them, but I would ask for the enforcement of the existing health bye-laws. I think there is enough legislation to deal with it, especially if the work of the voluntary agencies could be directed.

11496. How would you secure that enforcement ?—The only new thing that I would go for would be the resident magistrate; that is the only new idea. He should be an expert, and should lay himself out to do this class of business entirely.

11497. You would issue a closing order upon these premises ?—Not exactly a closing order; I might repair the premises, but I would take the whole area and proscribe it—the initial difficulty is the only difficulty—and then let all the officials in that neighbourhood know that they are expected to do their duty, and that they will not be absolved from doing it.

11498. A certain standard would be enforced in that area ?—Yes, and the magistrate would do whatever was necessary to enforce it.

11499. Of course you have to take into account the habits of the people, which would make the enforcement of any particular standard of decency difficult, at any rate, for a time ?—You would find a great variety of character, of course, and what might succeed in one case would fail in another.

11500. There would be in any area a residuum which would be quite inaccessible to efforts for their improvement ?—No, I do not agree with that.

11501. You think that something might be done everywhere with proper care ?—Every man, woman, and child living will respond to some effort. If one effort fails, try another; but I would keep on trying until I got the right method.

11502. You want a considerable machinery for doing that, do you not ?—I do not think so.

11503. Has the local authority sufficient resources ?—It must be left to charitable or religious agencies in a large measure, must it not ?—If a woman neglects her children habitually, although her husband brings her in fair money, and if she drinks and lies in bed simply through laziness and drunkenness, I would put the machinery of the society for the Prevention of Cruelty to Children in motion to watch that woman. She would be given fair warning, and if she were a Roman Catholic, or Church of England, I would call upon a minister of whatever religious persuasion she belonged to and give him the facts, and send him to visit her, or perhaps some district visitor. Perhaps the district visitor would stay the first day and get the woman through her difficulties—perhaps go in at half-past seven and help her with her children and with the fire. If that did not answer, I would take her, so to speak, by the scruff of the neck and give her three day's imprisonment.

11504. You recommend drastic methods ?—Yes, I would not stop at letting things drift.

11505. The drunken condition of a great many of them renders them insensible to moral suasion, or even to threats of severer measures ?—Yes.

11506. I suppose you would argue that in dealing with the residuum, machinery would have to be employed of

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the same kind as the experiment at the Hadleigh colony, in the last resort?—That would be a comparatively small fraction, I feel sure.

11507. You feel that by methods such as you indicate the numbers that would have to be treated on these lines would be inappreciable?—Yes.

11508. I mean that they would not involve a heavy charge on a community of that kind?—I do not think so at all; the existence of it would have a very salutary effect. Following the same figure again, if the woman next door were inclined to neglect her children, and she saw what was happening to her neighbour, that knowledge would hold her up to her duty.

11509. It would have a salutary effect upon her neighbours who were inclined to fall short in their duty?—Yes, I found it so when the Guardians of St. George's (Hanover Square) Union prosecuted a man for failing to maintain himself. They decided to send down to Hadleigh twelve men, and this is what happened. The master of the house came to see me first. He said, "We are sending down twelve men; there are six decent fellows and six who are as fair a type of the rascal as you could see." I said, "Give me twenty-four hours between and send me the decent six first." The second six were a "bright" lot. The first six were put to work without any interference from me, but the second six simply would not start. One fellow said that the master had promised him clothes. He said, "Look at my boots;" he was the spokesman of the whole six. I said, "My dear fellow I have seen better men than you work in worse boots; however, what did they cost you?" "Eighteen pence." "Very well—and the trousers?" "Ninepence." "And the vest?" "Sixpence, and the coat 2s." I said, "We do not work with our coats on here and we will not include that. If you destroy any of those clothes working here I will see that you have as good a rig-out when you leave the place. Now go on with your work." Then I turned to the others and said, "That is fair enough is it not," and they said, "Yes, that is fair." Then he produced a medical certificate and said, "I am not able-bodied."

11510. This all happened in your colony?—Yes. I tell you this to illustrate the facts. He pulled out this medical certificate. I said, "That is curious; did not the doctor see you yesterday;" and he said, "Yes." I said "What is the date of the certificate?" He said "It is March." I said, "Here is one dated yesterday which I have received by post. You can put the other one in your pocket for somebody else; it is no good here." My foreman then took him in hand. We tried him at digging and then put him on bird-scaring, and he could not even do that. He had the stupidity to fall back on the rates and was prosecuted. He spoke of our place in a certain way; in the *Times* it was referred to as a "verminous place," and the *Morning Post* had it a "sermonous place." Mr. Shiel heard what he had to say and then said, "Three weeks' hard labour, and if you come back it will be three months." That had a very great moral effect on the fellows at the colony. When this fellow came back again at the end of the three weeks he asked if we would give him another chance, and I said, "Certainly," and we gave him one. He thought we would give him "beans," but we were glad to see him; in fact I was very glad to see him, because it was a very good object-lesson. Soon after this at one of our religious meetings he got converted. The result in his case was entirely satisfactory; he is now in a position in London and has been for the last six months, giving every satisfaction.

11511. That is what you think is wanted, making those who live in these bad conditions have an object-lesson presented to their minds of what the law can do if it is enforced?—Yes.

11512. (*Dr. Tatham.*) You say drink is at once the cause and the effect of many of the evils mentioned?—Drink covers nearly all the difficulties. As I say, it is at once the cause and the effect. The conditions of life cause the people to drink, and the effect of the drinking is to still further demoralise them. When you see the conditions you cannot blame them, looking at it from the man-to-man standpoint. People do not do what they ought to do, and when a man is in difficulty, or perhaps out of work, he ought not to drink, but it is very easy for people to get drink when they cannot get anything else.

11513. We shall be glad to hear anything you have to say on this point—we have had evidence to the same effect from other people?—It would be simply to emphasise the point generally.

11514. We shall be glad to hear your opinion, because we know the considerable opportunities you have of seeing people of this class?—You can view it from many standpoints, but when you go down to the very poor classes you find that the conditions are such that you cannot expect anything else.

11515. Is it rather that they drink because they are reduced to a state of hopeless misery, and that they take it in order to get some temporary respite from their misery?—It is easily got, and it gives a certain amount of satisfaction at the time. Then their habits of feeding themselves create the desire for drink. It is an artificial and forced life all through, which creates the desire for stimulants.

11516. I suppose the people you speak of really have very little in the way of home life—the cooking is very bad?—It does not exist.

11517. And consequently, I suppose, the man scarcely ever gets a meal, what you and I understand by a meal?—That is so.

11518. He sees a comfortable looking pot-house and into that he goes?—Yes.

11519. I suppose it is a kind of last resource?—That is my experience. The women are at home all the time, and there is a great deal of drinking going on amongst the women, morning, noon and night.

11520. Is prostitution at the bottom of a great deal of it?—Not amongst the very poor. The morals are lax, but the immorality is not what you would expect it to be. If I may put it so, there is a rough-and-ready standard of morality which is very good so far as it goes.

11521. You would not state that as amongst the many causes of drunkenness?—No.

11522. Not amongst the very poor?—No.

11523. I suppose it is amongst those a little bit above them?—When you come to the class from which the prostitutes are drawn, yes, but we do not find that prostitutes are drawn from this poor class. They rather marry early and then you have another evil. I do not know whether your attention has been called to the difference between the English and the Scotch law in this respect, that if the parents marry at any time after the birth of the child in Scotland the child is legitimate. What happens in Scotland if there is an "accident," as it is called, in a family, is this—the mother will probably safeguard the daughter for a year or two and refuse to sanction the marriage and hold the man up to it. There may have been true love enough so far as it goes, and the match in many respects desirable. It is very often found that one child will be four or five years older than the next. In England that is not the case—marriages in England are forced on in order that the first-born child may be legitimatised. You have the same "accident," but there is an incentive to force the marriage on in order to get the child legitimate—which does not exist in Scotland, because, no matter when the child is born, if the parents marry afterwards the child is legitimate.

11524. With reference to General Booth's suggestion as to the treatment of vagrants, have you anything to add to what he says? He quotes your suggestion and approves of it, I think?—Yes, I had a unique experience when I was at Hadleigh for five years, and I made certain representations to General Booth, and that proposal is the outcome.

11525. Have you anything to add to what you state in this report as the consequence of your subsequent experience?—No, that is quite recent—it was in February this year, and it is very full. What I had in my mind when I was preparing my notes for the guidance of other people was that they should be as full and ample as possible, so that anybody who cared to adopt the idea should have the full benefit of the experiences we had there.

11526. In your opinion, with regard to the section of the population who by some means or other contrive to subsist at the expense of the community without work, if this system which you have proposed were adopted on a sufficient scale you think you could get rid of that class altogether?—I am sure of it—it would take a few years.

11527. And you think that the existing amount of charity would probably be more than sufficient to cope with the amount of real distress which cannot be avoided? —Yes.

11528. (*Chairman.*) In reference to this memorandum of yours—there has been a very considerable increase in the vagrant class of late years?—The figures show it.

11529. Are there any accurate figures? Is there any system of enumeration that can be relied upon?—There are the Local Government Board statistics.

11530. (*Dr. Tatham.*) Of pauperism?—Yes.

11531. (*Chairman.*) Mr. Loch said in Scotland there is a census at two periods of the year, in the summer and winter, which gives the maximum and minimum of those who live by the road, but in England he said there was not. So that surely your statement that the number of vagrants has increased is only a surmise. It may be perfectly well grounded, but is it more than a surmise?—Will you turn to the notes at the end of the pamphlet. I do not understand Mr. Loch's statement. He ought to know, certainly, but the counties have their return. On page 35 I say: "The County Reports of 1903, without exception, so far as has been noted, now being submitted to the authorities"—they are police reports, and therefore may not find their way to the Local Government Board—"all show a steady and, in some instances, an alarming increase of hundreds and thousands of vagrants in excess of the previous year. Gloucestershire, said by the Vagrancy Committee of that county to be the Mecca of tramps, shows 58,019 dealt with, an increase of 15,556; while Hertfordshire, a county not likely to have the same tramps passing through, shows a total of over 34,500, an increase of nearly 25 per cent. on the previous year's figures."

11532. (*Mr. Struthers.*) What are those figures—the number of vagrants who have been dealt with by the police in the course of a year?—Yes.

11533. That is different from a census?—Yes.

11534. (*Chairman.*) It may merely mean that the tramps are much more on the move than they were some years ago. The same tramp may figure two or three times in the reports, whereas some years ago they only figured once or twice. What you want is an enumeration of all these people at given periods twice a year?—I agree.

11535. In order to establish the fact—of course you would have to have it repeated—as to whether vagrancy is or is not on the increase, you would have to do that. Certainly, Mr. Loch's opinion was that there was a very great deal of exaggeration on the point. These county statistics, which are not based on any reliable system of exclusive enumeration, create a very considerable and, in his opinion, unnecessary alarm, and he thought that the first step towards a proper consideration of the problem was an actual enumeration on the basis suggested?—Yes.

11536. (*Mr. Lindsell.*) You have not the county report, in order that we may see what the character of that is?—No. Of course I would suggest that the same tramps are not likely to have the desire to make 15,000 additional visits in one county in the year. It is not their nature.

11537. (*Chairman.*) No doubt there may be some increase, but it would seem that the material for estimating what, that increase is exactly is insufficient. You think that the system is largely responsible for this increase?—Yes.

11538. For three reasons?—Yes, undoubtedly.

11539. Among which you class the lack of the reformative element, and the lack of uniformity in administration?—Yes, you have the Guardians divided amongst themselves as to whether you are going to give them greater kindness or greater severity.

11540. Would you have the Local Government Board impose some uniform system upon them?—If that were possible, yes.

11541. Will you explain what you mean by this statement: "The casual-ward system as it exists at present is costly and out of date"?—It is costly, as instanced by the case given there, where the Stepney people have had to spend £8,000 to provide for fifty-eight people. We would regard that as very costly.

11542. How would you have provided for them. They have had to be provided for in some way?—Yes.

11543. Would you have sent them to a Labour Colony in the country or something of that sort?—Yes. I would have done something different to perpetuating the present system.

11544. Do you think it would be a good thing that every local authority, or at any rate a combination of local authorities, should establish Labour Colonies in order to deal with this class upon the lines which you follow?—Yes, and, I believe, even if the people did not go to the colonies in any large number it would stop the wandering about.

11545. Then you would have them herded together in the slums of the big towns. It might be worse?—You could deal with them then.

11546. Could you more easily deal with them then?—Yes.

11547. Do you think it would tend to the elimination of what you call the "won't-works" in the long run?—Yes. I have talked to so many. I have approached the subject from various standpoints—from the purely religious point, from the social standpoint, and from the tramp-ward officials' standpoint, and that is my deliberate conclusion.

11548. You divide this class into two sub-divisions—those who object to work, and those who are incapable of sustained labour?—Yes.

11549. You deal with those two upon different lines?—Yes.

11550. First by something in the shape of penal methods?—If I suspected a man shuffling, I would make his food have some relation to the amount of work done. On the other hand I would not do so if he were really incapable.

11551. If he were incapable you would raise his physique to the point at which he became capable?—Yes. I would treat them with the greatest kindness, and give them plenty of good food and exercise for a few weeks.

11552. Which class do you think is most largely represented among the "won't works"?—Those incapable of sustained effort. The "won't-works" are a fraction.

11553. The class that is susceptible to improvement is the more numerous of the two?—Yes.

11554. From your experience of that class which, I presume, figures largely in this Hadleigh colony, do the results obtained justify what, I presume, is your idea that treatment of this sort enables such establishments to restore them in the course of a few months to the community as useful members of it?—Yes.

11555. But have you got any carefully recorded statistics which would enable you to prove that? Do you trace the lives of the people who leave you?—Probably for a year or two years.

11556. You have well-attested records of what becomes of them for a year or two years after they leave you?—Of a certain percentage.

11557. Of a certain percentage only?—Yes.

11558. What percentage?—I could not say off-hand.

11559. Half of them, do you think?—More if we eliminated 9 per cent. roughly of the people who are unsatisfactory.

11560. That you can do nothing with?—Yes, whom we regard as failures.

11561. You get rid of them?—Yes, they drift. We have to send them away.

11562. They must sink?—At present, yes. I was preparing the figures the other day for another purpose. I could furnish the figures.

11563. I think it would be desirable if you would do so?—I will.

11564. I take it, generally, you are satisfied with the ameliorative effects of the system as applied to the class as a whole?—Yes, for the effect of three or six months steady work under healthy conditions on those whom we *cannot* trace, which are a considerable proportion, is well worth to the nation all the cost and trouble. The women we can much more easily trace, but when you come to a man he may be a *bona fide* casual, moving about from place to place, and he cannot write. He says he can read and write, but he would sooner shift a few tons of earth or sand than write a letter; and that increases the difficulty.

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11565. I suppose those of them whom you do improve adopt some settled habits of life?—Frequently.

11566. And therefore it would be possible to trace the success of your system. I can quite understand it is impossible to trace failures?—It is otherwise. The latter is much more easy, because we hear of them continually; they hang around so; the successes we do not hear of.

11567. Would it not be possible to establish some kind of communication with them?—No. On principle we do not.

11568. You think it diminishes their self-respect that they should be traced back to an establishment of the sort?—If a man becomes a Salvationist it is easy. But we have Roman Catholics, Presbyterians, and members of the Church of England, and they would not care for it.

11569. They would not like their friends to know that they had been associated with your Home?—They would not care for us to make inquiries about them, or to be associated with us.

11570. That is your difficulty?—That is one of our difficulties.

11571. You say, speaking generally, that 65 per cent. of those you treat are successfully treated?—We do not put a man as a colonist in the records until he has been there a month; they are casuals, pure and simple. Of those that stay for more than a month roughly 10 per cent. of them are unsatisfactory, either physically, or from other causes. Then quite a third of those that remain we can trace for years afterwards. They probably identify themselves with the Army continually. Another third we can easily trace—when I say "easily" I mean by indirect methods as, for instance, when we emigrate a party. I have a photograph here of a party which we are sending out next month. And here also is a photograph of a party which we sent out to Canada three years; ago I could trace the majority of them still. (*Handing photographs to the Chairman.*) All those fellows were perfect wrecks when they came down to us. I can invariably tell how long a man has been on the place by his general appearance. For the first months I can tell the number of weeks he has been with us by his trousers, or boots, or tie.

11572. What time do they stay with you?—Those who stay over the first month stay from six to nine months—it varies according to the season.

11573. What proportion of those who enter go away before the first month has elapsed?—We do not count those who go out in the first month as being entered at all as colonists.

11574. You have no record of them?—Yes. I will furnish the figures. (*A photograph was handed to the Chairman.*)

11575. By what process are they admitted—by self application, or by draft from other establishments?—By both. We get them sent in from the police station, our London shelters, and from the workhouse by the friends of the men.

11576. (*Colonel Fox.*) These are photographs of men who have been reclaimed?—Yes.

11577. What have these people been doing which gives them such a bright look?—They have been at work. These were all perfect wrecks when they came to the place.

11578. Have these men stayed three months or six months?—Various periods.

11579. (*Dr. Tatham.*) Something from one month upwards?—Yes. This is the party which went out to Canada last year. (*Handing photograph to the Chairman.*)

11580. (*Chairman.*) Would you like to see this plan tried as an adjunct of the local administration?—Yes.

11581. You believe it might afford the means of dealing satisfactorily with a large portion of this vagrant class?—I am sure it would.

11582. And you think it affords opportunities for dealing with the submerged tenth, as it has been called, to some extent, which is not vagrant in its habits, but which is to be found herded in the slum quarters in big towns?—Yes. The married couples we have had there have encouraged us also.

11583. You make arrangements for husbands and wives and their families living together there?—Yes; after a certain period of probation.

11584. In the cases where the parents have been grossly neglectful of their children, and where it would be a good thing to remove the children from their care, what do you do? Have you any nurseries attached to the colony in which the children are cared for?—We have in London, and we work in conjunction; it is one organisation. For instance, we will take a man and his wife and children and deal with them according to the circumstances. For a man and woman who are living together, perhaps with no children, we would make an arrangement like this: that if a woman will go into one of our homes for women, and the man will go into the colony and work for a period of six months, then for the further period of six months we will give them a home of two rooms in the colony. By that time their friends will find a situation for them, or we will find work for them. I have a couple going abroad this week after such an experience. Another man came down under like circumstances, has gone back to New York, where he has a situation.

11585. In these cases, where the Society for the Prevention of Cruelty to Children have stopped short of prosecuting the parents, do they ever attempt to remove the children from the parents' care, or do you do that? We take some of the worst cases from the society, working in conjunction with them, and also with Dr. Barnardo's Home.

11586. Is any attempt made to obtain from the parent any proportion of the cost of keeping the child?—That I could not say.

11587. You do not attempt that—your work is purely charitable?—Oh, yes, in our rescue work we have a regular Affiliation Department which does good work in that way.

11588. It is in the interests of the children rather than the parents that, where the conditions are such that no decent standard of comfort or health can be maintained, they should be dealt with?—Undoubtedly.

11589. (*Colonel Fox.*) These are photographs of men who have gone to the devil, and whom you have sent down to the colonies?—Yes; they were absolute wrecks. You would not believe their condition—shaken nerves, and quite broken, down-at-heel, and clothes gone and everything. They are not quite hopeless, but when they come to us you would think they were.

11590. (*Mr. Lindsell.*) Do you provide them with these clothes?—They buy their clothes. We fix a minimum of food to begin with, but if they care to save out of the minimum—it is 1s. a day, and on that the Kitchen Department has a profit—they can do so. A good many men save out of that enough to buy clothes and boots, and we encourage that.

11591. These are very good clothes which they have got on. Are they provided by the Colony?—Yes, or by their friends; or perhaps we have taken them out of pawn for them.

11592. Does the work that they do repay you for the charges they are at?—No.

11593. Could it not be made to do so?—Only by diverting the whole enterprise from the object for which it was created. If the 500 people who are there now were going to remain, in a couple of years it would be paying its way.

11594. As they only stay a certain time they are inefficient workmen?—Yes, and when they are efficient they pass off.

11595. (*Mr. Struthers.*) And you want them to pass off then?—Yes.

11596. (*Colonel Fox.*) Are all those men in the photograph "won't-works"?—No.

11597. (*Chairman.*) They are those who were physically incapable until they came under your treatment?—Yes, and nobody would give them work.

11598. (*Colonel Onslow.*) Criminals?—There are criminals among them.

11599. (*Mr. Lindsell.*) Very few of these men begin life as members of the absolutely labourers' class. Are they not a superior class, a clerk or artisan class?—About a third are labourers.

11600. They look like men who, however low they may have fallen in the meantime, must have come down

from educated positions?—That is quite correct, and you will find a good many of those, who through distress want us to take them, are people who have known better things.

11601. (*Colonel Fox.*) What do you attribute their going down hill to?—The average man would probably say "drink;" but I say drink, with this reservation, that it is the primary secondary cause, if I may so express it. What I mean is that if a man makes a bad marriage or if his wife dies, as is the case very often, and he has a housekeeper, and his children are neglected and so forth, he goes to drink. We know he ought not to drink, but that is very often what a man does do. Moral deterioration sets in, and finally the man's home goes and everything. Drink is the cause of his downfall, but it is not the primary cause. I would say: "Remove that man from his surroundings and find a wife for him, if necessary." We have done that in one or two instances with excellent results. There is nothing we have not done which we thought was the right thing to do in individual cases.

11602. (*Mr. Struthers.*) You have looked out a suitable woman for him to marry?—Yes.

11603. And told him he ought to do so?—Mrs. Lamb has made it easy for him to fall in love with the right woman! Then again we have put a man in prison or taken him out of prison, and done the best we could in the man's interest. If we thought a man should have a month's hard labour for neglecting his wife and children, we have seen that he got it; if we thought that he has had a month when he ought not to have had it, we have appealed to the Home Secretary and got the man out before his time. As I say, we have married them, and divorced them, too, for that matter.

11604. (*Colonel Fox.*) Did you fit them out with wives down at the Colony?—Yes, we have done so; we do not make a practice of that.

11605. (*Chairman.*) I take it you think it would repay the community if it did establish some general system of this kind for dealing with cases such as you have described?—If properly managed, yes. I think everything turns on the management.

11606. The remuneration would come in the shape of men who were a dead loss to the community being restored as active, able-bodied and industrious persons?—Yes, if we could only get people to look at it from that standpoint. That is the fact, undoubtedly.

11607. That is your view?—Yes.

11608. (*Dr. Tatham.*) And you have proved it?—Yes.

11609. (*Chairman.*) You think you have proved it is a practicable scheme?—Yes. We are turning them out continually. We have our failures, but we want now to deal specially with failures. That is the whole idea of General Booth's Proposal, as set forth in "The Vagrant and the Unemployable." We do not want to have failures, but we want to deal with them. If you throw a failure out of the back door it does not dispose of the problem; it is still there.

11610. Touching the question of finance—have you formed any estimate as to what the cost of treating each case is, taking the average of detention?—No; I would not like to commit myself to figures at this juncture.

11611. Do you keep accounts?—Yes; there is an elaborate system of accounts, and they are all published.

11612. They are all accessible?—Yes.

11613. So that the figures could be obtained?—Yes. But, with all respect, I do not think you would understand them unless they were explained.

11614. You are not in a position to explain them now?—Not in a way which would give you any reliable data. Why I say you would not understand them is this: They are properly kept and duly audited—the books are under the direct supervision of the Midland Railway Company auditors, Messrs. Knox, Burbidge, Cropper & Co.—but they are so involved that it would be impossible for you to find out the figures for the Hadleigh Colony, which is only one part of our operations. The capital account is dealt with in one sum, and it would be impossible without internal analysis to understand the accounts; but we should be quite ready to prepare a special statement. *Mr. Lamb.*

11615. Do you see any difficulty in exercising supervision over those colonies if they became general?—No. One of the features of our management is the fact that we raise so many people from the class amongst whom we work, and, having them at hand, in time they inspire the men who come down hopeless. I have seen it over and over again that, when a man's back is breaking after the first two or three days hoeing in the market garden, and he feels like giving it up, and he is lying in bed, and is perhaps too tired even to sleep, in the next bed is a man who has been there three or four months and is just beginning to enjoy life, and he will say to the fellow who is inclined to give up: "You stick to it; I remember when I had a back like yours, and my hands were blistered, too;" and so hope is instilled into that man. We would draw a great many of the officers for such colonies from those very people, for this reason, that they would appreciate, and they would be better able to understand the habits and the thoughts of the people they are seeking to raise. You do not want to get a class too far removed from them. It is very nice, but a good many of the poor are very touchy on the question of patronage, and when someone who is very much above them comes they begin to wonder if there is some ulterior motive; they regard us a good deal in that way when they come first, until they see the way we live, and that we are not too far removed from them. We do not go down to the same level, but we are not too far removed to be above understanding them and being understood by them.

11616. They must be established on a footing of mutual sympathy?—Yes.

11617. Do you take the people on their own application?—Yes, so long as we have room, and the man is a suitable case.

11618. You investigate it?—Yes.

11619. You do not accept him on his own statement?—Yes, we do; but there are no risks in that if you set him to work at once. There is no inducement for him to tell a lie. If he is on the begging ticket there is all the inducement to spin a yarn, but with us there is no such inducement.

11620. The labour test is the efficient one there?—Yes, we throw them all together, and begin the sorting out afterwards; but we can give the men immediate relief.

11621. (*Mr. Lindsell.*) What acreage is this Hadleigh Colony?—We have 2,000 acres of land, and 1,000 of water, foreshore.

11622. Is that 2,000 acres all farmed?—We have about 800 acres marsh land used for grazing. Then we have about 350 acres in market gardens and fruit; then we have another 600 acres arable, and the other is utilised for the buildings and roads and brickfields, and smaller industries.

11623. You make bricks to a considerable extent?—Yes.

11624. Are there any other industries besides agriculture?—There are the bricks, the poultry, the stock-rearing, pigs, and so on; then we have our laundry and bakehouse, and tailoring.

11625. You do all your own work, I suppose?—Yes.

11626. All the repairs on the estate are done by the workshops?—Yes. We have our carpenters and blacksmiths.

11627. Have you a dairy farm?—Yes.

11628. How many cows do you keep?—There are thirty-five milking.

11629. Is that all done by the men who come to the colony?—Yes, mostly.

11630. They have to learn that?—Yes; of course, we have our skilled superintendents and employés.

11631. How do they live—in barracks?—A glance at this drawing will give you the facts. *This* is the first dormitory. (*A book—Hadleigh; the Story of a Great Endeavour—was handed to Mr. Lindsell.*) From that they start grading. Then he passes into a place where there are ten beds in a cubicle, and from that to a place where there are three, and from that to one of the farmhouses, which is another step. On page 14

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you will find the Old Castle farmhouse, which is the first step up from the dormitories. Then on page 12 you see the cottages. We made the bricks and built the houses right up from the beginning, and the married colonists can start at the lowest grade and work up to a cottage.

11632. When they get up they can get their wives and families?—Yes. We pay them 2s. 6d. or 3s. a day, or at piece-work they may be earning 30s. or 35s. a week.

11633. (*Colonel Fox.*) How long do they remain at that?—According to varying conditions.

11634. Do you keep them in permanent employment?—Yes, until they get something better; or until we have to move them to make room for others.

11635. (*Chairman.*) What is your permanent staff? How many do you want for permanent work apart from what is done by inefficient labour?—We have employees of two classes—permanent employees, and then we have the superior colonist who is passed on from being a colonist to being an employee. The number varies according to the season and the work we are doing. Park House, on page 24, is another farmhouse, which is the highest grade which a single colonist can get to.

11636. (*Mr. Lindsell.*) Does he have a bedroom to himself when he gets to Park House?—There are one or two rooms where there are single beds.

11637. Or dormitories?—It is an ordinary farmhouse with three beds in one room, four beds in another, and six in another. There is room for about a dozen men.

11638. Do they have a sitting room?—Yes, a dining-room. On Sundays they have their food there at certain seasons of the year. We have no fixed rule. They have their tea there always—they may have a good wash and their tea there, which is a distinct lift up. On Sundays they may have their food there in the winter time, because the roads are bad. In the summer, when there are usually a lot of visitors, the visitors have their food there, and then the men go to the dining-room. There are general advantages in his going to the dining-room. They all go in at one door. In *this* corner there would be so many tables with table cloths on, so that a man sees that there is something else for him to aspire to. Then there is another door, and another man passes through there, and the natural inquiry is "Where is he going?" He is going into a select room where he is waited on—the same food, but rather superior attention. Beyond that again there is what they call the Lord Mayor's parlour. A *choice* of food from the first—after the probationary period, of course—is a practical appeal to his independence, which the man understands.

11639. (*Colonel Fox.*) Do you find many of these men go back to their old haunts?—A few.

11640. (*Dr. Tatham.*) Ten per cent. I think you said?—10 per cent. we regard as failures; but, speaking of failures, one man that I was in despair about, and had really to send away from the Colony for the sake of the discipline of the place, I can tell you something about. After I sent him away I put some machinery in motion to look after him elsewhere. He came to see me not a month ago to ask if I remembered him. I said "Oh, yes." He said "I remember you, too, of course." He was a married man, and his wife was toiling to keep the house going, and he had been continually drinking on the sly and neglecting his work, and I had given him such a talking too as I never gave to anyone. He said: "You will be glad to know that I have kept a situation in the city for eighteen months, and I have just got 5s. added to my wages; the wife is going to stop working at Easter; we have taken a little flat in Holloway, and the children are coming up from the country." That case was marked as a failure on our books, and I suppose it will continue to be so.

11641. (*Mr. Lindsell.*) I understand you to say that it is not paying as a commercial concern?—No. Nevertheless, we know what our loss is, where it is, and why it is; that is to say the superintendent who is responsible for the brick-field and for the farm has the duty after the probationary period, as we call it, to pay a man the value of the work he does. He is paid to do that and nothing else. We tried at one time to get a man who would take a wide view and deal with the case on its merits. That did not do; we had either a man who was too hard or too soft. Then we said—"We will have superintendents, whose sole duty will be to pay them on the actual work done."

11642. Do you pay them in kind or in absolute money?—In tokens which are current and in money.

11643. They get so much food?—Yes, and they can save out of it and use it for clothes.

11644. Not lodging?—Yes, they pay for everthing that is of value. Then we give them the current coin of the realm, and if they use it well, that is if they do not spend it in the public-houses in the village, we increase it.

11645. To what do you attribute the failure to make some profit. Do you attribute it to the character of the workmen that you are dealing with, because you have to get relays of helpless persons who have to be educated up to doing good work?—Yes, and whenever a man has a market value he moves from us.

11646. Therefore you have to do the work which ought to be done by active men, with men who have to be educated up to that point?—Yes.

11647. And that is where the loss comes in?—I reckon for the first three months a man whatever he earns is more of a loss than even the full cost of his food. The next three months he contributes probably the full cost of his keep without contributing anything towards the management. Then he begins to contribute something towards the management, and at the end of nine months he is fit to take his place in the world. When he starts to earn something for us he is off.

11648. I see you mention here that you have lost £10 on the poultry account. You say, "The poultry and bee section last September reported sales amounting to £712, which fell short of the expenses by about £10"?—Yes.

11649. What do you reckon as against the receipts?—All the legitimate charges in that particular section. We charge the interest on capital and depreciation, management, proportion of rates, and all legitimate charges.

11650. Everything?—Yes. Of course the Poultry Department does not employ very many men, but we have laid ourselves out in that department, as in all departments, to breed the best. That was the feature of the colony in our early days. We had to decide whether we would go on working with cheap horses on the Farm Department, or whether we would lay down a foundation for the best in order that the moral effect on the men would be good. The result in the Poultry Department is that we have good birds. We have got as much as £10 for one, and even £25 for one which went to South Africa, a cockerel.

11651. The better your class of bird the more likely you are to make a profit on it?—Yes.

11652. I am rather surprised that you did not have a profit there?—That is why we have made a profit last year, because of the fancy price stuff. I do not think poultry farming would pay in this country in the ordinary way.

11653. Is there a loss on brickmaking?—In one of our fields, and there because of the fall in the prices. We have three qualities of bricks. Five years ago we sold our stock bricks for 36s. a thousand in London; last year we sold them for 26s., the nett result being the loss of 10s. a thousand. If you take that over a few million bricks it makes a difference.

11654. You feel bound to go on with it in order to give the men work?—Yes.

11655. And the same with everything—you keep things going?—Yes, to the extent of our financial ability.

11656. I should have thought that on market gardening you would have made a profit?—We made a profit last year, but the year before we did not, because of either the drought or the floods, whichever it was.

11657. What steps does a man take to get into your colony?—We get them either on their own application or the application of their friends, or they come from the Police Courts, or from our London shelters, or from the Boards of Guardians.

11658. The missionary recommends them to apply to you?—Yes.

11659. Or you get them from the London shelters?—Yes.

11660. Do you get many tramps pure and simple?—We are really off the beaten track. The road to South-end leads to nowhere else, and therefore we are not on their road.

11661. You do not get the local tramp, but do you get many from the unions about the country?—We get more than we want. They are more trouble than anybody. A man who comes from the union is about four or five times the trouble that an ordinary tramp is, and we do not care to have too many; we have always more than we want. One of the features of the colony is its size, and where you have got 500 or 600 people all the time apart from the people in the neighbourhood you have not the loneliness which you would have if you had only twenty or thirty people. You do not want too many of a set. You can take twenty or thirty at a time and be breaking them in, but if you had fifty or sixty probably you would have trouble.

11662. Supposing your colony were certified by the Home Secretary as a place to which a magistrate might compel a man to go, you would then have, of course, to take whoever might be sent, if you were a penal settlement more or less. I do not mean that yours should be made so really, but suppose it were, would it not enhance the difficulty of dealing with men to begin with?—No, not if it were on a sufficiently large scale.

11663. They would have to be kept there somehow. You could not have them walking off the next morning. I suppose your men can go away?—Yes.

11664. But if a man was committed under a magistrate's order there would have to be some means to see that he stopped there?—I would not pay too much attention to that. In our Inebriates' Home, which is licensed (it does not form any part of the colony), we experienced practically no difficulty.

11665. Under the Inebriates Act?—Yes, it is certified—the gates are as open as the Colony gates. We run it exactly in the same way as we do all our other institutions, appealing to the moral and the spiritual part of their nature. We have only had to produce the bye-laws twice. We do not have them up there aggravating people all the time. The first trouble was two or three months after we opened. We had some trouble and I telephoned through to the officer in charge and told him to lock the gate and put the key in his pocket. They wanted me to go along, but I waited for twenty-four hours: I thought I would let them alone to do the best they could. At the end of the twenty-four hours I went along and assembled them There were about twenty gentlemen in the dining room. I said I was very sorry that they had had some trouble. I said, "You were pitching into the officer because he locked the gate, and I am pitching into him because he did not do it soon enough." Then I said, "There is some idea that because the bye-laws are not up therefore they do not exist. I tell you that the object of the Salvation Army was to appeal to men morally and spiritually, but if you want the bye-laws you shall have the choice." It is not usual on Salvation Army principles to discuss things like this. But I said: "We will have a new departure: You can elect to-night whether you are going to have the bye-laws or the Salvation Army administration. Here are the bye-laws." I took them out of my pocket. I said: "Here is Mr. Ritchie's certificate. Would you like me to pass it round?" They said, "No," they were satisfied. Then I said: "The first clause says: 'No inmate of any authorised retreat shall retain money, watches, or other valuables without the consent of the superintendent.' Will you be good enough to hand over your watches and valuables; we will start there." Of course they were sensible enough to know that I had the grip of them. I kept my face as straight as I could, and I said, "It is no good going on with the second bye-law till we have enforced the first." One of them laughed and said, "Put them in your pocket, guv'nor." I said, "If that is the will of the people, all right." We have never had them out again except when we searched a man for morphia. We have never had a call for a bye-law since. We had superior intelligence in that Home to what I expect to get if we were taking the tramps as you suggest, but you would alter your tactics accordingly. I would have a place where I could lock the door and put the key in my pocket, and let them feel that I was master, but that would be at the very last resort.

11666. (*Colonel Onslow.*) With regard to the vagrants and the unemployable, it is suggested that colonies might be established and conducted by county councils and board of guardians, etc.? I see you lay stress on the fact that you would strongly favour the Colony being managed by a religious society, it would make it very much harder if it were not managed by a religious society—it would become a refined sort of prison?—Yes, I agree. *Mr. Lamb.*

11667. You really want the religious element?—Yes.

11668. A sentimental element of some sort?—Yes. I put in the other suggestion because I find, especially outside of London, amongst the younger members of county councils and boards of guardians, and others, a desire to have a tilt at this problem. They feel they have had enough of the old methods, and they want to try something else. I agree entirely.

11669. I understood you to say that you want a magistrate appointed to deal entirely with certain cases; for instance, cruelty to children, insanitary dwellings, overcrowding, and so on; is that so?—That would be in the slum area in any great city. I would like to see that tried.

11670. At present that goes simply to the magistrate of the area, whoever it is?—Yes.

11671. Sometimes to one and sometimes to another?—Yes.

11672. You want a magistrate appointed entirely for this particular work?—Yes; I would make him the rallying point for all the social forces in that neighbourhood.

11673. He would sit entirely for this work and nothing else?—Yes.

11674. He would not deal with the ordinary cases of drunkenness?—That was my idea.

11675. I think you have said the vagrants and the "won't-works" are no particular class—they are not born so—they do not come from any particular strata of society; they are simply people who have drifted down from something better?—Yes, in many instances, but there is a class that wants work, the unemployable, but whom nobody will employ.

11676. There is that class, I know?—That is a large class.

11677. Because he is more or less of a criminal nature, I suppose?—No, because of his physical unfitness, because his dress would be against him. He says he is willing to work, but nobody will give him a job.

11678. From the look of him?—Yes.

11679. There is no such thing as a vagrant who is a vagrant by heredity, is there?—Oh yes.

11680. I know there are what are called gypsies who are no more gypsies than I am, and hawkers and beggars, but they are not the regular slum vagrant who lives in a town when convenient and then wanders off into another town?—There is the town problem and the country problem. I do not think that point has been sufficiently emphasized. I have been at Poor Law conferences, and the people from the town and the country talk about the same thing in an altogether opposite way. The town tramp does not tramp; he loafs. The country tramp *must* tramp.

11681. It is his second nature, you mean?—No, it is because of circumstances. In a town he will get his breakfast here and his dinner round the corner.

11682. I understood you meant it was the nature of the man, that he can never remain still in one place: there is a good deal of that?—Yes. I do not think you will eliminate that. You have only got to look at the moving which is going on among a class which are not called vagrants.

11683. You think it is the same spirit?—Yes; it exists to some extent. I do not think it is any good trying to eliminate it. But I would try and regulate it or guide it. I would keep them on the move. If suitable, I would move them to Canada or elsewhere. If they have the north-west fever let them go there, or let them go to Ontario. But if you have a man paying rates and rent nobody objects; it is when he wants to go on at other people's expense that the obection comes in. I do not mind the man having a house every three months; that is no business of mine.

Mr. Lamb.

11684. (*Colonel Fox.*) Is not the tramp a professional tramp as a rule; you cannot reclaim him, can you?—Yes.

11685. What is commonly called a tramp that you meet perpetually walking along the road?—Do you mean the tramp in the country?

11686. Yes?—If he marries he will settle down in a parish; then he becomes an "in and out" of the workhouse.

11687. Does he become a respectable being?—No; he still tramps about in the same neighbourhood. I venture to say that you cannot go to a single country workhouse in England but you will find one or two families there for generations. They are known; that is the extent of their vagrancy, that they settle down there.

11688. You cannot break it out of them?—I would like to have a try.

11689. (*Colonel Cuslow.*) There was a case reported somewhere in Devonshire the other day of a man who boasted before the magistrate that he had never done any work for fifty years, and that he never intended to work. There is that class?—Yes, we have had numbers of them.

11690. Is there any possibility of getting that class to work?—Oh, yes; it is surprising; they are like children.

11691. I suppose only by pure persuasion?—Yes.

11692. And appealing to what better nature they may have?—Yes. They are like children when you really get them past their first difficulty and give them their first shilling. You know how a boy is when he gets the first half-crown he has earned. They are just like that. I have seen it over and over again, with the criminals as well as the casuals.

11693. (*Mr. Struthers.*) What is the longest period you allow a man to stay with you if he wishes to stay?—We have no fixed period.

11694. Have you any men who have been with you for three years?—Yes.

11695. How long has the Colony been open?—About twelve years.

11696. Have you any men who have been six or seven years with you?—No, not down there. We have them in other parts.

11697. I mean men who have been to this Colony, and who stayed on there from the time they come in?—No.

11698. You have known them to stay there for three years?—Yes.

11699. I mean actually in the Colony?—Yes.

11700. Five years?—No; I should think about three years.

11701. I understand you would aim at having them cleared out after they became fairly efficient to earn their own living?—Yes.

11702. You do not want to have a permanent class there?—No.

11703. You have no desire to deprive a man of any initiative, you want him to look after himself as soon as he has the capacity of doing it?—Yes. Three years we regard as a long time. If you have a man who is married it will probably take you a year or eighteen months before you get him in a satisfactory state; then in the instance I have in my mind now, the man was there a little over three years. He was a married man with six children, who were all in the workhouse. He was a capital worker, but he had a quarrel with his wife, and had gone off; he had a roving spirit in him. Finally we got hold of him thoroughly and took the children and the wife out of the workhouse. Then we made a collection amongst the colonists for the furniture. We furnished the house and paid some trifling expenses, altogether £17. £9 of that was raised by the colonists themselves; £3 we paid from the general fund of the Army, and another £5 we lent from the general fund, with this idea—that when his wife came there was to be 2s. a week paid for the furniture for a year. That gave us a lien on the furniture in case of a breakdown, and it gave the man and his wife an inducement to pay. At the end of the year, if they behaved themselves, the furniture was to be theirs. That is what happened. Now he is away from the Colony and in a situation outside and doing well.

11704. Of course I am accepting that there are probably occasional cases where you get an exceptionally good man to be a kind of superintendent?—Yes.

11705. To look after some department of the work?—Yes, we do that, and many of our important positions are held by men and women drawn from these classes.

11706. You have a considerable amount of arable land I gather?—Yes.

11707. Are any of those men who come to you able to plough?—No.

11708. Not one?—I would not like to say not one solitary case.

11709. Practically to all intents and purposes your recruits come from the towns and very seldom from the country originally?—Seldom from the country, that is so.

11710. Out of that lot you would have expected to get some who knew something of ploughing if there is a large country contingent like that?—There are a very few.

11711. How do you do your ploughing?—We employ the Essex labourer.

11712. Have you a large number of permanent labourers in the place who are not patients in your establishment, so to speak?—Not a large number. The farms were mostly out of cultivation when we took them over, but the labourers were still in the neighbourhood, perhaps going further afield for work, and taking what work they could.

11713. Perhaps fifty?—Not so many as that, nothing approaching to that, not thirty.

11714. Do they come into contact with the inmates in any way?—Yes; we have aimed at natural conditions as far as possible, and no matter where a man comes from, from the prison or the workhouse, or the road, that is nobody's business. The wives of the men who are there have met together at what we call our social meeting on a Saturday night, and they have joined in the games, and the women in the colony have darned the socks. We have looked after the social and the home life, and guarded that as sacredly as we could, and made it a large family as far as possible.

11715. The principal superintendents of the department, for instance, the people who look after the brickfield, are members of your own body, are they not?—No, not all of them.

11716. You do not insist upon that?—No. All we insist upon is, that he must be a member of a church, and he must be a teetotaller. We permit them to smoke when not on duty, but none of our officers of any rank smoke.

11717. I am speaking of your superintendents who look after certain departments of the work?—Yes; we naturally tried to get Salvationists at first because of the influence, but we could not get the right people. I remember one fellow we had in charge of the farm—a good man he was, and capable in many respects, but if he had a sick pig, or a sick calf, he would sit up the whole night nursing it. He ought to have cut its throat and gone to bed.

11718. You have a certain proportion of Salvation Army officers?—Yes; when it comes to the social and religious aspect that is all done by them.

11719. Then, I understand you to say that the inmates get paid for the work they do by token money?—Yes.

11720. Out of that they pay for their food and their clothes?—Yes.

11721. But suppose a man does not earn enough to pay for his food, you give it to him just the same?—Yes, in this way. The superintendent is paid to value the work and pay them accordingly. A man I saw the other day came in a great hurry about a year ago, and said, "Is that enough for a Christian man to live on." I looked at it, it was 3d. which he had had for his day's work. I said, "I do not know." He said, "Well Barker is no Christian." I said, "Whom did you say." He said, "Mr. Barker." I said, "Now I understand." He was talking of his superintendent. I said, "Mr. Barker is paid to value your work. He has paid you its market value, and, as a matter of fact, he is paid more than I am myself, and, therefore, I have great respect for his opinion." That is what I said to the fellow. I said, "If he values your work at 3d. I should think it is

pretty nearly correct. However, if there is nothing against you for your behaviour and so forth, apart from this; we think that a man ought to be encouraged for his good behaviour, and that work is not everything, and I agree that a man cannot live on 3d., and I will supplement that for the next three or four days until you see what you can do." That man was recently joined by his wife, and they have started life afresh.

11722. Do you count up that against him to be deducted afterwards?—That varies. We do keep a record—not a strict record, because the Home Superintendent has a free hand. I give him probably 10s. a week which he accounts for roughly. Very often the quickest way to get rid of a man is to give him 1d. or 2d. for a bit of tobacco. On the other hand, if it is a case we are working at steadily it will be recorded against him. But very often they magnify their difficulties—it is a real trouble to them—and the quickest way is to say, "Say no more about it." It has to be done carefully, of course.

11723. You do not confine them to the place in any way?—No.

11724. They can go out when they like?—Yes.

11725. And they get a certain amount of pocket money?—After a certain period.

11726. And they are perfectly free to spend that in any way they like?—Except in drink. If they spend it in drink we stop it.

11727. But you do not refuse to take a man back if he has been drinking?—No, we take them back over and over again, according to the circumstances.

11728. You allow them to have tobacco on the place?—Yes, we sell tobacco. I am in the difficult position that I denounce the use of tobacco on Sunday, and yet I am licensed to sell it. Yet I can get over it.

11729. I gather your idea is that the slum area should be looked after, and that there should be some social organisation?—That is the idea.

11730. It seems to me that your proposals of the labour colony, or rather, General Booth's proposals, that people should be looked after to a greater extent than they are at present by the police, are not confined to the men who commit a theft, or who break somebody's head, but to those whose whole course of life is likely to make them a nuisance?—Yes, I would treat them as a physician would treat a patient who was ill.

11731. You would keep them under observation?—Yes. You do not give a man the medicine that he likes. I would rather take the doctor's figure than the police figure.

11732. There has to be a combination of free will on the part of each individual with efficient supervision on the part of somebody else?—Yes.

11733. Developing the free will as far as you can, but interfering whenever it is necessary and having the necessary power to enable you to interfere with effect when it is necessary?—Yes. I would receive no man at a voluntary colony unless he was willing. I find a great many people are anxious to dump down their friends upon us on any terms. I always insist upon knowing what the man himself says.

11734. According to the proposals in this pamphlet certain people would be committed by a magistrate to a labour colony under restraint?—Yes.

11735. They would be subject to work for a certain period?—Yes, but I would like to get them committed voluntarily; that is to say, when a man was brought up, the police court missionary would say:—"Please let this case stand over for twenty-four hours," and the man is sent down, and then he is given the option either of having a month's hard labour or, perhaps, three or six months, according to the case, or of entering the labour colony voluntarily. I do not know that the magistrate has any business to do it, but it is done in inebriate cases with very good results, because you catch the man before he is given the last push down.

11736. You think that absolute restraint is only necessary in a comparatively small section of cases?—Yes.

11737. It is necessary for you to have that power in reserve?—Yes.

11738. To compel a man if necessary?—That is our experience with inebriates. We have had one warrant, and we have only had the bye-laws out twice. We have had one or two break-downs. But of the vagrant and unemployable classes, during this winter and last, we have been feeding 2,000 people at Stanhope Street between two and four in the morning, in numbers varying from 1,600 to 1,800. I am sure I could persuade 80 or 90 per cent. of those people to enter voluntarily. If they did not, then the police would have them up for wandering about without any means of support. I would take them aside and get them to do it voluntarily.

11739. There is no legislation now with regard to their want of accommodation?—There is no legislation at present.

11740. But of these people that you are feeding at present in the night hours, I thought you said you could get 80 or 90 per cent. of them to go to a labour colony voluntarily?—I assume that the new legislation for vagrants is in existence.

11741. And that you had that in the background?—Yes.

11742. I notice with interest that you are not a tremendously democratic community; you introduce something in the nature of class distinctions?—I hope that is not inconsistent with true democracy—with good democracy at any rate.

11743. I note the fact that you have what one might call class distinctions, and that you think they are absolutely necessary instruments in your organisation?—They exist right amongst the poorest. In our Blackfriars Shelter, before we altered it, one of the first things that struck me ten years ago when I took up this branch of the work was this:—We had what we called a 1d. shelter and a 2d. shelter; the 2d. men would not associate with the 1d. men. We had a prayer-meeting in the 1d. shelter room from half-past seven to half-past eight, and I have known the 2d. men stay outside and refuse to come in, not because they objected to the prayer-meeting, but because they would not associate with the 1d. men.

11744. (*Colonel Fox.*) When first the men come to your colony they have no chance of getting drink outside at outside public-houses, because they have only tokens?—That is true in theory, but it is not true in practice.

11745. Later, when they get money paid to them, do you ever find them break out and take drink?—Yes.

11746. They go back—they cannot help going back to their old bad habits?—That is so.

11747. You often find that?—Yes, frequently.

11748. You admit that the cause of most of these people coming to grief, and coming downhill, is drink?—Yes.

11749. And the only place they can get any form of refreshment in the neighbourhood where they are is the beer-house?—Yes.

11750. If we had some means of converting these beer-houses into eating-houses, where beer was kept more or less in the background, do you not think that would have the effect of reducing drunkenness throughout the country?—It might, but it would not apply at Hadleigh.

11751. Would you go in for absolute teetotalism?—I am an advocate for absolute teetotalism, but I advised our people to buy all three public-houses which were in the old village of Hadleigh, and shut up two of them and run one.

11752. Instead of being purely a beer-house you would make it an eating-house or restaurant, where they could if they chose get their beer and their tea, coffee, or cocoa, or anything they liked?—I would, but I am not voicing the official view of the Salvation Army in this respect.

11753. That has been done very much in the British Army—encouraging the restaurants in barracks, and keeping beer in the background. It has been attended with very good results. Do not you think that that might be done in this country with the same results, on the same principle that those cabmen's shelters have rather drawn away the cabmen from the public-houses?—Personally speaking, I am sure it would: I have no doubt about it at all.

11754. I suppose as you are against tobacco smoking in any form, you are against small boys being allowed

Mr. Lamb. to smoke?—Yes, I would like to stop that. I box their ears every time I see them, and take the risks. I suppose it is not quite legal, but I do it.

11755. What steps would you take besides boxing their ears to prevent boys from smoking?—If there were a simple Act of Parliament passed that would soon do it, because everybody recognises the real evil, but they are afraid to do what I do.

11756. Is there anything you can suggest by which one could reduce the amount of smoking amongst boys? They sell cigarettes in the sweet shops, and all these places?—Yes. I would restrict the Sunday trade to some extent, because the boys have more money on Saturdays and Sundays, but there are a good many missionary pennies which get lost on Sundays. We have little trouble with our own people in this respect, because none of our adults smoke. My youngsters have no temptation to it. They do ape some people a little, but they have no temptation to ape me in that respect. And the same thing runs through all our officers. With regard to drink, I was anxious to follow you, and I should like to make this remark: I do not regard a break-down as in any way against a man, for I have invariably good results after a break-down. The immediate effect when the man was getting well and getting into condition again was the feeling that he could manage himself. I knew, of course, that without the change of heart, that we emphasise, if he had the opportunity he would go drinking again. "Oh, no," he said, that was the last thing he would do. Well, we gave him 6d., deliberately, with the view of seeing how strong he was. Then when he came back, I asked him where the 6d. was. Of course it had gone in drink. After that we had knocked another prop from him, and we could approach him from another standpoint, and I have very good results from the men after they have had a good fall.

11757. That is in the Colony?—Yes.

11758. In your Inebriates' Retreat you have to put restraint upon them: you have to keep them away from alcohol, do you not?—No.

11759. Do you give them drugs of any kind?—No.

11760. How do you reclaim a bad case of an inebriate?—To begin with, we knock off the drink the very first day he comes in.

11761. But you keep them away from drink: you will not allow it?—Yes; for the first three or four days a man is not allowed outside the gates.

11762. You keep them away?—For three or four days.

11763. For how long?—That varies. If a man comes in who has been eating nothing for a week or a month, and has been drinking all that time, then you want to watch him constantly day and night for three or four days.

11764. But many of the cases of inebriates, I suppose, are confirmed drunkards?—Then it is no use locking them up. The only plan is to build up the moral and spiritual nature, and teach them to resist the temptation. There is no place in England where he can locate himself and be many miles from a public-house

11765. The only restraint you have at present is that he has no pocket-money?—No, he has pocket-money.

11766. (*Mr. Struthers.*) You have had occasion to consider what is the best sort of diet to keep a man in good form for doing work?—Yes.

11767. What is your minimum diet for people in the colony?—We have a varied diet, and the man has a choice; he can go to the bar and make his choice. For breakfast there is always porridge and milk, but he may have cheese, German sausage, and bloaters, or eggs.

11768. Is the dinner done in the same way: does each man choose?—Yes; he may go in for a light dinner if he likes.

11769. It is not that all men of the same class get the same dinner?—No.

11770. He can have what he likes?—After the probationary period. When the man comes in first, he has food irrespective of the work he does, he has a fixed diet for two or three weeks, as the case may be.

11771. What sort of diet?—Porridge, soups of various kinds, a little meat, and plum pudding.

11772. You do not consider that careful feeding is a very important point in the reclamation both of these people and of the inebriates?—We give a fair amount of attention to it. We think that food, to begin with, should be properly cooked, and that it should be of a proper kind. We go in for the best we can afford. We never buy job lines of food, because of the risk. We fix the quality and buy it at practically whatever price it is.

11773. But a sufficient supply of nutritious food is an important element in the reclaiming of these people of both classes, both of the tramp and the inebriate character?—Yes, undoubtedly.

11774. (*Dr. Tatham.*) In the event of your getting a man who has been addicted to the use of alcohol for a long time, and who comes under your care, you prevent him from taking any more alcohol of any kind. Do you find that he becomes ill after that?—Very seldom.

11775. My object in asking is this: Have you any arrangement by which medical attendance may be given in cases of necessity?—Yes, we have a doctor right opposite the house, and usually two or three medical men in the house, I am sorry to say.

11776. You find it necessary sometimes?—On rare occasions.

11777. Those men generally break down pretty much if they have given way to alcohol for a time?—Yes, but when you get accustomed to it you know what to do in extreme cases.

11778. I think you told us just now that in many cases, at any rate, you were able to trace your reclaimed men?—Yes.

11779. Into various walks of life afterwards. Do you find that any considerable number of them go into the Army or Navy?—No.

11780. They do not?—A few, not many.

11781. (*Chairman.*) Most of them are too old, I suppose, are they not?—No, a good many are rejected as physically unfit.

11782. (*Mr. Lindsell.*) Do you take the ages of the people who come in?—Yes.

11783. Do you know what the average age is?—I have not it at the moment. The last average I took was thirty-two, I think.

11784. (*Chairman.*) Most of your entrants would be much too old for the Army?—Yes. A good many of the men I have advised, and sent them to Shoeburyness.

11785. (*Dr. Tatham.*) And they are rejected?—Yes.

11786. Because of physical disability?—Yes.

TWENTY-FIRST DAY.

Monday, 25th April, 1904.

PRESENT.

Mr. ALMERIC W. FITZ ROY (*in the Chair*).

Colonel G. M. FOX.
Mr. J. G. LEGGE.
Mr. H. M. LINDSELL.
Colonel GEORGE T. ONSLOW.
Mr. JOHN STRUTHERS.
Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary*).

The Rt. Hon. Sir JOHN GORST, M.A., LL.D., F.R.S., K.C., M.P., called; and Examined.

11787. (*Chairman.*) Your evidence is principally directed to the causes prejudicial to health in the development of the young?—Yes, entirely.

11788. Do I understand your experience here as Vice-President has anything to say to the fact of your attention being called to these matters?—Yes, constantly. I really can hardly describe the sources of my information, because they have been soaked in during the eight years that I was Vice-President, conversations with inspectors, visits to schools, talks to teachers—I mean I was living in the whole atmosphere.

11789. That is what I presumed was the case?—I could, perhaps, in cross-examination, give my reasons for some of my statements or the ground upon which I make them, but generally I can only say it was my life during that time.

11790. As to the causes of degeneracy which you enumerate, you place first the physique of the mothers?—I should rather say physique of parents I am impressed with the idea which again you cannot reduce to statistics, that the race is propagated in the greatest proportion by the least fit part of it.

11791. You mean the superior stocks do not reproduce themselves?—I mean the restraints on marriage diminish as you go down in the social scale, and when you get to the most unfit part of the population there is no restraint on marriage. People marry who are perfectly unfit to marry, who are certain to propagate weakness and disease.

11792. There children die very fast?—Yes. But they marry very young, and all the resources of civilisation are now directed to keeping their offspring alive.

11793. They defeat those resources very much?—They may to some extent. That is a question upon which further information and further research is necessary.

11794. We had evidence from a factory inspector in Dundee, and he said in conversation with factory operatives there, he found women had ten, eleven, and twelve children and but one or two had survived?—Yes. As I said, a great many propagate the species who are not fit to propagate it at all, and those who propagate the most of the species are now weakest.

11795. There is no means of sterilising those?—No. The only remedy I can suggest, which I think the present condition of public opinion would allow, would be to put a stop to the very young marriages. The law is that no people under age may marry without the consent of their parents. In the case of the more responsible classes of society, it is a real restraint, but with the very poor it is no restraint at all.—They do not ask their parent's consent. They do not get it, and they marry just as they are disposed to marry. If you prohibited marriage below a certain age (I am not prepared to say what the age should be, whether it should be twenty-one for both sexes, or twenty-one for men and eighteen for women, or something of that kind), but if you prohibited marriage below a certain age you would stop a good deal of physical deterioration.

11796. Would not such a prohibition be extremely difficult to enforce?—I do not think so.

11797. Would not you get an immense amount of evasion?—I doubt it.

11798. By certificates of birth, you mean?—Production of the birth certificate is not very difficult. Of course there would be frauds. There are always frauds.

11799. Dr. Tatham, who represents the Registrar General's Department, will tell you that early marriages are not so common as they were.—I am very glad to hear that. (*Sir J. Gorst.*

11800. (*Dr. Tatham.*) That is so.—Then another thing. There is, of course, a great objection always raised on the score of morality. Now, I am almost certain that that argument is entirely wrong. That in the most cases immorality is what I have heard called "*pregustatio matrimonii.*" It takes place between two people, one at least of whom intends to be married, and if marriage was impossible a woman would not give up her person to the man when she knew he could not marry her. She will when she persuades herself he is going to marry her. So far from the limitation of marriages being a cause of increased immorality and increased illegitimate children, my belief is it would be a cause of less illegitimacy, and no doubt the illegitimate children in the schools—if you see the children in the schools—are very much worse than the rest.

11801. (*Chairman.*) Physically?—Yes; they are less cared for, and, therefore, to put a stop to illegitimacy would be to raise and improve the condition of the race.

11802. Another point is this. Illegitimacy is diminishing?—Is that so?

11803. (*Dr. Tatham.*) Yes, that is so.—That, again, I am very glad to hear.

11804. Not rapidly, but it is.—Then another thing I want to call attention to in the case of mothers of the poorest people, is that they are now so largely incapable of suckling their children.

11805. (*Chairman.*) That we have had a good deal of evidence upon.—And they are totally ignorant of the way of bringing them up by hand. There is an enormous amount, not only of death, but of illness. A great many children do not die, but they are spoiled for life by their ignorant bringing up. The only remedies I suggest for that are, in the first place, what has been proposed—I daresay you have had evidence of it—the establishment of milk dispensaries.

11806. Such as they have in Paris on a large scale, and which in certain municipalities have been started here?—Have they been started? I did not know that. That is one matter. And then another thing is the teaching of the laws of hygiene among the population.

11807. By house to house visitation?—I do not mean what the Board of Education means by "teaching," viz., cramming information into people so that they can answer an examination paper on hygiene. You find plenty of pert young people who do that. It is only the really practical teaching of hygiene by people who are district visitors, and others.

11808. Like the Manchester Ladies' Health Society?—I once went round with Dr. Barnardo's inspector, Miss Jane Taylor. She was a doctor. What I was most struck with were the lessons in hygiene which this woman gave in every cottage she came to. Practical lessons—what the people ought to do for chilblains and little slight ailments, so that her tour of inspection was also a tour of instruction, and most valuable instruction, in the laws of health, and in the ways in which the children fell short of the attention which they ought to receive.

Sir J. Gorst.

11809. There is one question upon that point. One of the witnesses here, Miss Eves, who works in Hoxton, recommended the municipalities establishing crèches, which should not only be philanthropic, but educational places, where mothers could come and obtain instruction at the hands of the municipality as she suggested, under the Technical Instruction Act?—Yes, I think that is an admirable idea, all that kind of practical instruction. I am not a believer in instruction for the purpose of examination. I think it goes in at one ear and out at the other, but instruction of that kind, I think, is admirable and will very likely produce considerable effects in time on the population. Now I come to what we do to children when we get them to school. think we fail in providing a great many of the necessaries of life. First of all, fresh air—I suppose the Committee will agree that fresh air is the first necessity of a child?

11810. Yes?—In some schools the ventilation is good, but in many it is defective.

11811. Their position in towns often makes it difficult?—Yes, that is so. In the country schools ventilation scarcely exists in practice. With regard to the generality of country schools, I have been in heaps myself and I do not recollect going into a country school where the ventilation, was proper. The nose is a very good test, and the smell of a school is always so bad in the country—not in a town—that you can tell at once it is not properly ventilated. The reason is that although admirable precautions are taken by the Board of Education to see that the schools are properly constructed, the teachers stop up the ventilation, the teachers, the children and even the managers, and, I believe, even the inspectors will have the ventilation stopped up because the school is too cold.

11812. It is draughty?—Because it is draughty or cold. You cannot have good ventilation of a school unless you have adequate warmth. Of course in the country schools they have quite insufficient fires and insufficient methods of heating, and when the school is cold anybody—you or I—would probably shut up all the windows and ventilation because it is much pleasanter to perish from bad air in warmth than from cold in the most admirably ventilated building. Another thing is that although the schools are generally well ventilated, the class-rooms are often extremely badly ventilated. It is very much like the House of Commons.

11813. Do you mean faults in construction?—Either from want of proper provision in the construction of the school, or want of proper management of the ventilating apparatus of the class-rooms. The class-rooms are constantly foul when the main body of the school is ventilated.

11814. Do you believe in the ordinary means of ventilation, or do you believe they ought to be mechanically ventilated?—I am rather a window ventilator, but I am quite ignorant upon that subject. I should yield any opinion I have on that to scientific people.

11815. With regard to the children at school a doctor from the country said that it would be a very good thing not to ask children in the rural districts to attend school so early; his opinion was that the children in the country up to six years old, or certainly up to five years old, would be doing better for themselves by running about in the open air and improving their physique with the result of really strengthening their minds for the work which they would be asked to do when they did attend school?—I should like the country children excluded from school up to seven years of age.

11816. He said six years, but you would go further and say seven years of age?—Yes. I would not let a child in the country—it is different in the towns—go to school till he was seven years old. That is the practice in Switzerland, which is perhaps almost the best educated country in the world. They do not let their children come to school till they are seven. They run about in the villages and mountain sides, and they are often employed in looking after cattle, goats, and so on. They do not go into school at all till they are seven years old, and therefore when they do go to school they are sturdy and strong, and their observation is awakened.

11817. (*Mr. Struthers.*) In Scotland it is not usual for the country children to come to school much before six?—I am very glad to hear it.

11818. You would not propose to enforce what is the letter of the law on the subject?—Certainly, I would not. The letter of the law in England is five years old. I have always thought that it was too young. I should never make a child go into school till it is seven at the very youngest.

11819. (*Chairman.*) Did you ever suggest an alteration of the law while Vice-President?—I think I have done so; I certainly made speeches in Parliament, and I think I wrote memoranda in the office. I think so, but I am not quite sure. Another thing I want to say in connection with this is, that I think the practice of open air lessons should be enormously extended in our schools. In America every lesson they can give in the open air they do. They constantly turn the children out of the schools. Even such things as history lessons. In New York, they will take a class out of the school, take it into the park in New York, draw it up before a statue of Washington and give a lecture on history there. Of course it is really the open air, it is not the statue of Washington, which is the great advantage.

11820. If you had all the children in Parliament Square it might interfere with the approaches to Parliament?—I do not know how far the practice may be possible in towns and in parks—that is a detail—but in most country schools, take a day like to-day, if the children were all turned out of the class rooms into the open air and did lessons there how much better it would be.

11821. Geography lessons might very well be done?—I do not know that the lessons would be better, but I am sure the children's health would. I tried to encourage such a practice when I was Vice-President. I saw a number of the leaders of the Country Schoolmasters' Association; they came and saw me and I preached this open-air doctrine to them. They accepted the notion, but they wrote to me afterwards to say that their managers would not agree to it. They had the schools, they liked to use them; they did not like the idea of the children being put out of doors. In the case of all physical instruction——

11822. That should be out of doors?—I am quite of opinion that you had better not give the physical instruction at all unless you can give it in the open air or in some perfectly ventilated room such as a town school board alone can provide.

11823. To give it in a room where children have been at work for a long time is bad?—Yes; it is worse than not giving it at all if you give it in a closed up room. You ought to have an open playground or a covered shed in which the children can be exercised.

11824. Which is practically open air?—Yes. Then I come to the next great necessity of children, and that is food. Children are ill-fed, not only in town but in the country. Most of the evidence and most of the speeches which have been made have been with regard to town children, but if you investigate the country children they are nearly, if not quite, as badly fed as the town children.

11825. They get as little milk, I believe?—Yes; children's food generally has two defects. It is insufficient in quantity and it is unsuitable in quality. I can give you a very curious confirmation of that. There are a large number of children, the better sort, sent down every year into the country by the Children's Country Holiday Fund. They are not the worst, they are the best of the children, because in most cases the parents contribute something towards their support. A friend of mine who is a vicar in a parish not very far from London, and who has a very large number of these country children in his parish, tells me when they first come down they will not eat the country food; they are accustomed to pickles, bloaters, and strong, tasty food of that kind, and when they got the bread and milk and porridge put before them in the country they begin by declining to eat it. They very soon get over that. In a few days the fresh air makes them hungry and they eat it, and they invariably end by having to have their buttons let out before they go back, showing how quickly the human body responds to fresh air and wholesome diet.

11826. That hardly bears out what you have already told us, that the children of the country are as badly fed. Those are selected, perhaps?—Yes, they live in the better households, 4s. and 5s. a week is paid and people look after them; they are not the ill-fed

country children; they are the improperly-fed children who are sent down from town into the country. I do not know that I need say a word to this Committee about the enormous mischief of teaching children when they are underfed. It is like working an underfed horse; it produces exhaustion of the brain and of the muscles, which the child may never be able to get over. At all events, if you do not feed the children you should not attempt to lay any stress upon either their bodies or their minds. I do not know whether the Committee would like me to mention a definite plan for feeding children, but I have talked to a great many people about it. Would you like me to give you a plan?

11827. I should like you to elaborate any plan that you have for the information of the Committee?—Of course any plan must be subject to modification according to the conditions of the place. You cannot have the same plan everywhere. There are schools where there is no underfeeding at all.

11828. A large number, I should think, in the country?—I should say a large number both in the country and town, where you need not interfere at all. I think the Scottish Commission showed that. I should be disposed to say, having visited Aberdeen, that very little interference was required with Aberdeen children.

11829. In the great bulk of the country districts the mother is never withdrawn from the house early in the day; she is always there to give their children food; it is one of the prevailing causes in the town that the mother goes out to work?—Yes. There are many cases where the mothers have not got food to give their children in the country. In every country district there are an immense number of widows with seven or eight children, and it is almost impossible for a woman to provide necessary food for her children; they sometimes get a little poor-law relief, but very insufficient; and there are a large number of such families in every country place. I know I used to go and see them in Essex when I lived there. The same kind of families live in Wiltshire and in Cambridgeshire; widows, who are living under conditions in which it is impossible for them to adequately feed their children. Those are the people from whom the country underfed children chiefly come. In all schools where a class of underfed children exist the school authorities should organise a provision of school meals, a breakfast and a dinner. Those school meals should be open to every child attending the school who paid what would be the cost price. I believe the thing can be done for something like ½d., or at the outside 1d., for a breakfast, and something like 2d. or so for a dinner.

11830. Three half-pence we have heard it stated?—Of course it varies in different places and varies in different classes, but the ticket for the school meal should be the cost price of the meal. I would not let the paying child have it for less than the cost price. I think that if a meal of that kind were provided a great many parents would gladly avail themselves of it, because they would get their children really well fed at a price at which they could not feed them at home.

11831. And as a measure of convenience it might be done?—They would get rid of a great deal of trouble and work at home, and the result to the children would be very much more satisfactory. I am of opinion that a great many people would use the public table, as they do in Paris, where public school meals are established. A certain percentage of children use the school canteen as they call it there, for the purpose of getting their regular breakfasts and dinners, and I see no pauperising in that and nothing whatever objectionable.

11832. You do not think it is open to the objection of tending to break up family life?—No.

11833. You are speaking generally?—I do not think it would, I doubt it very much. The father generally takes his food with him to his work. The mother and the children often live upon scraps. Certainly I should not be afraid of doing an injury to family life. Then I think that the teachers of the class should be charged with the duty of giving a ticket for breakfast or dinner as the case might be, or both, to every child that they knew was underfed.

11834. Do you think the teacher's information would be sufficient?—I think if you will examine Dr. Macnamara, who I understand is going to give evidence here—he is much more fit to speak upon this subject than I—but I think he will tell you that the teacher always knows and can perfectly well know which children are, and which are not, underfed. They see the children; they are with them all the morning and see how they do their work; they know something about the character of the child's home and they are the fittest people in the world, much more than the district visitor, much more than the secretary of a benevolent society, the most fit people in the world to pick out those children who are underfed, and I would charge them with the duty of picking out children who are underfed and giving them a meal, breakfast before school and dinner in the interval. But the teacher should be subject in the performance of this duty to proper supervision and checks. He or she should be required to make a return every day of every child to whom a meal was given to the head teacher, and through the head teacher it should be sent to the school authority. If they saw a child very frequently receiving this ticket they should speak to the teacher and make independent inquiries through the attendance officer or otherwise. *Sir J. Gorst.*

11835. That is the first thing that should be done—the conditions of the child's home should be found out?—Yes. In the case of every child to whom this ticket had been so given application should be made to the parents for the money, and the attendance officer, or a policeman would be better, should go to the house and say: "Your child was fed at school this morning and please to pay 2d. or 1d.," or whatever it was. In cases where the parent, being able to pay, refuses, the amount should be made recoverable by summary process. Under the present law, if a child went on having food at the school for a fortnight and the parent upon being applied to for the money would not pay it and did not feed the child, that would be conclusive evidence of neglect of the family, and the man might be prosecuted and sent to prison.

11836. Under the existing law?—Yes, under the existing law. At present neglect of family goes unpunished, because it is so very difficult of proof. But this system would enable you to get that proof.

11837. It would bring home the negligence of the parent at once?—Yes. Then in the case of those who cannot pay that is a case either for a benevolent society to take them in charge, or for the Poor Law to be referred to. If such a widow as I have been describing sends her children to school, and says that she cannot give them a proper breakfast, and the children are provided with breakfast, I would make it recoverable from the Poor Law authorities, unless some charitable organisation stepped in. What I want to impress is this, that the present system does not bring home parental responsibility. The children go on coming day after day half fed. Nobody interferes, and the parents have not got their responsibility for feeding their children brought home to them. Another thing is that the charitable societies which now give food indiscriminately distinctly tend to pauperise the parents. Dinners are often given to children who do not require them.

11838. Mr. Loch, who was a witness here, animadverted upon that?—A gentleman from Scotland recently wrote to me on the matter, and said that the pauperisation of parents by the wholesale providing of these meals by unauthorised people was doing a very great deal of harm, and I am quite of that opinion myself. If it were done under regulated authority, if the parent whose child was fed in that way was put down on a list and brought to the local authority, the local authority could take such steps as would bring home parental responsibility to the parents, and could prevent their pauperisation.

11839. You would leave it to the local authority to prosecute in such cases?—Yes, I would leave it to the local authority. I should very much like to see the law so amended as to make the sum recoverable from the parents by a very summary process. But, apart from that, I think you might, under the present law, without any change of the law, if you could get the funds establish this kind of canteen. As to the funds, of course, I suppose at the present moment the school rate could not be applied.

11840. It is not applicable?—No. I think in most places it could be done by voluntary contributions. They would provide a sufficient plant and material to begin, and funds to keep it going, at all events as an experiment.

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11841. Have you formed any opinion as to the proportion of children who go to school underfed at the present moment?—No, I have not. It is one of those things which has become almost a political question now. But I believe that if I were to make a guess I should say that of the child population of our public elementary schools nearly a third were insufficiently or improperly fed.

11842. All over the country?—Yes, taking the whole country through; that was the result of the Scottish Commission. I do not mean actually starving, but improperly nourished.

11843. A distinguished educational authority of Salford, who was in that chair, said that he did not think there were more than 2 per cent. of children there who went to school hungry?—I cannot speak for Salford.

11844. In London we have had the figures put nearly as high as you said—33 per cent.?—I would strongly urge the taking of samples. You can do this by taking samples. If you do that all over the country, as you did in Scotland, you would get a reasonable figure. In Scotland it was very nearly 30 per cent.—Aberdeen and Edinburgh combined. In Edinburgh it was certainly 30 per cent.

11845. In the samples which were taken?—Yes; in Edinburgh alone I think it was 30 per cent; in the North Canongate School, which was the poorest Edinburgh school, I think it was 38 per cent. of children who were, what Dr. MacKenzie, who examined them, called insufficiently nourished.

11846. The teachers are very good judges of a starving child, but do you think they are good judges of what we may call children insufficiently fed: Do you not think the teachers' opinion would be required to be reinforced?—Yes; I am coming to that later. I do not exclude medical advice at all, but I say I would make the teacher *primâ facie* responsible. If a hungry child had not been fed in school it should be the teacher's fault.

11847. The actual figures of London are estimated at 33 per cent. in the worst districts and 16 per cent. in the others. Do you think the meals should be given in the schools?—Yes; either at the school itself or at a building provided by the school authority.

11848. Would not you find that a good deal of structural change would have to be made in a good many schools?—I should think in most places they could get accommodation. I remember going to a country school some years ago, Tendring in Essex, where the meal was given in the school.

11849. Do you propose it should be prepared in the school as well as given there?—Prepared under the direction of the school authorities. In that case I think the dinner was provided by the Rector's wife, who did it in her own kitchen and managed the whole thing herself; and she told me—I remember very well—"This is not charity; this is far-sighted self-interest; because our children get better grants if they are fed than if they are underfed, and we feed them for the purpose of getting more money out of the Government." The next thing I want to mention—I suppose I need only mention it—is fresh water. I think in most of the new schools which are provided care is taken to provide the children with abundant water to drink, but in some of the old schools it is lamentably deficient. There ought to be close to every school in the schoolyard a tap from which the child can drink as much water as it likes. You know how thirsty children are, and if they do not get fresh water they drink foul water. There was evidence given in the Poor-law Schools inquiry that in a certain workhouse school the children habitually drank from puddles because there was no proper water supply—the children drank from puddles in the schoolyard. I need not enlarge to you upon the mischief that might do to the children.

11850. (*Chairman.*) Does the Board of Education make it a necessity?

11851. (*Mr. Lindsell.*) I think now water is very strictly looked after and the county councils are putting on very strong pressure about the supply of water. Of course, it cannot be always laid on to every school.

11852. (*Witness.*) I think we do a considerable amount of mischief to the very young children when we get them into what are called "infant schools." There are kindergarten schools under the great school boards than which no happier or better atmosphere for a little child can be conceived, but in many of the old-fashioned schools, and in many country schools where there is no infant school but an infant class, I think great injury is done to these little children. In the first place, there is too much of the school about it; they are not fit to go to school at baby age. They are made, for instance, to stand for hours in their classes, a thing which a little child cannot do without great injury to itself, and they are moreover made to stand—I have seen it myself—upon little chalk circles drawn in the ground, and there they stand for an hour. If there is one thing that a child wants it is to move about; and to merely keep it in one place, and keep it by discipline, is often very cruel. I have seen in punishment books records of children being caned for moving about and looking about them. My idea is that if a little baby is put to stand in a class at all—which I think is an abominable thing in itself—it ought to be for a very short time and with very rapid changes. Then there is a thing which may have been brought to your notice by some of the witnesses, which is to be seen constantly in infant schools. The children sleep in the afternoon. Every little child will go to sleep, particularly if it has had a dinner. There is no place for the child to sleep, and they are in the habit of sleeping by putting their arm upon the desk, leaning forward and laying their head on their arms, sleeping in that way for an hour or more than an hour. These children are sleeping with a curved spine, and they do that day after day. It is one of the most pernicious things possible. If you have little babies in your school you ought to provide a place where they can sleep lying straight. It is easy to have hammocks, if necessary, one over the other; but no children ought to be allowed to sleep on desks, and to sleep in the position which I have described. Then the teachers who have charge of these children are seldom certificated or trained; they are Article 68 teachers, little girls of twelve or thirteen, employed as monitresses. They do not know how to manage children. I do not mean to say that some of these Article 68 teachers might not be made into admirable infant teachers, because what you want in an infant school is not a teacher, but a nurse, and you might teach them to be kind to little children and give them practical lessons in hygiene. Many of them do make admirable teachers of little children.

11853. I suppose infants want the care of experienced persons more than any other class?—Yes. I am told that these girls of twelve or thirteen often fail to attend to these infants' natural wants, and that the infants pass their time in a condition of wet from want of some women to look after them. I am now going to say something which, perhaps, Mr. Lindsell will not agree with, but I think that one of the reasons for the defects of infant schools is that these babies are visited entirely by men inspectors. We had in my time a few women inspectors in the Board of Education, but I am told that they no longer inspect the schools. I got a letter the other day, which I will just read to the Committee, as it states the whole story as well as I can do it. This is from an infant school mistress of twenty-five years' standing. She says—"Since I became infant teacher, more than twenty-five years ago, I have had visits from about twenty different inspectors, and I can truly say that only two have had an idea of what a little child is like. I suppose it is the law of nature; if a man could really understand an infant he would be a mother and not a father." If you are going to continue the practice of having these infant schools at all, I think you ought to have a women's department—not merely an odd woman inspector here and there—of the Board of Education, organised for the purpose of managing these schools, which are really nurseries. If the Board of Education will have a number of nurseries under its charge, it must have women to manage them. Now we come to the question of physical drill—physical training. I think the Scottish Report shows that we do a great deal of unintentional mischief in our physical training by not having children properly examined before they are subjected to it.

11854. They are put to too great a strain?—Yes, and children who ought not to be drilled at all are drilled. No child who is insufficiently nourished should have physical drill.

11855. (*Dr. Tatham.*) Rickety children also?—Yes; those children ought not to have the sort of physical drill which is recommended by the Department, and which is practised in the school. Then I think that the child should be tested to show that it is free from heart disease,

or anything of that kind. There was a case in the Edinburgh schools, I remember, where Dr. Mackenzie said that a child might have dropped down dead it was in such a condition of heart disease; it was unfit to have the strain put upon it which was put upon it. I have already said that physical training should not take place in the school, but in the open air or under a shed. Then I think that this physical drill should be of a scientific rather than of a military character. I do not think the sort of training which is very good for country yokels who come from the plough, and are going to be turned into soldiers, is at all fit for delicate little boys, and particularly for delicate little girls. The drill sergeant who comes does not even know how the little girls are dressed; they are very often very inadequately dressed for the sort of training they have to go through. Very likely you have taken evidence about this, but there are scientific methods of drill which are now put forward, and have been carried to very great perfection in Sweden and other countries, which we ought to aim at having—a scientific system of drill in our schools rather than a military one.

11856. (*Chairman.*) A Special Committee has been sitting upon that subject, as I daresay you know?—Yes.

11857. It has reported?—Yes. It was established about a year ago, because Dr. Macnamara and I made such a fuss in the House of Commons.

11858. (*Mr. Struthers.*) The Report is now presented to Parliament?—I have not seen it yet; but as it has been presented I need say no more about that.

11859. As I understand it, what you advocate is something not in the nature of military, but some approach to a scientific system of physical exercise?—Yes. Another thing which is of very great importance is the clothing. I am certain that the clothing of the children should be inspected every day. If nothing more can be done than that, that alone would be a step in the right direction.

11860. (*Chairman.*) Just to see that the child is suitably and sufficiently clothed?—Yes.

11861. With our changing thermometer it might require different clothing every day—yesterday and to-day, for instance?—I do not think that the country child would have felt very much difference. I have no desire to see the clothing of children undertaken by a public authority, but there are several things in connection with clothing which a public authority may do. It might take the children's wet boots off when they come to school and put them into slippers, and even take off their wet stockings and put them into dry school stockings, which would not be a great expense but would be a great benefit. If people who look after these children could only induce parents to do what the fashionable parents do, namely, put their children into sandals instead of shoes, it would be an enormous saving of expense and would, no doubt, be greatly to the children's advantage, because the number that come in with wet clothes and sit all day in wet clothes in a country school is very considerable. Of course no record is kept of that, but that is one of the things of which a record ought to be kept. Then I think the last general thing I need call attention to is cleanliness. I have an idea that if you force all the children of a neighbourhood to come to school the parents have a right to expect and to require that the children shall be fit for their own to associate with, and that certainly is not the case now. In the place where I live, Yateley, which you know very well, every now and then an effort is made to make the gipsy children, the van children, go to school. They come to school swarming with vermin and the respectable people of the village object very loudly. They say, "Our children are sent clean to school, and are we to let them sit on the same bench with these verminous children from the common, who will inevitably infect them with lice."

11862. (*Mr. Lindsell.*) You know that the fact of children being infected with vermin is a sufficient reason for excluding them, by the Code. That has been upheld by the Board?—Then if they are excluded they do not go to school at all.

11863. Where are they to go?—It seems to me that one of the things to be provided by the school should be the means of washing, that no child should be allowed to come into school with a dirty face or hands, but that it should be made to wash its hands outside.

11864. (*Chairman.*) Do you not think that the proper way is to enforce such sanitary conditions as will discourage them living in vans at all?—You know the impossibility of dealing with a population on the common.

11865. It may, I believe, be dealt with now in one or two different ways. I believe the sanitary authority should intervene. Those vans are surely most insanitary?—Yes. I should go a little further than the Board of Education goes—I should take the children and wash them. It is done in Sweden.

11866. (*Mr. Lindsell.*) You must burn its clothes, washing the child is not enough?—You might disinfect, I suppose, by a proper temperature without destroying the clothes.

11867. (*Chairman.*) The clothes are so filthy and rotten that if you took them off the child they would probably fall to pieces.

11868. (*Mr. Struthers.*) Who is to do this washing and baking?—There was an Act passed some years ago, which created great excitement in the House of Commons called the "Verminous Persons'" Act, but I believe it has never been put in force in any one instance. I should think an Act could be passed which could be adopted by the Local Authority as part of its sanitary proceedings.

11869. There is this Act already, which enables a sanitary authority to do it, and which is not put into force; it is no use having another Act?—I hope that now that the public authority has become the school manager their eyes will be opened to the necessity of some of these things, and that they may take action of themselves. I suppose dirt is unwholesome, and if that is so you ought to see that the children are not unhealthy.

11870. (*Chairman.*) We should prevent them from living under conditions which create this state of filth?—Yes. Then we come to the actual physical defects in children, which ought to be found out in the schools and dealt with.

11871. This can only be done by medical inspection?—Yes. First of all there are the diseases of the nose and mouth, adenoids, which, if properly diagnosed and proper advice given, could, I think, to a great extent, without any expense upon the ratepayers, be ameliorated. Then there comes the extremely important question of eyesight. I think we want a great deal more scientific inquiry into the conditions under which school children's eyes deteriorate. This is not confined, of course, to the elementary schools; children in all kinds of seminaries of learning get worse eyes.

11872. The young children are employed on too small work to begin with?—Yes, there are some things in our curriculum which are very bad for the children. For instance, one of the common employments of these little babies who come to school is to thread needles. I suppose it is a very bad thing for the eyes of a young child to thread needles. Then in many of the schools there is not proper attention paid to the light. I have constantly been in the country schools and found the children sitting in the full glare of the window, looking at it. Then there are other schools where the light is very deficient, and I suppose that is equally injurious to the eyesight. Then they use blue chalk constantly on the blackboard, which I suppose strains the eyesight. I do not think sufficient attention is ever paid in the schools to the place where the child sits. You will see the teacher lecturing upon a blackboard, and a child sitting right off at the side. He cannot possibly see, or can only see very imperfectly, the writing upon the blackboard. The straining of the eyes must be very bad, but the whole of this question, I think, further scientific inquiry is necessary. Myopia is greatly on the increase, and it is one of the very great disadvantages of all school life. Then with regard to the children's ears. I think it was in the Scottish Report they found 40 per cent. of the children have defective hearing, largely, I suppose, due to mouth and nose diseases. The children certainly should be examined to see who can and who cannot hear, because boys and girls are perpetually caned in school for not hearing something which they cannot hear. The condition of every child as to hearing should be found out, and recorded in the school.

11873. There are some special tests which should be applied for the condition of eyes and ears?—Yes, I think so.

Sir J. Gorst. Then there is the question of teeth. I suppose it is now established that the condition of the teeth is a test of general health and physique, and certainly in the schools there has been very little examination into that. What has taken place tends to show an enormous amount of teeth disability.

11874. Experts upon that subject who have been here have refused to admit that there is any correlation between general degeneracy and the condition of the teeth?—It has been adopted by the military authorities as a test, and I daresay you have heard more about it. I was reading the other day what Dr. Hall, of Leeds, says; he makes out that the Jew is so much more healthy than the Christian, and attributes it partly to the condition of the teeth.

11875. He says Jewish children are much better developed, does he not?—Yes.

11876. And he attributes that to dietary rather. Everybody would admit that the condition of the teeth is largely due to dietary, but defects of dietary touch all classes, not only the degenerate ones, it would appear?—Now I come to the question of medical examination which I have referred to once or twice. The measurements proposed by the Anthropometrical Committee, which are of a scientific character, I have nothing to say about; I am not qualified to express any opinion. I have no doubt they are the very best measurements that can be taken, and I rather incline myself, from my general experience of life, to having special operators instead of attempting to have the teachers of the school conduct those operations themselves, particularly as it will be a very intermittent thing, affecting each school once in ten years, if that scheme is carried out. For my purposes, what I want to say is that this anthropometrical examination will not do much for the children. It will not do what I want to see done.

11877. It will not be a substitute for medical inspection?—No. As far as it goes I am entirely in favour of it. I think it would be an interesting addition to our statistics, and would be well worth the very small sum of money which it would cost if the Chancellor of the Exchequer could be induced to see it in that light. But for the purpose of the medical inspection of the children, I should begin by a daily inspection by the teacher. The teacher of the class, which is often only between thirty and forty—I do not mean the head teacher but the teacher of the class—should draw up his class in line, and walk round them as a military or naval officer walks round his men when they are drawn up on parade to look after them and see the condition they are in. I think there should be a general record kept by the teacher of the physical condition of every child, which should first of all contain the particulars of the child's home, what sort of home he lives in, whether it is in a one-roomed house with a large family, or in a two-roomed house, whether in short the child is properly and decently lodged. That would give a great deal of information, because it would show what Dr. Mackenzie of Edinburgh seemed to think he almost established there, a correlation between the kind of house the child lived in and its general condition in the school. Then, I think, a daily record should be kept of the condition of the child as to nutrition. Of course if the child comes to school without its breakfast, absolutely hungry, he should note that; I would also keep noted the general condition of the child as to nutrition and as to health. Then a daily record should be kept of its clothing, whether it was clean or dirty, and also whether its person was clear or dirty, all of which a teacher with a note-book in his hand could take notes of by walking round his class. It would not take long to go through thirty or forty children, and it would be an extremely valuable record of the condition in which the children were growing up, and would greatly promote increased care on the part of parents.

11878. You would have this done in all schools or only those of the poorer classes?—I would have it in all schools as a desirable record of the general condition and health of the school children. I think the teachers would take a great interest in it when it was once begun, and it would give you a continuous record of the health of the school population; it would give you more information as to the sort of race that was growing up than any other course you could take. Then besides that there ought to be a periodical inspection by trained observers. I should say nurses—trained nurses.

11879. As well as doctors?—The doctor comes last. I would have more frequent inspection by trained nurses than by doctors. I should say it might be as much as half-yearly or even quarterly. That, of course, is a question for the local authority. There is an inspection of this kind in many of the schools in London and in many of the schools in Liverpool and possibly in other places. The nurses would examine the children more at length and more in detail than the teachers; they would, for instance, look at their throats, their noses, and their general condition; they would pay special attention to their eyes, both to defects of vision and diseases of the eye and eye-lid, which are not very uncommon in some of the poorest schools. They are highly infectious, and children suffering from them should be at once taken out of school. The teachers would in time become experts, and detect eye disease long before the advent of the nurse. But there ought to be a professional examination of the children. Then the same inspectors would examine for defects of hearing. The defects of hearing would be recorded in the general history of the child, and the condition of the teeth. They seem to me the people who, in the first place, might determine the fitness of the child for physical training.

11880. Would it not be expecting too much for the most highly-trained nurses to have the qualifications of an oculist, aurist, and dentist?—It is not that. The trained nurse would only have to recognise that there was something abnormal and refer to higher medical authority.

11881. Indications of specific diseases are not so easy to determine?—Many people who are not doctors at all, who have had no professional training at all, can tell an ophthalmic child in a moment. My friend Mrs. Barnet, who is neither a doctor nor a nurse, can do so. I was never more astonished than once when I went into the baby-room in a workhouse; there were thirty or forty children grovelling together on the ground, and she darted like a man into a flock of sheep and seized one child and said: "That child has got ophthalmia." A medical man was sent for and it was found that this child had ophthalmia and it was taken away at once. All bad cases would have to be referred to a medical officer, and I suppose every school authority now will have an official medical officer. I do not know to what extent he need visit the schools. I should think in large places like London, Manchester and Liverpool, it would be most desirable that the children should all be visited by the medical officer. It might be more difficult in the rural districts. At all events, where there was any case of serious disease or defect amongst the children the medical officer should be referred to. How far these serious illnesses and defects should be treated at the public expense is a question which I do not know I need argue here. I am strongly in favour of treating them at the public expense.

11882. I suppose in the first place you would have the matter referred to the parents?—Yes, if the parents liked to pay, well and good, but if there is a serious illness or defect I do not consider that it is pauperising the parents to have it treated at the public cost. It is now treated at the workhouse infirmaries and hospitals at the public cost. Taking the strongest selfish view of the matter it is in the interest of the State to cure and alleviate, as far as possible, the diseases of the members of the community. The child whose eyes or ears are treated at public cost will grow up a stronger man or woman and do better work for the commonwealth, because of the attention bestowed upon it in its earlier years. I think it is the worst economy in the world when you become aware of any curable weakness in a person who is growing up a member of the community to refuse to treat it; it is the most wasteful extravagance not to deal with it early and cure it.

11883. Unfortunately people look at the cost rather than the benefit?—I am afraid they do.

11884. I suppose a scheme of general medical inspection, supplemented by the inspection of trained nurses, would be an expensive one?—You may make it as expensive as you like.

11885. Could it be done economically ?—I think so. What I should begin with would be nurses. I should make a general inspection with power to refer to the public medical officer of the district—there is one in every district—such cases as they thought were serious.

11886. Could you get such a staff of nurses if you wanted it ?—I think so.

11887. Is there not a great demand already on the existing supply of nurses ? It would mean an enormous addition to the number of nurses who are now employed if all the big educational authorities had a staff ?—Yes ; if the educational authorities had a separate staff I have no doubt it would. But in country districts village hospitals are not unknown : and the nurse from a village hospital could easily visit the neighbouring village schools.

11888. They could be given a small fee perhaps ?—Yes. In a village you could get it done by a nurse resident in the place at a comparatively small charge. In a place like London, or other great towns, the more you do for the people the more expense you would incur and the more officials you would want. It would give a very great increase to the number of nurses and medical officers required in London if anything of the kind were done.

11889. (*Mr. Lindsell.*) The London School Board have medical officers already ?—Yes. The nurses now employed in schools are all paid by voluntary contributions.

11890. (*Mr. Lindsell.*) But there are medical inspectors as well as other kinds of inspectors appointed by the London School Board. We had one here.

11891. (*Dr. Tatham.*) I understand that you do not want to put children under six years of age into the schools at all ?—That is so.

11892. And you think it is especially necessary in those cases for the young children to have nurses rather than teachers ?—Yes.

11893. I presume your idea is a preventive one mainly ?—Yes.

11894. You think that it would be economical to act on preventive principles and prevent the spread of, say, granular lids, which you speak of, among children ?—I have always thought that. I have always advocated that all this sort of thing is economical.

11895. I may supplement what you said just now with regard to the spread of ophthalmia amongst young children in schools. I myself have seen a workhouse in Lancashire where practically every child in the infant school was down with granular lids at once. That was a case in which prevention would certainly have saved the ratepayers a very great deal of money ?—Yes.

11896. It became a matter of Government inspection for a time. So that really preventive measures taken early enough would probably have saved hundreds of pounds to that one Board of Guardians ?—I am quite prepared to advocate that on purely economic grounds, without any philanthropy in it at all.

11897. And you would have your trained nurses examine a school at short intervals, and where they found cases requiring a reference of those cases to a medical man ?—Yes.

11898. Do you happen to know anything of the work of the Ladies' Manchester Health Society ?—No, I not do.

11899. It is proceeding very much on the lines which you spoke of just now, of the lady doctor acting under Dr. Barnardo ; in Manchester a large number of ladies, the wives of some of the manufacturers and important people in the place, have joined together and formed a society. They themselves employ a very considerable number of women of the working class to visit under their direction the people in their own homes, and their work is very largely educational—I mean educational from the sanitary point of view. They teach mothers how to feed their children, how to clothe them, and how to look after them in sickness, and that kind of thing. The work of that society seems to me to be worthy of imitation, and I should be very glad indeed if that could be extended. It is not so well-known as it should be ?—I had not heard of it, but I think the plan excellent.

11900. (*Mr. Lindsell.*) I understand that your views with regard to the ventilation of schools are not that it is the fault of the arrangement of the schools, but the teachers will not make use of the means at their disposal ?—I believe it is very largely the people who will not use the ventilation which is there. I have not a word to say against the requirements of the Board of Education in the building of any new school ; I believe their requirements are good. But I know from my own experience that they are often not put into practice.

11901. How could one remedy that ?—By inspectors. The inspectors often do not look into these things.

11902. Of course this new system of having the sanitary authority and the educational authority under one and the same head will probably lead to an enormous extension of those things which you suggest ?—Yes, I think so.

11903. The medical officer of health will now be in a more authoritative position ?—Yes, I think that was the design of the authors of the recent Act.

11904. Certainly. The question about excluding children until they are seven years of age is open to argument on both sides ?—Yes.

11905. A little child may not be very much better in its home surroundings or even in the open air. It may be exposed to other risks, perhaps not the same risks, but other risks?—I am afraid the interest of the child in many places is sacrificed to the desirability of the mother going to work. The object is that the mother should go to work.

11906. The object is to get rid of the child ?—Yes, family life and everything goes to the wall as compared with the necessity of getting the mothers to work.

11907. (*Chairman.*) Not in the rural districts, surely ?—Yes, even in rural districts. But my observation applies more to the manufacturing districts, and especially to the textile districts. With regard to a woman who is a good weaver, they will hardly let her get over the birth of the child ; the overseer who wants her back urges her to come back. An Act was passed for their protection forbidding them to go back within one month.

11908. The last Factory Act ?—Yes.

11909. (*Mr. Lindsell.*) Now, with regard to this important question of the feeding in the schools : you said that the teacher would hold a sort of daily inspection of his class ?—Yes.

11910. And would know, among other things, cleanliness, and so on. Whether the child showed symptoms of deficient feeding ?—Yes.

11911. That would give a sort of foundation to go upon, to start with ?—Yes.

11912. Then the next step would be to provide meals for such children as were reported by the teacher to be insufficiently fed. Those meals, in your opinion, should be given by the school authority ?—Not necessarily by the school authority.

11913. I mean provided ?—Yes, provided under the responsibility of the school authority. I see no objection whatever to a benevolent society undertaking the duty of doing it, but it must do it as the agent of the school authority.

11914. In the East Lambeth Association it is done undoubtedly under the auspices of the School Board : that is a purely voluntary association which co-ordinates all the benevolent child-feeding schemes. For instance, Mr. Sims, of the *Referee*, gives a large sum of money, and that is done under the ægis of the London School Board, and with the appliances at its disposal ?—Yes.

11915. If that were done once by the school authority as a legal duty voluntary aid would come to an end, would it not ?—I do not know why it should. There are a great many public obligations in this country fulfilled by private benevolence, *e.g.*, the provision of life-boats. The British public is very fond of doing some part of the work of the Government for them, and I do not see any objection to its being done by benevolent persons, so long as it is efficiently done, but the school authority should be responsible for its being done efficiently. Take the lifeboat service. The lifeboat service is extremely efficiently done, I am told, but if it were not efficiently done the Government would have to step in and take it out of the hands of the benevolent society which undertakes it.

11916. You would rather leave it, if possible, to a benevolent society, acting under the direction of the school

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authority?—I think that would be a very good plan. I should like to try that, at all events, as an experiment.

11917. Then a ticket would be provided by the head teacher at the school?—Yes, the child would get the ticket at the school.

11918. And the parents would be called upon to pay?—I should like to see that done, yes. I would give a meal to every child whose parent did pay beforehand.

11919. But if the parent failed to pay, the meal would have to be given at the public expense before the public could demand the fee back?—Yes: it would require legislation to recover back the price of the meal from the parent. I should like to make the price of the meal summarily recoverable from the parent, just as you summon them for non-payment of rates.

11920. (*Mr. Legge.*) By this summary process you mean recoverable as an order in bastardy?—I should call it recoverable summarily.

11921-2. The way of putting it in the Act of Parliament is that it shall be recoverable as an order in bastardy?—That is legislation by reference. It is not a nice reference in this case.

11923. (*Mr. Lindsell.*) You said there was already an existing law by which the parents could be punished for not feeding their children?—Yes, neglect of family.

11924. The danger is that if the parent went to prison the family would be worse off?—That is the difficulty of the whole position. It is not peculiar to the case of feeding in school; it is a law occasionally put in force. A man is sometimes sent to prison for not providing for his family, and the family goes to the workhouse.

11925. Where would you have this food prepared? In the country, for instance, it would be very difficult, would it not, unless there was a Rector's wife who was willing to give her kitchen for the purpose?—Of course, such a thing as porridge is very easily prepared.

11926. (*Chairman.*) It is not prepared quickly?—No, but you can boil it all night; that is a detail.

11927. (*Mr. Lindsell.*) Broth, soup, and things of that kind?—Yes.

11928. It would be much more difficult in the country than in the town?—Possibly.

11929. (*Chairman.*) It will not be wanted in the country to any large extent?—I do not think it will be wanted so much in the country as in the town.

11930. (*Mr. Lindsell.*) You said something about the class of teachers they have for infants in the country. You would agree that the Article 68 teacher is often, if a woman of mature age, as good a teacher for small classes of infants as you could have?—I think so.

11931. Far better than an immature pupil teacher?—Yes; and some of them very easily learn. A movement took place in Oxford a couple of years ago; they brought a great many of the Article 68 teachers into Oxford and sent them for only a fortnight to a very good infant schoolmistress in Oxford, and they said that the effect in the country districts, the improvement that was made, was extraordinary. Many of them only want teaching, and I do not think it is a very difficult thing to give that sort of instruction to a young woman even if she does not know the multiplication table or the rule of three. She might be an admirable person to take charge of a little child.

11932. (*Mr. Legge.*) You referred to children of six years of age in Switzerland tending cattle and goats; do you approve of that?—Yes. I do not think there is any harm in that under the circumstances that they do it there.

11933. You do not object to light occupation for children?—Not in the least. The children want to do something and they like it—they love it. Of course it is all in degree and kind.

11934. You have perhaps seen reports of the Mosely Commission?—I have only seen the outside of it. I have not read it.

11935. They referred to some experiments being carried on in America with regard to giving children some sort of occupation as well as schooling; and similar experiments have been carried on both in Sweden and in this country. Have you seen, for instance, any of the working of the day industrial schools, such as Drury Lane?—No.

11936. Where the children have their meals and have three hours' book work and then a couple of hours, or two-and-a-half hours, the girls domestic work, laundry work and cooking, and the boys trades; have you any objection to an extension of that system to the poorer districts?—Not in the least. It is an admirable system. I understand it to be a system of teaching the children to do something and then giving them such literary or intellectual instruction as is necessary to enable them to do it.

11937. Not only with that limit which I should term rather narrow—I mean to stimulate their intellectual faculties as well as merely to enable them to perform certain manual operations?—There is an institution established in Cairo which is very much what you mean I think—at any rate it is what I mean. They have an institution there—they do not call it a school—but they take boys from the streets of Cairo and apprentice them as tinsmiths or carpenters. They take them into the institution as apprentices. They know nothing; they do not know how to read. In the course of learning to be tinsmiths or carpenters, they give them all sorts of instruction; they teach them arithmetic, and how to read and write, but it is all in connection with what they are learning to be.

11938. You would be in favour of variation of types of schools to suit particular districts?—Yes. I am very strongly in favour of that. I think the old plan of merely teaching reading, writing, and arithmetic in a formal way is a very bad one.

11939. As the age for compulsory attendance is extended would you allow children, say a girl of thirteen years of age who otherwise might have to stay at school until fourteen, to be licensed out of school for half-time employment at home, providing the school authorities were satisfied that the home was a good one?—I think a system of that kind would require to be very carefully watched for fear of its degenerating into child labour.

11940. An extension of the principle of Mr. Robson's Act?—I know that Act very well.

11941. Have you studied at all the question of special courts for dealing with children?—I have often discussed that.

11942. Are you in favour of that?—I am very strongly in favour of that.

11943. Because obviously the more the children come under the observation of the court the more intimately would the history of the case be studied?—I would never let a child go into an ordinary police court under any circumstances. There ought to be special tribunals for everything connected with the child.

11944. Now as regards your preference in favour of special operators for the anthropometrical census, I am glad to see you attribute a great deal of intelligence to the average teacher?—I do not think the average teacher is at all an unintelligent member of the population.

11945. You go so far as to say that an average teacher can detect an underfed child by looking at it?—No, I do not say that. If you will cross-examine Dr. Macnamara upon that point I think you will find that the teachers have a great many more methods. They observe the conduct of the child. He said the other day in the House of Commons, for instance, that he knew a group of children when he was master of a poor school who were always to be seen crouching in a corner of the playground, and not going home when the other children went home to dinner, and by questioning these children he found that they had no dinner to go home to. It is more than mere looking at the child.

11946. Surely the average teacher is intelligent enough to take a child's height and weight?—I suppose they could. I do not doubt the teachers would be able to do it if you put the work upon them.

11947. Or, at any rate, one teacher in any particular school?—Yes.

11948. Or if we had this army of nurses invading the schools, perhaps the trained nurses might have intelligence enough to take the child's height?—Yes. Of course

it would give them more to do. They would be employed or a longer time.

11949. Are you aware what is done by the certifying surgeons under the Factory Acts ?—Yes.

11950. They see the children and young persons at very critical periods, fourteen and sixteen; they have to medically examine them. Surely the average certifying surgeon would, in your opinion, be capable of taking the height of a child and so on ?—Yes.

11951. It is not on scientific principles that you insist upon the special operator ?—No. I always like a thing done by people specially qualified to do it, if I can get it done, rather than by amateurs.

11952. (*Colonel Onslow.*) I do not quite understand about the system of tickets at schools for feeding; where it would be convenient to the parents, either through their having to go out to work or any other causes, to have their children fed at the school, you would allow them to do so ?—Yes.

11953. It would not be a sort of punishment for the parents not feeding their children ?—No.

11954. They could do it if they wished ?—Yes.

11955. And is not there an old law in existence by which the school fees could be recovered from parents who could pay, and in some cases where it was shown that the parents were too poor to pay then it was thrown on the rates ?—Yes, I remember; it was thrown on the Poor Law Guardians.

11956. (*Mr. Lindsell.*) The parents could be sued for the fee ?—But could they summon summarily ?

11957. No. It would be sued for as a debt ?—Yes.

11958. (*Colonel Onslow.*) It struck me that would be useful machinery for obtaining the fees.

11959. (*Mr. Legge.*) This is a terrible business, this civil process for the recovery of debt.

11960. (*Colonel Onslow.*) You spoke of the insufficiency of food in the country schools amongst certain children. Is that owing to ignorance or neglect or poverty of the mothers mainly ?—I should say owing to all three.

11961. A combination of all three ?—Each one in different cases. There are cases of ignorance, but I should say they are not so numerous. There are many cases of neglect, almost entirely from drunkenness, and there are a very great number due to poverty.

11962. We had a lady who had investigated many parts of England, and she was very strongly of opinion that it was owing to the general ignorance of the women of the lower classes; they did not know how to feed themselves even ?—I have no doubt that the lady was quite right. Nothing is more deplorable than the impotence of the general English labourer or labourer's wife in the presence of food. Where a Frenchwoman would make an excellent dinner an Englishwoman would almost starve.

11963. That is what this lady said.—That is my experience. I have been in a great many poor people's houses both in England and France, and I should say that, although an Englishwoman spends a great deal more on feeding her family than the Frenchwoman, the Frenchwoman gives them a great deal more food.

11964. Then with regard to the daily inspection of teachers which you mentioned, surely something of that sort is done now, is it not ?—Some of the teachers no doubt do; they look round their class.

11965. As the children are going in ?—Yes, but it is done in an informal way, and no record kept.

11966. That is so: There is no record kept. I should like to mention one thing about the services, both the Army and the Navy: I think one reason why the authorities are so very particular about the men having perfectly good teeth when they enter is more because when a man is on service, and very often at sea when he is in the Navy, in the old days, if he has not sufficiently good teeth to masticate his food, his health must suffer, because he does not get sufficient food, and consequently he breaks down. That I think is the main thing. And the second point is that when a man has defective teeth or any other physical defect, although he may have been in the service some years, and have cost the country a good deal of money, if he wishes to get out of the service it is the easiest thing for him to complain to a doctor, and he is brought before a medical board and he gets out. I think that is the point ?—I understand. *Sir J. Gorst.*

11967. (*Mr. Struthers.*) You suggested that one of the causes of defective ventilation of the country schools was insufficient heating; the teachers stop up the means of ventilation in order to make the place reasonably warm ?—Yes.

11968. Very often a country school is a long room warmed with one open fire, and it is very difficult indeed by means of an open fire to heat the whole school properly. Can you suggest any means of dealing with a case like that? —I suppose a school to be efficiently warmed ought to be warmed by hot water pipes.

11969. That means a pretty elaborate machinery for a small country school ?—It means a capital outlay to begin with. But surely it is very much more economical in the long run to get a room warmed with hot water than with an open fireplace.

11970. It might be so, yes. But apparently there has been nothing said by the Board of Education as to the advisability of warming the schools with hot water instead of an open fireplace ?—In the old times when it would be done at the expense of the Managers, possibly it was too costly for the Board of Education to suggest, but now you have the local authority which has to manage for all time, they might make a great many improvements of that kind.

11971. You think it would be reasonable to ask them to consider this question whether these small country schools might absolutely be warmed on a different plan ? —Yes.

11972. You would not think there is anything in the point that an open fire is an aid to ventilation itself ?— I suppose it is a very good means of ventilation.

11973. What you said as to the number of children who are insufficiently fed in the country districts is in evidence before the Committee, I think. Have you any definite statistics on the point ?—No. There are no statistics to be got.

11974. It is a personal impression ?—It is a personal impression from conversations with a great many people, school managers and others, and what I have seen when I visited country schools.

11975. From inquiries made at the school ?—The part of the country I knew most about was Essex, near Manningtree. When I lived there I went a great deal into the labourers' cottages, and I knew a number of very hard cases of widows with large families who had the greatest difficulty to make both ends meet. It was before I was Vice-President.

11976. You think that is not confined to Essex but is widely spread ?—I should think so.

11977. You do not speak from positive knowledge of any other place or from information given to you of any other district in the country ?—Yes, I have asked that sort of question when I have been going about in other places. My general impression is that it prevails over all the country districts.

11978. Both south and north ?—I think in the northern counties the country people are much better off. The country people in Lancashire, Yorkshire, Cumberland and Westmoreland are better off. I was born in Lancashire, and I know the country people there certainly are much better off, or were much better off, than the people in the south. They get better wages.

11979. You know that information on insufficient feeding is extremely vague. The Report of the Scottish Commission, which you referred to, says: "We were informed by some of the School Board representatives, notably from Edinburgh, Glasgow, and Aberdeen, that in these towns the Boards co-operated in this matter with philanthropic agencies, and caused inquiry to be made, so that practically most of the necessitous cases were relieved." Then they had a witness, Mr. Bridgeman, who said: "There are now practically no cases of underfed children attending the London Board Schools" ?—I should think he was taking a very sanguine view of it.

11980. I do not say he is right, but there is a divergence of opinion even as to what is underfeeding ?—Yes, it is even a matter of opinion what is under-feeding.

11981. That rather brings us to the point that you referred to in this Report, the proportion of underfed children which they quoted from the investigation made

Sir J. Gorst. by Drs. Hay and Mackenzie. It brings out that Aberdeen shows 9 per cent. of the children badly nourished, and Edinburgh shows 29·83 per cent. That is what you were referring to ?—Yes.

11982. We had Dr. Mackenzie here, and he explained what is very material indeed, that the 29·83 per cent. means children who are thin ; but in his own report he says that thinness is of two kinds—namely, that due to underfeeding and that due to hard training. He says—"For example, there was the thinness due to underfeeding, which was the predominant form at North Canongate, and the thinness due to high training, both muscular and nervous, which was the common feature of the other schools." So that there again we are dealing with a very vague figure ?—Very. I think all attempts to get at the actual percentage of children is altogether vain.

11983. It is almost more than that. There seems to be a distinct want of understanding as to what are the signs of children being underfed ?—Yes. Have you had the master of the North Canongate school here ?

11984. (*Chairman.*) No. When I was in Edinburgh last year I had a conversation with him ; he is a very remarkable man.

11985. (*Mr. Struthers.*) You mean Mr. Young ?—Yes. He impressed upon me this fact—he said :—"I did not try to make out a case for the North Canongate School. If I had I should have made a much worse picture than Dr. Mackenzie drew."

11986. I believe it is quite possible, but that school is an exception, is it not ?—I believe it is an exceptionally poor neighbourhood.

11987. There are several other statements in this Report and one must be careful of the inferences to be drawn. For example, Dr. Mackenzie was questioned upon this point as to the contrast between statistics of children of very poor health in the different towns—Aberdeen, 0·5 per cent. of children in poor health ; Edinburgh, 19·17. That is a contrast which is frequently referred to, but he was clearly of opinion that the greater part of this was to be accounted for by the personal equation. The characteristics they were dealing with, complexion, and so on, were the sort of things on which very different opinions might be expressed about the same state of facts ?—I was in Aberdeen last year and went round the schools, and I was struck with the exceptionally healthy appearance of children at Aberdeen, so much so that the people taking me about said : "We must in justice take you to the worst school in the town." I went to the poorest school in Aberdeen—I cannot remember the name—and certainly from the sort of general view that I took the children looked very well nourished and very well set up—bright, active children.

11988. In reference to this uncertainty as to what the facts are, might it not be a good thing, not merely for the returns but for the means of drawing the attention of the school authorities generally all over the country to the subject, for the educational authorities to ask for a return from the school authorities of the facts as to underfeeding ?—They could only give you opinions : they have no accurate facts. What I should like to see done would be to have samples drawn from all over England and subjected to the same sort of careful medical examination as was made in Edinburgh and Aberdeen. I think that would be a most useful piece of information. You could take a sample of Manchester children, Liverpool children, Leeds children, London children, and so on.

11989. It is so difficult to make a sample, because the population is in spots ; it is not uniform ?—I know that is a difficulty.

11990. It is rather a question of getting actual facts as regards each particular school, is it not ?—Take a certain number of typical schools.

11991. To make sure that there was no omission of schools by arbitrary selection, why not have a return of the whole of them ? It might be simply blank as regards the great majority, but that would ensure that no school was being overlooked ?—The objection that I should make to the return is that this return is rather a matter of opinion. There is no definite test of an underfed child. It is only the opinion of the headmaster, or the class teachers, or the local authority, as to what is an underfed child.

11992. Of course, a good many of the present school authorities have a medical officer, and I should think a great many of the new authorities will appoint a medical officer, and such an inquiry would be conducted under his direction ?—I should have confidence in an inquiry conducted by a professional man.

11993. Of course, the statistics which we have been getting hitherto have not been those of professional men as a rule, with the exception of Dr. Mackenzie and Dr. Hay. With regard to your plan for dealing with underfed children, there is one point that I am not clear about : Do you contemplate the scheme being helped from the rates at all ?—Yes, the rates must be responsible for it.

11994. For the feeding of the children ?—The rates must be ultimately responsible. I think that with the payment by the parents and contributions by benevolent people the drain on the rates would be very small, but they must be fallen back upon.

11995. (*Chairman.*) The poor rate or the school rate ?—It is really the same thing, is it not ?

11996. With regard to its incidence it is not ?—Then I should say the school rate. It must be part of the cost of education.

11997. (*Mr. Struthers.*) There is no power in the school authorities under the last Act to draw upon the rates for this purpose ?—I do not think there is. That is a legal question.

11998. Certainly there is no power in the Scottish Acts ?—I do not think there is. Mr. Lindsell's opinion would be very valuable on that point, but I do not think there is power in the Acts to draw upon the rates for feeding children.

11999. (*Mr. Lindsell.*) No, there is not.

12000. (*Mr. Struthers.*) But in the meantime it could be carried out by benevolent societies under the direction of the School Board ?—I think so. I think in many places the thing could be started experimentally and the local authority might confidently anticipate subscriptions. I am quite sure they would in Manchester.

12001. (*Mr. Lindsell.*) The moment people begin to think that they can go on the rates they will not subscribe ; that is the danger ?—They can enable the local authority to do a bit of experimental work.

12002. (*Mr. Struthers.*) The plan is by no means a new one with regard to voluntary agency ; it has been in operation in many parts of the country for varying numbers of years. In Edinburgh they have an Association which does exactly what you propose, which has been in operation for twenty-five years ?—I know it has been done. I do not suppose the plan to be at all a new one. It is what is done in Paris, only in Paris it is done at the public expense.

12003. (*Mr. Lindsell.*) Your organisation might be done at the public expense ; if the school authorities found all the machinery that would relieve it a great deal ?—Yes.

12004. (*Mr. Struthers.*) They could lend the machinery at present—at least they have been doing it ?—I suppose they could.

12005. Because in Edinburgh they get the teachers' School Board authorities to make investigations into the case at the homes of the children ?—Yes.

12006. Then how do you get over this difficulty ? The teacher says, "This child is underfed," and the child is supplied with breakfast or dinner, but when the parent is called upon to pay he says, "No, I fed the child at home ?"—That is a question of evidence. The teacher may have made a mistake. It is possible to make a mistake in one case, but not very often. He would not make a mistake for many days running.

12007. That precludes all dealing with the parent in a summary way, because the parent is entitled to say, "I did feed the child at home ?"—If a parent were summoned before a magistrate for refusing to pay for his child, he could say, "The child did not want a breakfast," and give evidence upon it.

12008. It must be more elaborate than sending a policeman to collect the 2d. ?—You could let the policeman go

and ask for the 2d., and if he did not get it he could report that he did not, further inquiry could be made, and after that a summons could be issued. Then if the man summoned, said, "I did not neglect to feed my child; it had a good breakfast," and if he convinced the Justice of that, he would dismiss the case. There would be few such cases; there might be mistakes made now and then.

12009. With regard to teaching of hygiene, I rather gather that you advocate its being taught to the mother?—Yes, by missionaries.

12010. You have not very great faith in the teaching of hygiene in any form in the schools?—I have not. I think the learners pass an examination, and there is the end of it. It is like teaching ventilation. Most people know how much oxygen there is in the air, but they shut all the windows up, and breathe carbonic acid gas.

12011. What do you say with regard to cooking and laundry work?—I have the same kind of feeling with regard to teaching of cooking and laundry work.

12012. Would you rather have it taken out of the school altogether?—No. I would not go so far as that, but I am not a great believer in the efficacy of the teaching of cooking as now practised. I should look upon it as in an experimental stage at present.

12013. Your view is rather objecting to the present method of teaching it as a school subject?—I think if we could only teach the older children it would be an advantage. It has been taught to little girls who are incapable of learning. If it were taught as in polytechnics, to girls of sixteen or seventeen I should not feel so much objection. What I do feel is that the time is occupied in teaching little girls to make rock cakes and things of that kind. Of course it is very amusing. We used to like very much as children to make messes—what we called cooking.

12014. Do you think there is any possibility of having a good system of teaching cookery to girls of from twelve to thirteen?—I am not sanguine. I should begin at fifteen or sixteen, I think.

12015. That is after they have left school?—It is, unfortunately.

12016. (*Chairman.*) Would you advocate the compulsory attendance at continuation schools of girls from fourteen to sixteen for the purpose of learning cookery and hygiene, domestic management, attending to children, and all such subjects?—Yes. As soon as public opinion is ripe for it, I would have compulsory continuation schools.

12017. For those girls who will become mothers?—Yes; they are all possible mothers.

12018. You think a recommendation on that point would be a very useful one?—Yes. Very useful. So soon as public opinion will stand it I would have compulsory continuation schools for both sexes, and for the girls particularly, for that purpose.

12019. You would make the continuation schools for boys rather of a physical character would you not?—Yes.

12020. (*Mr. Struthers.*) If those subjects were provided for in compulsory continuation classes then there would be a great deal of time set free, which is at present occupied in the ordinary day school; I suppose you think that would still be made good use of up to the age of fourteen?—Yes. I think they have too many things to teach now in the day schools, and if anything can be taken out of the curriculum so much the better.

12021. The argument of many people is that these are so very much more valuable than the other things?—That is quite true, but unless you keep your girls longer you cannot teach them. There are all sorts of things that it is eminently desirable should be taught, but they cannot be taught unless the children stay longer at school.

12022. In the meantime while we have no compulsory continuation schools, what do you think of the plan of the Glasgow Board of having a class for girls over twelve and a half, say, who leave school at fourteen? They are obliged to stay till they are fourteen. Having reached a certain stage of general education before they enter upon that special course, they have a year or a year and a half teaching of about twenty-five hours a week, out of which ten is given to housekeeping, taught practically—the various forms of it?—I think that is perhaps better than nothing. I would very much prefer to have them generally at a later stage, but I think it would be an experiment well worth trying. *Sir J. Gorst.*

12023. It is being tried?—Yes.

12024. (*Chairman.*) There are one or two points I wish to ask you further upon. In regard to a great deal that has passed in your examination by Mr. Struthers, have you still the same opinion that school teachers are to be trusted to pronounce whether a child is underfed or not generally?—Yes. I think they are the best people. It is the best authority to which you can refer the matter, *primâ facie*. I would have the teacher's action in the matter carefully watched both by the head teacher and the local authority. I do not say that every teacher would succeed, but I believe they are the best people to employ at the commencement.

12025. Do you not think that before the teacher pronounces whether a child is underfed or not he should place himself, through the school authority, in communication with the school attendance officer and ascertain something about the condition of the child's home? Otherwise he might make a mistake?—I think he should, but you should not do it as a preliminary to feeding the child. If the child is there without its breakfast it must have it.

12026. If it has been without its breakfast for years, there is no reason why it should not be without it for a day or two longer?—I should certainly make the teacher make inquiries.

12027. Mr. Loch, of the Charity Organisation Society, gave evidence upon that point. He said that no child should be fed without thorough investigation into the circumstances of his family?—That is the general method of the Charity Organisation Society. They make a long, elaborate inquiry, and in the meantime the patient dies.

12028. There is no reason, with the machinery which the school authority has at its disposal, why the investigation should be a long one?—No, but I should not delay the feeding of a hungry child until after the investigation. But the moment a child begins to have tickets given it I would have an investigation made.

12029. You would recommend the distribution of those tickets by the teacher?—Yes.

12030. You are familiar with the Paris scheme?—Yes.

12031. One of the particular points in the circular of the Prefect of the Seine is the desirability of getting the distribution of the tickets out of the teacher's hands?—I respectfully differ from the Prefect of the Seine on that point. I do not know what it may be in Paris, but I am sure that in England the teacher is the best person. I do not say that he is unexceptionable; he might make mistakes, but of all the people I say the teacher is the best to give this power to. Somebody must do it, and I think the teacher is the proper man or woman.

12032. In respect to the other recommendation of the Prefect, you agree with them; that is the system you would like to see more or less established in London?—Yes.

12033. In regard to what you were saying about the breakfast meal, we had Dr. Robert Hutchinson, a well-known authority on nutrition here—he was asked to give evidence on behalf of the Royal College of Physicians, and he is connected with two or three children's hospitals. He said that a child, no doubt, ought to have a certain amount of nourishment during the twenty-four hours, but it does not matter how you divide it up, except that it is more important to have a meal before physical exercise than before mental exercise, and therefore the mid-day dinner is more important than breakfast?—That is a point upon which I should yield to the faculty, but I have a vivid remembrance of my own agonies as a boy when I went to before-breakfast school; I never was good for anything until I had had my breakfast. Perhaps it is the personal equation which enters into this.

12034. (*Mr. Lindsell.*) They always made us have an hour before breakfast?—Yes.

12035. The more fortunate elementary school child does not undergo that?—No. But you know there is a sect of people nowadays who do not eat any breakfast at all—a non-breakfasting heresy has sprung up. I am no authority on it.

12036. (*Chairman.*) You do not think the feeding of

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school children can be worked in with teaching cookery to any extent, that the children themselves should be interested in the preparation of the meals that are distributed?—The worst of it is the time. I think that the preparing the food in the school itself might be done by the older girls and older boys. I do not see why they should not teach the boys cookery.

12037. They do in the Navy?—Yes.

12038. (*Mr. Lindsell.*) We have cookery classes in seaport towns?—The rule of the Code restricting the teaching of cookery to girls was one against which I always fought. It was the Treasury that refused to relax it.

Dr. Ralph Vincent, M.D., called; and Examined.

Dr. Vincent.

12039. (*Chairman.*) You are physician to the Infants' Hospital at Hampstead?—Yes.

12040. It has not been in existence long, I think?—No; since March, 1903, but it represents the results of work carried out in private practice. I organised it on the basis of a hospital to demonstrate the method of grappling with the problem of the infant.

12042. It was established with a special view to infantile diseases arising from malnutrition?—Yes. I found that to be *the* factor.

12043. That you thought to be one of the principal factors in the degeneration which exists?—Yes.

12044. You are familiar with the serious conditions often attending infant life?—Yes. I do not think you want those statistics; they are in my book, "The Nutrition of the Infant."

12045. You will leave the book with us?—Yes. I should like to refer to the pages which I have marked, especially page 268. The cases referred to on that page come from Liverpool. I have gone into the statistics especially of Liverpool and Sheffield and the various towns, and the great factor in the causes of disease—

12046. Of this extreme mortality among infants?—Yes—is invariably improper feeding. Diarrhœa, cholera, infantum, atrophy, gastro-enteritis, diseases of stomach, etc., are the chief headings. Inflammation of bowels, inflammation of stomach, dentition, bronchitis, pneumonia, and convulsions are generally the secondary results of bad infant feeding. I would also point out that Dr. William Hill, of Birmingham, has shown that sanitation has nothing to do with it. He prepared a number of tables to show that the sanitary conditions of affairs do not make any real difference at all.

12047. It is food and food alone?—It is food and food alone.

12048. And food at the early period of life?—Yes, about the first year, and especially the first six or nine months.

12049. You think that is the most important period of all?—Yes. Because after that it is easier for the mother to deal with the matter. After that the child can be fed on whole milk and the problem is simpler, but before that it is necessary to imitate human milk. The first thing is the difficulty with regard to maternal nursing. We ought to advocate this; but it is getting more and more difficult. There are a variety of reasons for that. I would like to point out—it is referred to on page 29 of my book—what Dr. Holt of New York has said in relation to this. He says, "In New York at least three children out of every four born into the homes of the well-to-do classes must be fed at some other font than the maternal breast." Later on he says, "It is not, as has been so often asserted, that the modern mother will not nurse; nearly all in my experience would be glad to do so if they could, but they simply cannot." That is my experience with the well-to-do classes here.

12050. We are not touching upon them. It is more so with the other class I suppose?—Yes, I find the same thing.

12051. What do you attribute that to?—The mother is called upon to undertake work, she is called upon during the whole of pregnancy to carry on her ordinary duties. Very often she has to go to some factory, and to manage her house.

12052. The number of mothers employed in factory work is not great?—No, but there are her duties at home in looking after the rest of the children. It is very doubtful as to how far mothers can maintain successful nursing when they have that to do. They fail to do it continually. It is quite rare to find hard-working women supplying good milk.

12053. It is the effect of exhaustion?—Yes, she wants to be treated as a woman, providing milk, and she cannot work the house and do all the things she has to do as well. In consequence a substitute food for the infant becomes necessary. The great reason for the present conditions is that the methods in general use for providing this substitute altogether fail to meet the essential requirements. That is the crux of the situation. On page 88 of my book I refer to those ordinary methods, which I have absolutely given up for the reason that they do not meet the requirements. Again, a serious thing is the use of artificial foods, by which I mean patent proprietary foods.

12054. They are very unfit for the purpose?—They are absolutely fraudulent.

12055. And deleterious?—And altogether deleterious. Many of them do not provide a food at all in the proper sense of the word.

12056. They have not got the chemical elements which they profess to have?—Several manufacturers publish analyses representing fairly accurately the chemical composition. These analyses are often sufficient to demonstrate their complete inadequacy. If they put flour and sugar together and advertise it as a perfect food for infants there is nobody to say nay to them; they can advertise it as a perfect substitute for human milk.

12057. Cannot they be dealt with under the Food and Drugs Act?—Apparently they cannot. I may quote one instance of many in my book, on page 108. Here is a food, for instance, which is advertised in the journals. Take Nestlé's Milk Food; it contains 5·5 per cent. of water, 11 per cent. of proteid, 4·8 per cent. of fat, 77·4 per cent. of carbo-hydrates, and 1·30 per cent. of mineral matter. More than one-third of the carbo-hydrates is in the form of starch. It is one of the worst forms. That is advertised as a perfect food for infants and a perfect substitute for human milk, and it is consistently advertised as that.

12058. Cannot your profession expose the pretensions of these things?—Many of us have endeavoured to do it, but so far we have not had much success. Here is Allenbury's Food as another example.

12059. Allenbury is Messrs. Allen and Hanbury?—Yes. I have gone though Nestlé's Food, Allenbury's Food, Horlick's Malted Milk, Mellin's Food, Condensed Milk, and so on. I think everybody competent to express an opinion is agreed that all those foods are absolutely unfit for infants. That is with regard to artificial feeding, but it is almost as bad with regard to the ordinary methods of substitute feeding, as I prefer to call it. For instance, take the action of certain municipal authorities—they have taken some milk and water, added some sugar, sterilised the mixture, and sent this out as food for infants.

12060. Was that humanised milk?—Yes, it is not a food for infants. Here I cite Dr. Ashby's case of scurvy, arising from taking municipal humanised sterilised milk. It is what one would expect. Sterilised milk causes scorbutus. When it does not even produce such definite symptoms it injures the infant generally. You cannot by any of these ordinary methods produce a proper food for infants.

12061. You condemn sterilised milk?—Yes. I should like to refer you to pages 131 to 138 of my book. The first thing about milk for infants is that it should be a vital living fluid. It should never be heated above 160° F. None of the food I order is ever heated above 150°. The processes I advocate are entirely different.

12062. Processes for its preservation?—Yes. Heating over 150° kills it practically, or, at any rate, little over 150°.

12063. It destroys its nutritive value?—Yes; and

produces one definite disease, scorbutus. May I give you a list of a few technical things: "The chief physical and chemical changes occurring in milk as the result of sterilisation, according to various authorities, have been tabulated by Judson and Gittings. Lecithin and nuclein are decomposed, organic phosphorus is diminished, while the inorganic phosphorous is increased. The phosphates become insoluble, and precipitation of the calcium and magnesium salt occurs. Normal lactic acid fermentation is inhibited. The fat emulsion is injured or destroyed. The lactalbumin is coagulated, and caseinogen is only partially or not at all coagulated by rennin, this latter change being related to the precipitation of the calcium salts. Digestion of the caseinogen is delayed. After prolonged sterilisation albuminoid toxins may be produced."

12064. That is due to sterilisation?—Yes. If it had not been too technical I should like to have shown you this. If you were to send me raw milk and a sample of the same milk heated to 180°, I should be able to tell you by the test whether that milk was raw or a sterilised milk. As a matter of fact, if you add the reagent, orthomethylaminophenol sulphate, to raw milk, with hydrogen peroxide you get a brick-red precipitate, but if you add it to sterilised milk it remains the same. There is no change whatever; in other words, you have killed those properties. An important point, which I much emphasise here, is that while I condemn the artificial foods, the people have largely gone to them, for the reason that the methods of using cow's milk have been so utterly inadequate.

12065. You mean, they cannot obtain it to begin with?—Pure cow's milk cannot be obtained, and it must be modified for the use of the infant. The modifications which are in vogue, and which are recommended, are quite hopeless. Nobody knowing anything about the composition of human milk and cow's milk could imagine that those modifications could meet the requirements.

12066. What is your alternative suggestion?—That being the case, I rejected all these methods, and I started to get a pure cow's milk, to break it up into its various constituents, and to re-combine it so as to meet the need. I should like to draw attention to pages 118 to 130, dealing with the milk supply. Those are the facts that I have found. There is no such thing as pure milk generally supplied. I draw attention to page 120, where you will find the case mentioned of a bowl of milk standing on the counter of a shop in a wide thoroughfare—in Knightsbridge, in fact—within a few yards of a continuous and dense traffic.

12067. It is imbibing every kind of bacteriological poison?—Yes. It should be pitched down the drain.

12068. (*Mr. Struthers.*) They do not actually sell that, do they?—Yes; they make a great point of having it in wide bowls, because the difficulty, unless the bowl is wide, is that the cream rises and the lower part is deficient in cream. That is why they have it in those wide bowls.

12069. (*Chairman.*) It presents a large surface for contamination?—Yes. Milk ought always to be protected from exposure. Practically speaking, you cannot get a pure milk; it is not available. Then I refer to its being broken up into its various constituents and recombined so as to meet the need of each individual infant. The first thing was to design a farm, with a milk laboratory attached, and that is the first thing I should like to discuss. I have rather anticipated the food question, but Appendix 4 is very important: *Diet in regard to structure.* I have already raised the question about the first year being of such extreme importance, and I draw your attention to the increase of weight and length, the growth of the head, and the growth of the thorax, in the year. We have to find a food for the infant which will meet this normal development, and we have only one means, and that is by modifying the milk. An infant is made inevitably rickety about fifteen months of age as a result of neglect during this early period of life, and nothing that can be done later will ever remedy it. There is no other period of life where structural development is proceeding at such a rate. I compared that in the infant and the child and the adult. A child is still growing rapidly, but the scope of diet for the child at about eighteen months of age is much wider; although it should still have milk, it may have minced mutton or fish, and so forth, and therefore the limitations are much less severe. Now I will go on to the production of pure milk. Here I have a series of photographs. (*The Witness produced some photographs.*) I will begin by saying that milk is the most dangerous product to handle. *Dr. Vincent.*

12070. Because of its liability to contamination?—It is intended naturally, of course, for milk to be the food of the offspring, to proceed directly from the mother to the offspring, whether human or otherwise. It is a most perfect medium in every way for the development of bacteria. It is all the more so because it comes from the cow at about 100° Fahrenheit, which is the best temperature for the development of bacteria. Every factor has been neglected in the production of pure milk. Another point is that once the milk is bacterially contaminated to any serious degree it is absolutely injured for infants; no amount of sterilisation or heating will do it the slightest good. The reasons are these: There may be a few bacteria in the milk coming from the udder, but that is a matter of very little moment. What we have to stop is the *development* of bacteria in milk, which is quite a different thing, and which never occurs under natural conditions. By the development of these bacteria the chemical composition of the milk is altered; that is to say, the proteids and the fats are lived upon by the bacteria, and are split up; toxins are formed, and those toxins are always present when sterilisation is carried out, however effectually. Once the milk is contaminated it is contaminated for all time; nothing can ever do it any good as regards the infant. I will give you a little sketch of the farm I designed. *This* is the cowshed; *these* are the modifying rooms; *those* are the refrigerating rooms. The cowshed has a solid concrete floor; there are no drains underneath it. Everything runs outside; the walls are lined with enamelled iron; there is a false roof providing ventilation. You will notice there is a south light right down the main corridor between the cows, and it is light practically everywhere; it is quite light—that is a very rare thing to find in a cow-house. Then there are three hydrants in it which are used to flush the whole shed out at least once a day. The cows are groomed and washed; the udders are washed in particular before milking. The men wear sterilised coats, and the milk is taken through sterilised cotton-wool into special milking pails, so that it is only at the moment of the passage from the cow to the pail that it is open to any contamination. The cotton-wool covers it, so that directly it is in the pail it is free from contamination. That is the first essential. The next essential is that the milk has to be separated if it has to be used for infant feeding. That is a momentary thing. Each batch of milk as it comes is taken to the cooling-house. That is a most important point. We cannot allow this milk to stand for even an hour, because the development of bacteria at 100° is so great that it would spoil it.

12071. In any atmosphere, however pure?—There are always germs, you will never get away from bacteria. They are in the udder, for instance. It is not those bacteria—those comparatively few bacteria—which cause injury; in fact, I have done a good deal to show that lactic acid bacteria help the infant; without them it is probable that no infant would live. There are always lactic acid bacteria in the stomach. It is not those which injure; it is the development of those bacteria, which is quite a different thing. They have never lived in this milk. This milk is immediately transported to the cooling-house.

12072. (*Dr. Tatham.*) Have you this system in operation?—Yes. I have had it in operation for more than a year now.

12073. (*Chairman.*) It is a costly system, is it not?—It is costly on a small scale. Here is the gas engine to drive the machinery, and here is the refrigerator. (*Handing a photograph to the Chairman.*) This milk is immediately taken and placed over a cooler. The milk comes over *here*, and is taken into the churn. It is put into refrigerating tanks, and gets to forty degrees within a few minutes of milking, and it is kept at that temperature for the rest of the time. At that temperature bacteria do not develop; they are in a quiescent state and do not develop at all.

12074. At what temperature?—Forty degrees Fahrenheit, or rather lower sometimes. It is quite a common experience to find a small quantity of milk frozen on the cooler, but that is not a particularly good thing. This is only a method of getting pure milk, either whole or

Dr. Vincent. separated. In regard to infants, we have made a most important step there, but we have made a very little step as regards providing the infant with food. The next thing is to modify the milk. *That* is a photograph of the set of modifying rooms. They are opposite the cow-sheds, some distance away.

12075. Where milk undergoes changes to prepare it for the use of infants?—Yes. The first of this set of rooms which I show you is simply the washing-room. All the bottles are roughly washed, but they are not sterilised there; all the traces of *debris* of milk are removed, and the bottles are thoroughly cleaned, and you will see that they are placed downwards to drain into these trollies. Having cleaned the vessels, they are taken to the sterilisers. *Here* are the trollies, and *here* are the churns. *This* room is for the men's clothes. Everything is sterilised in those three chambers.

12076. (*Dr. Tatham.*) Where is this establishment?—It is at Sudbury—the Sudbury Park Farm, Middlesex.

12077. They are managing it?—I have a novel arrangement with them. There is a lot of money involved here, and the question was how to do it. Medical inspection is no use whatever when the medical inspectors are in the employ of a dairy company. That is obvious, because they are not sufficiently independent. The Walter-Gordon Laboratories have done everything I have told them, practically, and I am constantly visiting the farm. My relation to them is absolutely voluntary. I condemn anything I do not approve and insist on everything being as near perfection as possible. I watch the diet of the cows, and see that the infants under my care are provided for, and I have a complete check upon them in consequence of the number of infants in the hospital and elsewhere. Their business is to deal with the commercial aspect, and my business is to deal with the medical and scientific aspects. *Here* is the modifying room, to which I have paid a great deal of attention. This is the first view of it. (*Photograph handed to Chairman*). There are three illustrations here. Here are the various solutions which they use. *This* tap means that there is ice at the back in a separate compartment, so as to keep the solutions absolutely cold. You will notice a pipe running on both sides of the wall from which water passes down. By this means the room is kept cool and free from dust. *This* room is practically a sealed room. *There* is a water-cooled motor. The air passes through *there*, through many sprays of water, and thus it is perfectly pure, and also cool. *There* the modifiers are actually making up the modified milk. There is one other photograph. You will see on *this* side the door by which they enter, and there is the truck on wheels. That contains iced water, and this is a very important provision, because it prevents the rise of temperature in those small tubes, which would otherwise occur when the mixtures are in such small bulk. Now I will give you a description of the method. In the first place, I would like to put before you certain private cases. There is much technical detail, but I should like to call the attention of the Committee to certain points. They are all private cases, and I have only taken a few for that reason. The first is the case of a mother who lost her baby at the age of seven months. They were quite well-to-do people, and, although every skill was available, at the age of seven months the baby died. She could not provide it with proper food, and the doctor could not. When she was going to have another baby she was anxious and she come to me to see what could be done. That baby was fed by laboratory methods from birth to twelve months of age, and its development is comparable with that of the finest type of breast-fed infant. The character of the diet is shown from November 18th, 1902, to December 2nd, 1903, when it was placed on plain whole milk.

12078. (*Chairman.*) Are these the constituents of this food from day to day?—Yes. I should like to roughly point out one or two factors, showing how unreasonable it is to try and make this process of modifying milk so simple that anybody can do it. I began on November 18th with a very delicate food. The food was gradually adjusted and enriched, so that on February 9th it was thriving on a food containing fat 3·75, lactose 6·50, whey proteids 0·90, caseinogen 0·50. I thought the time had come when a whole "proteid" might be tried, and on February 14th its food was fat 4·00, lactose 7·00, proteids 1·25. This upset the infant and the proteid was reduced to 1 per cent. Still it upset the baby, and I had to go back to ·85 of whey proteids and ·15 of caseinogen. If you follow the chart you will see that I built the caseinogen up again till on April 21st the baby was established at 1·25 (whole proteid). You will see that the food was gradually enriched till it contained 3·50. I should like to point out the weight of the baby gradually increasing from 7 lbs. 13 oz. on November 17, 1902 to 28 lbs. on October 8th, 1903. The teething took place at the normal age; it walked at the normal age; and it is about as fine a type of baby as you could find. Then take the next case. I have selected this as a case where I had to operate on the mother. It is the Case H., L.M. It is generally speaking a serious thing to take a baby two months old from its mother and put it on substituted food suddenly, but this was done. The milk was used, and the baby did just as well. It went on from March 18th to March 22nd, when it was discontinued. If did very well, but it was discontinued because the mother was able to nurse it. On September 30th that baby came again under my care, because the mother's milk was failing. The infant was then fed by graduated mixtures till December 18th, when it went on to milk and cream. I will not weary you with these other cases. The case which you have there is a very interesting case. The father is a very wealthy man indeed. With every nursing attention they absolutely failed to provide the baby with food by the ordinary methods and the chart shows the adaptations of the food to meet the requirements. These cases are, admittedly, selected cases. I have put them before the Committee to show that what I am advocating is not a matter of merely theoretical speculations, but of the most practical application.

12079. You would hardly contend that these methods are of general application?—Yes, they are; we shall not succeed until they are applied.

12080. Are not the practical difficulties insuperable—the economic difficulties?—I think not. Now I come to the hospital. I wish to put before the Committee the fact that we have done nothing more elaborate here than is absolutely necessitated by the facts in modifying cows' milk. Here are the papers of the Infants' Hospital and the Infants' Health Society. (*Documents were handed to the Chairman*). Each baby in the hospital has its food ordered for it, and there are various charts in which its food and progress are detailed. Its weight is taken and notes of its condition. Here are the whole of the charts. (*The documents were handed to the Chairman.*) I put this before you because you could not possibly apply a severer test to any method than this. In the first place, we practically use no medicines except a little castor oil occasionally. I have given some particulars in Appendix 7, on page 5; the weights of the babies in the hospital have been added up to April 22nd. I draw your attention to the condition of the infants when they come in:—Two months old, weight on admission 7 lbs. 11 oz.; age four months, 6 lbs; age nine months, 7 lbs. 4 oz.; age three months, 6 lbs. 9 oz.; age six and a half months, 12 lbs. 6 oz. Taking them all through, they are all extreme cases of malnutrition.

12081. This Appendix does not show how long the children remained in the hospital?—No; you have those in the charts. This is a summary. Each case has a number which is referred to in the charts.

12082. (*Colonel Onslow.*) How long do you keep them? From six weeks to two months—there is an asterisk against some of the cases. We have to take in cases such as tuberculous meningitis, which we take for a day or two and send to other hospitals. There is practically not a case of malnutrition which has not succeeded well. I may point out that, as a matter of fact, we have lost one case since the beginning of this year. Here is a baby which comes in on November 3rd at 7 lbs, 11 oz., Dorothy Fox. She was discharged on January 26th, weighing 10 lbs. 12 ozs. You will see by the chart how the food was adapted. From the time of admission to discharge there were ten variations in the diet.

12083. (*Chairman.*) You are always varying the proportion?—Yes. These babies are ill and want delicate foods, and I gradually constructed a food of relatively high proteid-content.

12084. With the normal child have you arrived at a conclusion of what is required?—The principle is the same. That first case I submitted is typical of the management of a baby from birth. The mother's milk is always changing, it is getting richer in certain parts and poorer in others.

In order to meet the digestive requirements it is necessary to alter the milk. Each feed is put up separately in these tubes. (*The tubes were exhibited.*) I prescribe so much fat, so much proteids, and so on. The single feed is warmed to blood-heat, the cotton wool plug is removed, the mouthpiece is applied and the food is ready for the infant.

12085. The milk being made from your prescription ?—Yes.

1208 . You can hardly expect every child throughout the United Kingdom to be fed by prescription ?—They are now. The only difference is that it is a general prescription instead of being an individual one as it must be in order to succeed.

12087. Do you mean a medical examination of every infant in the country ?—I think it is quite easily arrived at. In the hospital I can do it, and so can any medical man after a certain familiarity with the subject, with a nurse in residence. Take any district, have a depôt, find out the babies which are born, and so on.

12088. Do you think the hospitals in London have sufficient machinery to do that ?—I do not think that it should be done by hospitals. I think it much better that in each district the doctors should attend twice a week. There should be a nurse in residence. It should be organised either by philanthropy or by the municipality. The nurse should make it her business to know all about the babies which are born in the district, and a doctor should observe weight and the general particulars in regard to the infant. I can manage twenty in an afternoon quite easily, and even forty in an afternoon at the Infants' Hospital, although I have to go some way to Hampstead.

12089. Do you think this could be done by municipal organisation ?—Partly. Personally, I think it would be well for the municipality to give a grant rather than take it over as an official matter. I think it would be much better to do that.

12090. Do you not think that hospitals are proper organisations to co-operate with ?—I do not see how it can be worked with hospitals. Hospitals are for the treatment of disease. Here, our primary object should be to prevent disease

12091. Would any doctor be able to do that ?—I should have thought you wanted an expert ?—At present, in difficult cases, yes ; but I find that in private I go to see cases in consultation and the doctors gradually get into it ; with a little study I do not see why any intelligent doctor could not master the principles in a month easily. Once he is in the position of seeing infants, and doing it systematically, there would be no difficulty. You might have difficult cases which call for an expert It is not impossible to have that with an organisation like the Infants' Hospital and the Infants' Health Society, and to ensure that expert assistance should be forthcoming when desired.

12092. Has this Infants' Health Society any extended operation at present ?—We started the Infants' Hospital, and we have only just started the Infants' Health Society.

12093. The hospital is in connection with the Society ?—Yes. We started an Infants' Hospital with all its scope before it, and we decided that in order to carry out our methods in the best way as regards these depôts, there was a good deal that might be better done by a Society in the way of organising depôts all over London.

12094. Have you done anything towards that ?—No. As a matter of fact the letters have only been published to-day in the "*Times*" and other papers, signed by the Duke of Portland and others.

12095. (*Mr. Struthers.*) Which was first, the Hospital or the Health Society ?—The Infants' Hospital was founded in March, 1903, but the primary organisation now is the Infants' Health Society, because the Infants' Hospital has merged itself as part of the work of the Society.

12096. But the Society is a later development ?—Yes.

12097. (*Chairman.*) It is to be much more general in its operations ?—Yes. I would like to call attention to Appendix 8. I have here a photograph of one of the wards of the Infants' Hospital. (*The photograph was handed to the Chairman.*)

12098. You require of course, in the first instance, some general security that the milk supply comes from a pure source ?—Yes.

12099. Having regard to the extremely foul way in which milk is to a very large extent now put upon the market, through having an immense distance to travel and so on, there are many intermediate steps which might be taken to give it comparative purity, are there not ?—Yes, but if you study the production of pure milk, and are going to take legitimate precautions to obtain pure milk, you will find you are landed in all the expense. You cannot get pure milk unless it is refrigerated and kept at forty degrees Fahrenheit. *Dr. Vincent.*

12100. You have no guarantee of its purity unless you do that ?—No ; the only other way is to injure the food by sterilising it.

12101. Surely steps can be taken to see that a dairy is clean instead of dirty ?—Yes ; but the man who will do that will be the man who will want to refrigerate his milk.

12102. (*Mr. Lindsell.*) Refrigerating milk is very common in Paris ?—Not what I should call refrigerating. They put it over a milk cooler and reduce it to sixty degrees Fahrenheit. That does something.

12103. (*Chairman.*) But it is not enough ?—No.

12104. (*Mr. Lindsell.*) You want to bring it to forty degrees Fahrenheit ?—Yes. I point out the rate of bacterial development at about 60° in milk in my book (p. 145).

12105. (*Chairman.*) What do you estimate the cost of this apparatus to be ?—I have gone into the cost as far as I can, and I say that is governed by the cost of pure milk plus the cost of modification and delivery. I put it that trebling the actual cost of the cream would allow for the expense of modification and delivery. Cream is the costly thing in milk because it is wanted in such a comparatively large amount for infants, and is present in milk in such a comparatively small amount, about 4 per cent. Then any adequate method depends upon the number of cases. If you have an organisation for thirty cases, a large part of it is applicable to 300, the average cost can never be much below 5s. a week for each infant, and it is not likely to be more than 10s.

12106. It would cost that to feed infants upon these methods ?—Yes, or, leaving out these particular methods, any method which provides an adequate food for an infant. Taking the actual cost of milk, and its modification and delivery, it must cost about 5s. a week ; it cannot be much below. If you take the amount which is consumed by an infant, say, three months old, it will be two pints a day at the least. That is 3s. 6d. a week, the cost of absolute material.

12107. (*Dr. Tatham.*) That is the cost of the milk at two pints a day ?—Yes, 3s. 6d.; that is without allowing for modification.

12108. (*Chairman.*) Surely it would be better for the working-class mother to conduct herself so that she could suckle her own children ?—That is the great factor, but, unfortunately, they cannot do it.

12109. But I suppose if they took proper precautions they might do it, and in face of the very great expense of this alternative, they might be induced to do it ?—I should certainly encourage maternal nursing, but a large number of these women cannot nurse, and cannot provide a good food, and it is equally important that we should stop, if possible, a mother providing her infant with a food which is no food at all. We are constantly seeing a mother come up to the hospital who is providing a watery mixture which is not milk at all.

12110. If your alternative is to supply milk which is outside the limit of her pecuniary resources, I do not see where you could have any improvement ?—My contention in the whole matter is that, either we must leave this alone, and say we cannot do anything, or, if we are going to do anything, then we must see that we are providing a food for the infant. The only way of providing a food for the infant is upon the general principles which are carried out at the Infants' Hospital—I will not insist upon unessential details. That is going to cost money.

12111. As it appears, milk cannot be provided at a price which is within the means of the parents ?—That is absolutely the case.

12112. Then do you propose as a corollary to establish eleemosynary system for the poorer classes ?—Certainly.

Dr. Vincent.

It is absolutely essential if we are to bring up the poorer classes properly. We have only to realise the number of infants that are dying, and the amount of disease, crime, and insanity which are directly due to improper methods of infant feeding. We are filling our asylums from that cause. That is not my opinion alone; I should like to point out the opinion of men like Coutts and Gowers. On page 267 of my book you will see this: "Mr. William Hall, M.R.C.S." (of Leeds), "in the summer of 1903, weighed, measured, and examined the limbs and teeth of 2,335 board school children in the city of Leeds and neighbourhood. He found that more than half of these children were rachitic, and that considerably more than half had decaying or badly-developing teeth." Now, if you will compare that with the note "on the ultimate effects of rachitis," you will see the following: "Out of fifty cases of laryngismus stridulus forty-eight were rachitic, and of these, nineteen had convulsions. Of 102 cases of general convulsions, forty-six were rachitic. Even in later life the effects of rachitis seem unquestionable. Gowers found that 10 per cent. of epileptics had suffered from rachitis. Coutts found the rachitic history more frequent, and assessed it at 17 per cent."

12113. (*Mr. Struthers.*) What book are you quoting?—My book on "The Nutrition of the Infant." I admit that my proposal is radical and extensive, but it is the facts which justify me. Then take page 244: "Holt refers to an important fact which has received little attention. The growth of the long bones is arrested. This is one of the most characteristic features, so much so that a rachitic child of three years often measures, in height, six or eight inches less than a healthy child of the same age, the difference being almost entirely in the lower extremities." Wherever you find defects of the nervous system or deformities, you will come back to rachitis or similar lesions, and these lesions are due to improper feeding.

12114. (*Chairman.*) We have been told that in some of the larger centres of population, for instance in Glasgow, rickets has almost disappeared. How do you account for that? I do not understand that there is an improvement in their milk supply?—I do not believe it. I am certain that if I went to Glasgow I could produce very many cases of rickets.

12115. (*Colonel Fox.*) How long does this treatment last?—Six months on the average. We find a number of mothers who nurse their infants for a certain period, say a month.

12116. What is the period for those children who are not suckled?—I think six months, or rather above it. After eight or nine months you can get them on to mixtures of milk and water and so on. It is the first six or nine months that you have the trouble. Then I point out the amount of injury which is done by feeding. One of the most striking is the result of measles, scarlet fever and so forth, in the production of *sequelæ* like middle ear disease and tuberculosis and so on. I am convinced that if you take the same infection you will see one child gets measles and goes through it and the mother says it is rather better for it; the other gets middle ear disease, general tuberculosis or something of the kind, and is injured for life. Middle ear disease and these chronic defects practically arise from the *sequelæ* of these specific infective diseases, and their incidence is determined by the want of resistance due to the malnutrition of the infant.

12117. Is this system the same as that in vogue in Paris at the present time?—No. It is chiefly Budin's system there; they sterilise the milk.

12118. (*Chairman.*) That is open to objections?—Yes. What they do there is this: They "satisfy" the infant. They satisfy the stomach of the infant and have practically no regard to the final nutrition. That is a factor which has been neglected all along.

12119. You are passing rather a sweeping condemnation on the medical faculty as a whole, are you not? There are many prominent members of the medical faculty who have identified themselves with this treatment which you condemn?—Yes; but I am afraid it is no good I think many of them have approved because it is better than something worse, rather than because they have regarded it as really sound.

12120. You mean there are many ignorant people in your profession as well as in others?—I prefer to go by the facts which I have put in my book. They are the results of my observation. It is perfectly true that the whole question of infant feeding has been very greatly neglected. Generally speaking, at most centres of medical education in this country the subject is barely touched upon, and the medical student has but little opportunity of making himself familiar with the facts.

12121. Your proposal is that the municipality should charge itself with the provision of properly prepared milk for all the children in the country?—Yes, under proper supervision.

12122. Up to six months?—Up to the first twelve months you would want to provide pure milk, and for two years you ought to supervise the feeding of the infant. After one year it becomes much less difficult; you do not want the same degree of medical supervision. If you find a pure milk you can leave it to the mother, as a rule, and the child can take food in the way of fish and so on at about eighteen months of age. I think the most dangerous thing is the attempts which are being made to deal with the question, which are inadequate; I think they are more dangerous than anything else. With every respect to them, I think the attempts at Battersea and Liverpool, for instance, are most dangerous. I think it is a most serious thing for a corporation to give its endorsement to a disease-producing milk. It may stop gastro-enteritis, but Dr. Ashby's case, which I have referred to, shows scurvy produced by a municipal humanised sterilised milk made at Liverpool. This was in the *British Medical Journal* of 27th February. (*A copy was handed to Dr. Tatham.*)

12123. (*Dr. Tatham.*) It is only one case?—Yes.

12124. *Post hoc* or *propter hoc*?—You will see what he says there. I describe the scurbutoid condition in my book.

12125. (*Colonel Fox.*) In Paris they are very well pleased with their system; they weigh the babies and watch the growth most carefully?—I can only speak generally, because I have not had actual experience in regard to Paris, but I am satisfied that the sterilised milk supplied to infants here will not succeed. It has been tried over and over again. It will not succeed even in private, with the best nursing.

12126. (*Chairman.*) We have heard something of what they do at Battersea, for which success is claimed?—I am afraid they are all claiming successes, but that is so easy.

12127. We have been told that the death-rate of infants has been diminished?—At the present time it is very difficult to argue about death rates, because, as we know, last year was a wet summer, and so forth. Then in regard to Liverpool I saw some statistics. Those statistics are absolutely worthless. In the first place it came to this, that if an infant had been fed from the depôt for a week, and the milk had upset it, and then it had been fed on another food, that baby was counted as a success to the depôt, because it had had its name down in the depôt books.

12128. (*Dr. Tatham.*) Will you think me troublesome if I ask you to go categorically over what you have said to us?—Not at all.

12129. You began by condemning ordinary milk as a food for infants?—Yes.

12130. Such milk as you say you have seen in London?—What we know as the ordinary milk supply.

12131. That is bad?—Yes.

12132. And if it has been kept any considerable time it gets progressively worse, until it becomes poisonous?—Yes.

12133. Do you think it is bad for adults as well as children?—Yes, but nothing like so bad. It is the delicate state of the children which makes it so bad for them.

12134. It is decomposed because of the toxins?—Yes.

12135. As regards the sterilisation of milk, you know it has been the practice for some years to feed infants on sterilised milk?—Quite so.

12136. And, speaking generally, I suppose the practice has been considered successful, has it not?—The criterion of success is so inadequate. Practically, when you ask a doctor what he means by success in a baby you will find that the nurse tells him that the baby is no longer sick, and the intestinal dejections are fairly normal. Whether that food is providing it with the requisite elements of

nutrition hardly comes into the question. I can produce a sterilised milk that will satisfy an infant in the sense of meeting its digestive troubles without any difficulty. It is a twofold problem to provide an infant with what satisfies its digestion, and is also a nutritive food.

12137. Then you condemn sterilised milk as a food for infants ?—Absolutely.

12138. Even modified in any way ?—Yes. I should like to point out that I am using the word "sterilised" to mean that the milk becomes more or less sterile. I do not altogether oppose Pasteurisation if it is not carried above 155 degrees Fahr.

12139. Anything beyond that you say destroys the nutritive properties of the milk ?—Yes.

12140. It kills the bacteria, at any rate ?—Some of them.

12141. But it also destroys the nutritive value ?—Yes.

12142. In what respect does it destroy the nutritive value ?—There is a great deal we are doubtful about. It destroys the anti-scorbutic property, whatever that is.

12143. You would not give that a name ?—I should prefer not. We do not know what it is. It has got a great deal to do, I think, with the nitrogenous extractives. The lecithin and nuclein are killed by the heat, and when they are present it appears that this anti-scorbutic property is present also. Sterilisation gives rise to radical changes in the character and composition of milk, upsets all the salts, precipitates the calcium salts, interferes with the coagulation of rennin, which is a most important thing, and there are numerous other changes. But apart from the chemical evidence I would rely upon accurate clinical facts. I will defy anybody to produce a healthy infant that has been fed entirely for three months on sterilised milk.

12144. In what respect does sterilised milk, in the sense of which we are speaking of it, differ from your modified milk ?—In the first place, no modified milk prescribed by me is heated to a temperature at which any of its vital principles are destroyed. We have tests for raw milk. The milk supplied to babies under my care answers the tests of raw milk. In the second place, no infant is ordered for, because it is an infant; every baby has the amount of fat, lactose, whey proteids, caseinogen, and alkalinity which is necessary, according to the individual. Every case goes up labelled with a name, and every baby has its own individual food. If that food upsets the baby we go into the questions—is it sick, is it this or is it that ? And we adjust the food to meet the conditions. There are many cases here in these charts, which you can study at your leisure. Here is a case of 2·50 fat, reduced to 1·50, and then reduced to 1 per cent., then rising to 1·75, 2·25, 2·50 and 2·75.

12145. That is fat ?—Yes. Then the proteid started at ·95, ·25. I was engaged in altering the amount of fat in that case. The proteids finally finished at ·75 and ·50. Here is a very good case, where the composition of the food originally was 2·7 per cent. of fat, ·7 whey-proteids, .25 caseinogen; and we finished at 3·50 fat, ·75 of whey proteids, and ·50 caseinogen.

12146. With regard to the establishment at Hampstead, at which the milk is preserved—— ?—Are you speaking of the farm ?

12147. Yes ?—The farm is at Sudbury. *That* is the photograph of the hospital which you have there. *This* is the farm. (*Witness handed the photograph to Dr. Tatham*).

12148. At the establishment where this milk had been treated is the milk sent out in a bottle unmodified ?—No, everything is done at that laboratory. To-night the modifiers will start work about five o'clock, and will be going on till twelve o'clock at night. At seven o'clock they will start modifying. At three o'clock the van comes up, and it is distributed all round London. They modify at night because the physician wants to make prescriptions during the day. In fact, as demand increases they will probably be working all night

12149. (*Chairman.*) You already distribute all over London ?—Yes.

12150. (*Dr. Tatham.*) Am I asking a question which I ought not to do if I ask you of what your modification consists ?—By no means, everything is published. What we do is this. We pass the milk through a separator driven by a gas engine; we get the fat about 80 per cent.; on the other side we get what is practically a fat-free milk. Now, that fat-free milk contains caseinogen and everything else in the milk except fat. Caseinogen is the great difficulty of infant feeding. We have to get rid of that, because the casein in cows' milk is three times as much as in human milk. We have this fat-free milk, and in addition to that we have the rennin ferment. The caseinogen is percipitated by means of the rennin ferment, and this fluid is heated to 150 degrees to kill the ferment. Thus we have the whey containing the whey proteids the nitrogenous extractives, and all the constituents except casein It is a most serious thing to dilute milk with water, because the salts and the nitrogenous extractives are already low compared with the high amount in human milk. With all our delicate infants we use the whey proteids. We have now a cream that is standardised to 32 per cent. Then we have a lactose solution of 20 per cent; lime water, and distilled water. The modifiers have tables in which every possible prescription is provided for, showing the exact amounts of each constituent up to forty ounces, and so forth. Perhaps I might give an illustration of that in prescribed mixtures. You will see about twenty prescriptions of mine on page 95. You will see, on the one hand, the prescription, and on the other hand its actual composition. It can be made to forty ounces or 100 ounces. In the photograph you will see those nurses working.

12151. (*Chairman.*) They are making up those prescriptions ?—Yes.

12152. (*Dr. Tatham.*) Nothing else is added ?—No. If the physician wishes he can order oat jelly or other materials to be added. You can have anything added.

12153. Is it proposed to extend this practice ?—We do so much at the hospital. We take these cases where every method has failed. Now the question comes when they come out of the hospital what is to be done, because it is not good to keep them in a ward. We have a carriage which takes six for a drive, but we cannot keep them in hospital for more than two months, because they suffer from want of fresh air. Now we are going to try and feed those babies outside the hospital. The hospital is to be moved to a central district, the Marylebone Road probably.

12154. (*Chairman.*) Is that so good as Hampstead ? The London air is very good if they have good food.

12155. (*Dr. Tatham.*) How long has the hospital been established ?—Since March, 1903.

12156. It has not been long enough to show any statistics showing the value ?—These are the statistics.

12157. But they are too few, are they not ?—They are too few in a way, but they are such severe cases. It is a very good test, if you consider the weights of these babies and their general development. If we can succeed here I think that is a very good test. I have already tested them in private, and have not had a failure. Those cases have been invariably successful. Take this case of Queenie Osborne, No. 62, she began at six months old with a weight of six pounds, fourteen ounces, on January 8th; six pounds, twelve ounces, on January 12th; and from that the baby went right up to eight pounds, nine ounces. That was a case of severe marasmus.

12158. You have statistics with respect to a good many cases ?—There are about forty, I should think.

12159. (*Chairman.*) Would it not have made these figures more valuable if the amount of time spent in the hospital had been given ?—You would have to examine the charts in order to find that out. It is in the chart. I did not want to make my summary too full. The charts show the time they entered and the time they were discharged.

12160. (*Dr. Tatham.*) You will agree that the value of your statistics will be very much in proportion to their number ?—Yes. As a matter of fact we have only twenty beds at the hospital. When I took this house I practically took it entirely on my own responsibility. The Committee came afterwards. We want to get fifty beds. I am confident that we shall soon be able to produce statistics of 250 cases. It is simply a question of the limitation of beds. We have refused fifty cases in the last fortnight.

12161. Is it not within the first twelve months that the feeding difficulty is most acute ?—Yes.

Dr. Vincent.

12162. After the first twelve months what do you propose to do?—Pure milk is still needed, but, as a rule its modification is not necessary.

12163. I think you spoke just now of a process by which you filled ordinary bottles?—Yes. In addition to preparing modified milk they put whole milk over the cooler and take it into these churns, put it into the bottles and put a seal on them.

12164. And reduce it to 40° Fahr.?—Yes, before it is bottled and then pass it into bottles and put it in the tanks which you see in the further room.

12165. Will the milk keep in that condition?—Yes. I have it in my own house. They only deliver once a day, about 9 o'clock in the morning, and it is perfectly fresh without any refrigerator at eleven o'clock next morning, simply because it has been kept free from bacterial development and growth. If any member of the Committee would like to see the farm I am sure you would realise the work there much better than from my description.

12166. There is one point which I should like to put to you and I am perfectly certain it is an important matter. There is no provision in your method of modifying milk for the destruction of disease germs of any kind, for instance enteric fever germs?—All the provision there is to prevent them getting in.

12167. You prevent them getting in?—Yes. We have our cowshed and the milk is passed through the cotton wool, so that no germs which do not exist in the udder of the cow or in the hands of the milker—and he has to wash his hands—could get in.

12168. In the establishment you speak of the cows are milked on the spot?—Yes. I do not allow them to buy an ounce of milk. All milk must be produced there.

12169. That is an important point?—Most important. And all the diet is regulated.

12170. The diet of the cows?—Yes. It costs half as much again to feed these cows as is ordinarily the case. In order to get pure milk you must not use oil cake. Every farmer does use it because it gives him a good quantity of milk. He also uses brewers' grains and distillery grains.

12171. (*Mr. Struthers.*) What is the objection to the use of oil cake?—It produces an oil in the milk which is quite different from the fatty emulsion which is normal to milk. It upsets infants at once.

12172. It gives a different quality altogether?—Yes.

12173. And the brewers' grains?—The brewers' grains produce a thin milk with an odour and gives rise to products the precise nature of which I do not know, but I know that brewers' grains upset the milk and it took a little time before I could get the cows in order. I used to find these things and I looked into the diet and found it arose from oil cake or brewers' grains.

12174. You say that 5s. a week is the very lowest figure?—It is a difficult thing for a doctor to give a commercial estimate, but I name that because I want to put before the Committee that it is perfectly certain it is not going to be done for nothing, or for very little.

12175. Of course between 5s. and 10s. a week is a price which a very large proportion of the population, who are probably most in need of it, simply could not pay?—Quite so. My experience is that it does not matter whether you reduce it to 3s. 6d. even, because unless the State or somebody steps in nothing is going to be done. You need not take only the poor, but the people you would not call the miserably poor class. Only a few days ago I saw a case from Wood Green; I saw the wife of a clerk earning about £120 a year. She could not find food for her baby and she came to see me. I got her infant into the hospital for a little time, simply because the cost of the food and its delivery at the house was beyond her resources. If that is the case with them surely it is impossible for the poorest class, who are only earning perhaps 18s. a week, to pay for food for the infant or make any serious contribution to its cost.

12176. Of course these people have children and feed them at present?—Yes.

12177. And a considerable number survive; they do not all develop rickets?—It is quite a rare thing in a poor family to find a women rearing all her children. You find that there have been several who have died or who have had disease. It is quite unique to find a poor mother who has been feeding her children artificially bringing up four children according to the standard of health. Those women generally say that they have lost three or four children of the same complaint and the fifth is going the same way. That is the fact which is most extraordinary.

12178. Your experience at the hospital would not enable you to say yet that your death-rate among a certain number of children would be distinctly lower than the ordinary death-rate?—Since this year we had only one death, but they have much of careful nursing. Last year we had twenty-five deaths in the whole year. Many of the infants die in the first two or three days after admission. As a matter of fact, every case in this hospital, practically speaking, would have died but for this hospital. Every case was a failure and going downhill, and in fact had got there. That is the reason I put even this small number of cases forward, because they are a very severe test in that direction.

12179. There is a considerable diversity of opinion as to what constitutes rickets. Some doctors say the child has got no serious affection, when another doctor would say that it had?—I do not think there is any serious difference of opinion amongst experts now.

12180. But that is a very small number of the whole medical profession?—Yes. What I meant by that answer was that there is not very much difference of opinion. Everybody who knows rickets can see it. The signs of rickets are described, and they are fairly obvious. You must remember that the apathy of some of the medical profession is not unnatural. Do what he can, the doctor in the country cannot order a real food because the materials are not available in very many cases.

12181. We had the statement made that rickets had practically disappeared from Glasgow, but you tell us that if you went there you could produce a number of cases?—Yes.

12182. Dr. Scott, who made that statement to us, is a man of some standing in the profession, and has had a good deal of experience?—It is an astonishing statement for me to hear. Take another town such as Manchester. Only a short time ago I heard from Dr. Ashby that the number of deaths was nothing to the number of children whom he could produce who could not walk at two years of age. Manchester and Glasgow seem to be fairly comparable.

12183. I understand in addition to producing this pure milk, with the whey separated from the fat, the essential part of your procedure is a proper mixture for each individual child, according to its age and circumstances?—Yes.

12184. Do you determine that mixture *à priori* with a certain proportion of fat, of lactose, and so forth?—To a certain extent, yes. Clinical experience comes in there, always in the case of a sick infant, and generally in the case of a healthy infant. The mixture is in the nature of an experiment somewhat, but it is an experiment based on a considerable amount of observation. I know that a baby of a certain weight and character will usually take 3 per cent. of fat and so forth. As I see an infant correspond to the standard, so I adjust the food. I am careful to begin low, because I know that a high fat would upset them at once.

12185. There is such a thing as a normal healthy infant?—Yes.

12186. Would not you expect to have a normal satisfactory milk for that child?—I will point out to you the Table on human milk. I have summarised all these observations in the book. There is a correspondence between mother and child. On page 21 there are fourteen analyses of human breast milk, the mothers all healthy, and the infants all digesting well and gaining in weight. The milks are of different compositions, and they are Dr. Rotch's figures. All my work is based on that of Dr. Rotch, of Harvard University, Boston. I have done a great deal in the final development in this country, but my book is dedicated to him, and he is responsible for the milk prescription and the milk laboratory.

12187. Has this plan of milk prescription and milk laboratory been carried out in America?—Yes, extensively.

12188. For some years?—Yes, since 1891, when it was originally started. At the present moment a Milk

Fund is in existence at Boston, and a great number of the babies are fed in this way in New York.

12189. This system which you propose, which the Infants' Health Society is to introduce, has been in operation in America for some time ?—Yes.

12190. In certain towns ?—Yes, Boston, New York, Philadelphia, and other towns.

12191. Are there any statistics as to the result of the general operation of this new method in these towns ?—Statistics in regard to results are difficult to obtain, but I may tell you this, that the Professor of Diseases of Children in the Harvard University and the Professor at the Columbia University at New York have both endorsed it, and, practically speaking, all the representative men in America now are working with it. I am, however, not acquainted with any definite statistics.

12192. What I mean is this: Of course they have their system of death rates for children of certain ages, just as we have here ?—Yes.

12193. And if this system has been widely spread in certain towns, such as Boston and New York, one would have expected some clear result on the death rate at the ages of infancy ?—Yes.

12194. Has that been noted as a well-established fact ?—Even in America I should say the application to the poor is a recent development. The Milk Fund at Boston is of quite recent creation.

12195. (*Chairman.*) How is the cost met there ?—By philanthropy.

12196. Not by municipal action ?—No. They have a milk fund, and people subscribe to it, and physicians send in their orders on a sort of coupon.

12197. You think the creation of such a fund in English towns would be of the greatest possible service ?—Personally, I would much rather welcome the creation of a fund on philanthropic lines, with the municipality supporting it—perhaps giving it a grant—rather than making itself actively responsible. I think it is very questionable whether a municipal authority should take up infant feeding to that extent.

12198. I will refer you to the questions about rickets in Glasgow. Dr. Scott, who is a doctor of very good standing in Glasgow—in fact he is a certifying factory surgeon, and chairman of the School Board in the vicinity, and has done his whole life work among the poor, said: "Apart from that"—that is with regard to the quantity of lime in the water—"rickets are disappearing." I was somewhat struck by that, and I said: "You go so far as to say that ?" and his reply was, "Yes ?"—If it has anything to do with the lime in the water, I think that can go, because lime in the water has nothing to do with rickets.

12199. He said, "Apart from that ?"—"Disappearing is rather a difficult term to deal with.

12200. It means there is a great diminution. Again, he was asked: "You explained to us just now that there is a great diminution in the number of children suffering from rickets, and you attribute that to better nourishment. Am I right in that," and he said, "Yes ?"—I would not like to say that there is not an enormous number of children suffering from rickets. That is a statement which I challenge most emphatically.

12201. (*Dr. Tatham.*) It will be your wish as time goes on to keep very accurate statistics with regard to the treatment of cases ?—At the present moment we have the weight when they come in, and the actual food. They are weighed twice a week, and the precise food is given and anything such as brandy or a dose of castor oil is all registered. Also there are notes taken and every case is gone into on those lines, so that I hope to have a valuable collection in course of time. When I first started this I could not put all those charts in order, and it was only in October that I did so. But I think that at the end of this year we shall have enough statistics, because 100 good statistics show a great deal more than 1,000 inferior ones.

12202. But 1,000 good ones are superior ?—Yes.

12203. With regard to the causes of mortality, you are aware I daresay that they are pretty much now what they were twenty years ago ?—Yes. I think that is so generally speaking.

12204. Of course there are exceptions ?—Yes. *Dr. Vincent.*

12205. With regard to syphilis, do you think that plays a very great part in the mortality ?—It is difficult to say. From my experience as to the mortality in the Infants' Hospital I should say yes. Nearly all those cases with asterisks are syphilitic. Excluding the commonest cause—defective diet—I think congenital syphilis is an important factor in regard to malnutrition, but I have not had sufficient experience in regard to syphilis to offer a definite opinion.

12206. When a case turns out to be syphilitic or tuberculous you discharge it ?—Yes, if we can.

12207. Because your hospital is not intended for such cases ?—Yes.

12208. Then with regard to tuberculosis ?—We should remove it. Our business here is to find the diet. The case which was referred to was sent to Hampstead Hospital, and Dr. Cook operated on it. I omitted to mention two cases showing very strikingly the effects of sterilised food. Here are the two cases. They are numbers 115 and 116 on the charts. These babies were fed on the diet and did not improve; I thought they had been fed on sterilised food, and were not provided with the anti-scorbutic bodies in sufficient amount. I added orange juice, the remainder of the babies' diet being the same. On the 11th when I gave it the first case weighed six pounds three ounces, and the weight increased seven ounces in four days; the second one gained five ounces in four days. They were twins, so that this was a very fair test. They were cases showing a scorbutoid condition, and I was astonished that they were not doing better. I simply added the orange juice, and that condition disappeared.

12209. (*Colonel Onslow.*) An immense amount of milk comes to London from dairies in Dorsetshire and Wiltshire ?—Yes.

12210. They could not run their dairies on the Sudbury principle ?—I think they could.

12211. A great deal comes from the small farmers ?—That I would absolutely stop.

12212. That is rather hard on the small farmers ?—As a matter of fact he does not do much now; he must join in.

12213. (*Chairman.*) He must join in a co-operative system ?—Yes. I would stop the middleman system in regard to the milk traffic absolutely. It cannot be properly controlled.

12214. (*Colonel Onslow.*) I understand you to say that the cows are actually washed every day ?—Yes.

12215. Does not that affect the animals ?—No. They are groomed and they are in very good condition. Of course they want to be taken care of.

12216. I should have thought that the washing was an entirely unnatural process to a cow ?—The conditions are so artificial; keeping them in a shed in winter, and keeping them together.

12217. (*Mr. Struthers.*) Do you test them for tuberculosis ?—Yes. They are all tested for that before they are admitted.

12218. Are they fed on grass in summer ?—Yes, they are provided with a very fine meadow. But the system adopted is that they are fed before being turned out, so that they do not depend on the grass for their nourishment.

12219. (*Colonel Onslow.*) What do you feed them on ?—Hay, pea-meal, bran, and in the winter a few mangolds to make the food succulent. Pea-meal is an important thing. It is expensive, and is always left out unless this is looked to.

12220. (*Dr. Tatham.*) You know that in the medical profession it is certainly a very common practice to recommend that the ordinary milk supply shall be boiled before it is taken, for the purpose of preventing the spread of enteric fever ?—Yes.

12221. Do you think that is a wise precaution ?—No.

12222. What would you do ?—I prevent the contamination. In the chapter on the "Heating of Milk and the resulting changes" I endeavour to show that we should *prevent* the development of bacteria..

12223. You contemplate the eventual treatment of all milk supplies on this principle ?—Yes. My view is summarised in the paragraph: "Whatever be the excuse of

Dr. Vincent.

expediency, the whole argument would appear to be unsound and inconsistent with the principles of scientific procedure. To supply an infant with contaminated milk is certainly far from advisable, but milk containing pathogenic bacteria is contaminated whether heated or unheated. The *prevention* of contamination is the prime necessity." It is only a temporary expedient to boil milk.

12224. But it is better to boil milk as circumstances are at present ?—If I were given the ordinary cow's milk of commerce I am very doubtful what I should say about it. If milk is dangerous unless it is boiled then, to my mind, that milk is unfit for consumption. But if such a product has to be used it would be better to boil it.

Dr. ARTHUR SHADWELL, M.A., M.D., M.R.C.P., called; and Examined.

Dr. Shadwell.

12225. (*Chairman.*) You have given a great deal of attention to the subjects connected with our inquiry ?—Yes.

12226. With regard to national vitality, you divide the subject into two parts, vigour and reproduction: what you have to say in this *précis* is mostly concerned with the first head ?—Yes.

12227. I rather wanted to ask you some questions about the other. I understand it was your view that there was a decided tendency of the superior stocks in all classes towards a diminished rate of production, and that that was an element in deterioration ?—Yes, there is a general decline of reproductivity in all Western nations.

12228. I suppose on account of the standard of comfort, and so on ?—That is general; but with regard to the point to which you refer, I had a little evidence on that, but all the positive evidence has disappeared, I understand, and therefore I cannot refer to the figures. I can tell you the point that I had to illustrate, which is the point you have just asked about, the class of people in whom this failure of reproductivity is most marked. I have some figures for a number of industrial towns. The decline in the birth-rate is most marked in the textile towns; in the metal towns the birth-rate remains much higher. That holds good both for this country and for Germany. The difference is very marked; I took a series of each. I had some correspondence on this point with Dr. Neech, the Medical Officer of Health for Halifax. He said he could not trace any connection between birth-rate and occupation because, of course, in these textile towns the women go into the mills. He thought it had to do with the class of people. Really the two things are the same. The fact that the women go into the mills, and therefore do not want to have children, amounts in the end to the same thing as that the population in those towns is of a superior kind because several members of the family earn money and bring it in. The wives earn as well as the husbands, and the standard of comfort is exceptionally high; it is higher than in those iron and steel towns in which the birth-rate remains highest—where the same decline has not taken place. There they are a rougher class and live simpler and more primitive lives; they take life as it comes, and they have children.

12229. Do you think the children are of a physically inferior type ?—No; I do not say so. The others are more comfortable and better off. But these are what you call a lower class. I do not pretend to attach a definite meaning to the word "lower." As to whether they are physically inferior I cannot say. You would have to get the data accurately with measurements, and so on, in order to arrive at that. We have no data.

12230. Do you think there is any ground for the impression that the reproductivity of the more capable classes, both physically and mentally, is diminishing ?—The general reproductivity is diminishing in all classes, but you mean more among the higher classes, the better educated, those who live a more comfortable life. Better in that sense, yes; but as to saying they are physically better, that I cannot say. It seems to me that vigour implies reproduction. The two words are identical. Vigour only means a proper fulfilment of the natural functions of which reproduction is one.

12231. It has been suggested that the more capable among the working classes are not reproducing themselves as rapidly as they were, and not in the same proportion as the rate of reproduction among the less capable, but I do not know that there is any evidence of that ?—It depends what meaning you attach to the words "less capable."

12232. Less capable of putting into existence persons who are physically fit ?—No, there is no evidence of that. I should not say that people in those towns—for instance, Bolton, and Oldham, Bradford, Halifax, Huddersfield, and Blackburn—those towns in which the birth-rate is less, that the people there are physically inferior to those in Sheffield, Newcastle, Wolverhampton, or Birmingham. No, I cannot say that; there is no evidence of that at all.

12233. Are you familiar with the conditions of life there ?—Yes, in all of them.

12234. Is your experience in the urban or rural districts ?—In the urban districts. I have made a study of those industrial towns.

12235. Have you formed any opinion of how far the population of those towns is being recruited by the best of the country stocks ?—No; I have not been able to form an opinion.

12236. Do you think that the process is having the effect of depleting the rural districts of their best stock or not ?—The rural districts are not being depleted. I suppose you have evidence of that.

12237. Not so much as we should desire, perhaps.—It is the general impression, and I see it constantly repeated, that the rural districts are being depopulated, but that is not the case. The population increases generally in the rural districts, though not at anything like the same rate. The population is becoming relatively much more urban.

12238. There is 77 per cent. in the urban district now ?—Yes; I thought you would have had evidence on that.

12239. We know about the distribution ?—I mean about the depletion. I did get out the figures, but I took it for granted you would have those with regard to urbanisation.

12240. We know all about that, but the question is whether that is accompanied by the depletion of the better stocks in the country so that the poorer stocks are left to reproduce themselves in the country, whereas the better stocks go into the towns and suffer degeneration there; that is the point, so that the evil may be—I do not say it is—caused in both ways ?—Yes.

12241. You have not any opinion to express upon that point ?—No, there is no evidence upon that. We cannot get at it.

12242. Evidence on that point could only be got by something in the nature of an anthropometrical survey established for a number of years ?—Yes; it would have to be very systematic even then to get at that.

12243. I think you have formed some personal impressions as to the existence of what you describe, and what you no doubt correctly describe, as deterioration, as to whether it exists or not ?—If you ask my own opinion, though there is no proof and the evidence is very inadequate, itis that the evidence for deterioration rather weighs down the balance. I believe the evolutionists are right, and that there is a general process of deterioration going on.

12244. Because of the check which has been given to what is called the elimination of the unfit ?—That is the theoretical explanation.

12245. Do you think it is well based ?—Yes, I think it is well based.

12246. Do you know Dr. Allbutt, the Cambridge Professor of Hygiene ?—Yes.

12247. "He maintained very strongly indeed that of all the discriminating agencies tc produce the survival of the fittest, disease was the worst, and he argues that the injury to those who survive is so great that all measures which combat disease tend to improve the race." Do you agree with that ?—I am quite aware of those objections, but in spite of that I think the evolution theory does hold good, and all the evidence confirms it. The

evidence is very unsatisfactory and inadequate, but such as it is, it confirms it.

12248. You think it does?—I do.

12249. Have you anything to say in support of that belief?—No. I have not much to say. I am unwilling to give it, because it is merely an opinion, and I think we have far too many opinions without anything to back them, and therefore I do not put forward an opinion myself; there is such a mass of assumption, opinions and impressions, I am tired of it myself.

12250. When you go on to talk about the change which is involved in what is called urbanisation of the people, you admit that urban death rates are lower than rural death rates were twenty or thirty years ago?—Yes, but then I cannot interpret death rates. I do not know whether death rates mean an improvement or not.

12251. Surely an improved death rate means a greater power of resistance?—I do not know that it does at all; on the contrary, I daresay you have had these figures here from the Manchester Unity of Oddfellows, their last report. Longevity has increased, but there is a remarkable increase in sick claims. The people live longer, but they are not so well. Those are the figures (*handing same to Chairman.* The sick claims have increased at all ages. That is one of the reasons why I cannot interpret the death rates to mean necessarily improvement in physical vigour. If they do, then there is an end of the question; death rates are falling everywhere; we must all be improving, and there is no good inquiring any further.

12252. No doubt they are not conclusive, but as a matter of fact they show something?—Both processes are going on in my opinion, and what we want in order to determine on what side the balance lies is the data which we have not got.

12253. Which you would wish to see collected by close investigation into the conditions of the people?—Yes; it is the only way to get them.

12254. You do not think the apparent increase in insanity, for instance, is proved?—No; it is not proved.

12255. In Ireland, I take it, it is?—It may be in Ireland.

12256. I think there is no doubt about that, so far as statistics can prove anything?—My own belief is—and here again it is only a belief—that both insanity and cancer are really increasing, and that the increase is not merely apparent: it seems to me too steady and too large to be accounted for by any errors of registration.

12257. It is certainly so in cancer, and if cancer is a disease of deteriorated tissue, which comes late in life, prolongation of life would be expected to be accompanied by cancer?—Yes. Sir James Paget pointed that out years ago, but Dr. Newsholme has shown that the increase in longevity can only account for a very small part of the increase of cancer; it does not account for the whole, supposing the increase to be real. I think those two things, both dependent on what they call instability of tissues, are evidence that the evolution theory is correct.

12258. And your general conclusion is that adequate data is indispensable to any real knowledge of the question. What is your opinion as to the way that data should be collected?—I would not presume to lay down the method.

12259. Do you mean an investigation into the physical characters of the people?—Yes, certainly, such as has been proposed. The only thing which I thought might be of use to you which you have not got (and it is positive evidence as far as it goes) is the statistical evidence from Germany. There the same process of urbanisation has been going on, and those are the figures which I put in, and which are lost.

12260. Have you the figures at home?—Yes.

12261. Could you furnish them?—Yes. This process has been going on for a number of years; it has not gone on so far anything like as it has here, but it has attracted attention; I mean the probable effect of the urbanisation upon the physique of the people, and it has been much discussed. With them it is a vital question because of its bearing on military strength.

12262. I take it their towns are much healthier than ours?—They are in many respects. The excess of births over deaths is very much greater there than it is here.

12263. Their towns are laid out with greater regard to the conditions of health, open spaces, and so on?—I do not know whether you can say that on the whole; they are better in some respects, but not in others. The evidence has been gone into, it has been discussed, of course. They discuss everything which arises in Germany very thoroughly, and they have proved that rural districts are more healthy, and they have the recruiting returns. Of course their recruiting returns are of the greatest value, because they cover the whole population: the whole male population is medically examined on reaching the age of twenty, year by year, and there is no doubt that from the recruiting returns the physique of the rural population is greatly superior to that of the urban. That is both in general and in detail. Then there is a certain amount of evidence of deterioration since the urbanisation began. It does not amount to much. But the proportion of the unfit has risen, and the proportion of the fit has fallen slightly. It does not amount to much, but it is positive evidence as far as it goes. *Dr. Shadwell.*

12264. If you would let us have these figures I shall be much obliged?—I will do so.

12265. (*Dr. Tatham.*) Are you in practice as a physician?—No, I no longer practice.

12266. From your investigations does it occur to you that emigration is a factor in whatever physical deterioration exists, assuming that it does exist?—You mean the removal of so many persons in the prime of life?

12267. Yes?—Yes; I should think that it probably has something to do with it. But there are two classes of emigrants, are there not? Some of the emigrants are persons of unusual enterprise and vigour, but you have the other kind of emigrants that leave their native country because they fail there.

12268. But are not they returned to us? I understand that in large numbers they are returned to us from America and other places; they will not have undesirables?—Now they will not.

12269. That is so now, is it not?—Yes.

12270. So that really it comes to this, that emigration consists very largely of the best blood of our country, and if that is the case, surely what remains behind must be less desirable for purposes of reproduction?—Yes.

12271. Do you think that is a tenable position?—Yes.

12272. Do you think that alcoholism, speaking generally, is at the bottom of a good deal of deterioration?—Not of deterioration; of degeneration, of course it is. There is so much less alcoholism than there was; it cannot be the cause of deterioration.

12273. Is it true that there is so much less alcoholism?—Oh, dear yes.

12274. Are you judging from the published statements of mortality?—Certainly not. The statistics of mortality are valueless.

12275. *Qua* alcoholism? What are your grounds?—The mortality statistics do not represent facts; they only represent opinions, and it has become the fashion to put that down as a cause of death when it used not to be so.

12276. I quite agree with you, but you were saying there is evidence of reduction of alcoholism?—Yes.

12277. What is the nature of that evidence?—The police returns and the descriptions of what used to take place. Are you acquainted with them?

12278. I am, unfortunately?—You do not agree with that?

12279. I would rather hear what you have to say, because I know you are interested in the matter?—I have said a good deal in this book on the subject (*book handed to Dr. Tatham*). The first two chapters deal with that.

12280-1. I knew you had written on this subject and that is why I asked you the question?—I think if I read you a few extracts from that you would see what I mean when I speak of that. You know the high water mark of drunkenness in this country was in the middle of the 18th century, when they passed the Gin Act of 1736. There was no very marked improvement down to the time when the very famous inquiry was held by the House of Commons Committee in 1834. Have you read descriptions of what took place then?

12282. No?—I have here a lot of evidence of different kinds. There is the consumption of drink, the number of

Dr. Shadwell. licensed houses, the police returns of public drunkenness, and the description of what used to take place. I think that that is generally admitted.

12283. (*Dr. Tatham.*) I am glad to hear you say so.

12284. (*Chairman.*) Is there not more drunkenness among women?—No; certainly not. I have gone into that. If you look at this diagram (*book handed to the Chairman*) I think you will see.

12285. (*Dr. Tatham.*) What are these?—These are judicial statistics. If you read earlier in the century than that you find they held censuses of the public-houses, and the women were in quite as large a proportion as in any recent one. I think it was in 1829 they brought the subject up before the Middlesex magistrates, and the Chairman remarked that on the previous Monday seventy-two cases had been brought up at Bow Street for absolute and beastly drunkenness, and the worst of it was that most of them were women. The notion that it is a new thing among women is a complete delusion. There is abundant evidence that the same thing has been going on for centuries. I may say the evidence I have put together in that book has been confirmed in the inquiry I have been recently carrying out into the conditions of industrial life by employers and others, old men in the industrial towns who described to me what used to go on. They said there is no comparison at all nowadays. It is "simply ridiculous"—that was the expression used—works were never opened on Monday, seldom on Tuesday, and on Wednesday there were not many men there. They were only in full work on Thursday, and then they used to work Thursday, Friday, and all through Friday night and Saturday, and you could not get them to go to get their wages till midnight on Saturday because they wanted to earn money. They used to be lying about the streets on Sunday morning, as described to that House of Commons Committee, and the employers used to drink with the men. This was the usual practice. Whatever there is now fades into insignificance beside it.

12286. (*Mr. Lindsell.*) Do not you think that is in any way counterbalanced now by private drinking?—So far as statistics go the average consumption per head remains very constant. It rises and falls with trade, but the average is much the same as it was seventy years ago. It has not increased, it is rather less.

12287. But the fact that public drunkenness is not so marked as it was does not necessarily prove anything?—No; I agree with you.

12288. I see you refer here, as one of the possible causes of deterioration, to compulsory education?—Yes.

12289. In what way do you regard that as tending to deterioration?—The effect of having the children in the schools for a number of hours. I do not think the schools are so unhealthy as their homes—probably not—but they are unhealthy, much more unhealthy than a factory, for instance.

12290. Do you think so?—Yes, most decidedly. The air in the schoolroom is decidedly worse than in the factory.

12891. Is that due, do you consider, to the inseparable accompaniments to a large number of children gathered together, or defects in the present system of school buildings?—It is both. I think it might be improved. I do not think you could have a large number of children together without some fouling of the atmosphere.

12292. Do you think the regularity of life and the better habits inculcated, and the attention that is paid to children now, does not counterbalance any harm that may be done?—Yes.

12293. I mean a child before he went to school, his home conditions were bad, and the surroundings were bad, and the exposure?—I think you rather misunderstood what I said here.

12294. You say in your *precis*: "Other causes must be sought in new conditions—*e.g.* compulsory education, enormous growth of amusements, theatres, and music-halls, juvenile cigarette-smoking," and so on. You put compulsory education in the same category?—As a new condition in recent years. I do not say it is a cause of deterioration; it may be a cause of improvement. My point there was that you cannot seek deterioration in things which have been much worse than they are now; you must seek it in something new.

12295. That is a possible cause?—You must seek in it that; I do not say it is in that at all.

12296. (*Chairman.*) It may be in the conditions attaching to it?—Yes.

12297. (*Mr. Lindsell.*) Is juvenile cigarette-smoking very deleterious? In some countries they are supplied with cigars in the schools?—Yes; there are some countries where there is a great deal more juvenile smoking than there is here. I do not think it is good for them.

12298. (*Mr. Struthers.*) There is no positive evidence to show it is bad?—No; there is no positive evidence about any of these things.

12299. (*Colonel Ouslow.*) Not even if it affects the heart?—If you show me a boy whose heart is affected by that, I should say "Yes, it has done harm."

12300. The question is whether it is caused by cigarette smoking?—There is no evidence of that.

12301. (*Mr. Lindsell.*) You say you noticed an immense increased consumption of Indian tea?—Yes. I am sure that is a cause of ill-health. I do not put in any figures with regard to the increased consumption. But you know China tea has almost gone out and the Indian tea has increased enormously. I have always found that women coming to the hospital—out-patients, of course—complain of indigestion and constipation. You begin to ask them about their habits, and then they will own, of course, to drinking tea, but in great moderation. If you cross-examine them a bit you find it comes to something like twelve cups of tea a day, and they drink it exceedingly black and strong, which is what they call good; by good they mean bitter. Then the effect of this is counteracted by corresponding quantities of pills and other patent medicines to put it right. They suffer habitually from indigestion and constipation, and I am sure that excessive tea-drinking has a good deal to do with it.

12302. (*Mr. Struthers.*) You mentioned, specifically, Indian tea?—Yes. There is all the difference between Indian tea and China tea.

12303. (*Mr. Lindsell.*) Is there more tannin in it?—Yes; its effect is entirely different. I suppose it would be called tannin.

12304. (*Mr. Legge.*) You mention among the alleged causes of deterioration which are less operative now than they were—ignorance of mothers; have you any evidence on that point?—No. The reason I say that is that now some attempt is made to teach them; formerly there was none.

12305. We have had a good deal of evidence, particularly from ladies, stating that the ignorance is growing, and that it is growing because there is less home teaching than there was. It is true there is a certain amount of artificial teaching in schools, but they state that the family life in overcrowded urban centres, and also in neglected country districts, is practically a thing of the past, and so a girl of to-day does not get that domestic education which she was favoured with in the past?—I do not agree with that at all.

12306. Early in your examination you said you thought, on the evolution theory, there was some ground for leaning to the view that there is a certain amount of deterioration, but I have not been able to gather from you since why; what is there in the evolution theory?—Do you mean theoretically?

12307. Yes, to lead one to any supposition of the sort. We are not declining from an ideal state of the past?—No.

12308. Is there anything in the evolution theory to lead one to imagine that deterioration is more probable than otherwise?—I suppose if the evolution theory holds good, softening of the environment is necessarily followed by deterioration.

12309. That is what I wanted to get at?—The theory of natural selection is that the weakly perish in the struggle for life, and so you maintain a certain standard of vigour. If you soften the environment, and lessen that struggle, you do preserve the unfit. There is not a question about it, we do preserve the unfit. When I say unfit I mean the least fit, those who would have perished. We preserve them of all kinds. We restore them to ordinary life, and enable them to propagate their kind.

It is not possible to dispute that; in fact, most of our social agencies, legislation, and that sort of thing, are directed to that end.

12310. (*Mr. Legge.*) I must have misunderstood you, because I thought when the Chairman raised that question that we had interfered with the struggle for existence, you did not agree with him.

12311. (*Chairman.*) No, I do not think so. He expresses dissent from Dr. Clifford Allbutt's opinion.

12312. (*Witness.*) It has been worked out most thoroughly by Mr. Headley. I do not know whether you have been referred to the book; it is "Problems of Evolution."

12313. (*Mr. Legge.*) You have made a thorough study of certain conditions of certain industrial centres?—Yes.

12314. You are familiar with municipal enterprise?—Yes.

12315. You think it is a valuable power, the placing as much power as possible in the hands of the local authority? You would rather have certain powers exercised by the local authority than by the central administration?—You mean local government—decentralisation?

12316. Yes?—I can hardly answer that question.

12317. Do you think that a municipal authority, if it wishes to improve the conditions of life in its sphere, can do so?—Yes.

12318. Is there any particular direction in which you think their hands might be strengthened by legislation or otherwise?—No; I think that they have sufficient powers. I do not know that they always use those powers wisely or with discretion, I do not think they do.

12319. Are there any points on which you could criticise their action. Have you studied the smoke question, for instance, at all?—Yes. I have paid attention to the smoke question.

12320. Have you considered what powers they have for keeping the atmosphere pure and to what extent they exercise them?—Of course there is the greatest variety of local administration, but smoke, as regards manufactories, is considerably checked in this country, I think more so here than anywhere else: it is incomparably worse in America, for instance.

12321. (*Chairman.*) Not in Germany.

12322. (*Colonel Fox.*) They enforce the law in Germany?—Of course in Germany they enforce all laws better. I agree with you that the law is very unevenly enforced here. But there is no means of dealing with domestic smoke.

12323. (*Chairman.*) Not by compelling every householder to burn anthracite?—No. If he were fined for having visible smoke coming out of his chimney he would burn anthracite, or use a charcoal stove, or gas, but you can never get such a measure passed.

12324. There is no objection to the use of anthracite; it is claimed that is the most economical there is?—Your housemaid would give warning.

12325. Why?—Because it is a bother to light; she would have to get up much earlier. That is a very practical objection.

12326. (*Mr. Legge.*) Supposing the result of an anthropometrical survey showed that the physique of the population in one district was very much worse than in another, you would be, I suppose, in favour of the central government as representing the country at large bringing pressure to bear on that local authority to conduct at any rate an investigation into the causes of the inferior physique of the district?—Certainly. I think the local authority ought always to be supervised and kept up to the mark.

12327. (*Mr. Struthers.*) I understood you to say that while the population in the towns has increased at a greater rate than the population in the country, there has not been an actual decrease in what you would call the rural population?—No.

12328. That also has had its own increase?—Yes.

12329. Though not so great as the other?—Yes.

12330. That applies to the country as a whole?—Yes.

12331. Because there have been many districts where there is an actual decrease of population?—Yes.

12332. Do you know what are the main causes of the depopulation in those districts?—No; I am not prepared to say.

12333. The difference in the farms?—It may be.

12334. Do you think the physique really of the rural population is better than the town population in this country, or is there any evidence on the point whatever?—I do not know of any evidence in this country, that is why I attach importance to Germany—they have got evidence.

12335. What evidence is that?—The evidence of the army. The military medical returns are conclusive on the superiority of the rural population—the proportion taken broadly.

12336. Having got that fact, have they proceeded to found any theory upon it as to the causes of the superiority of the rural stock?—No, beyond general conditions of life in the town and in the country respectively.

12337. More open air life?—Yes, I suppose so.

12338. And not better feeding and not better sanitation?—No. In many respects what we call the sanitary conditions are greatly superior in the town than in the country.

12339. (*Chairman.*) There is better water, too, very often?—Better water and better drainage; in fact, those conditions are generally as bad as they can possibly be in the country districts.

12340. (*Mr. Struthers.*) On this point of the natural consequences of the law of evolution, that the softening of the environment tends to the survival of a larger proportion of the unfit and therefore towards something like progressive deterioration—on that theory the State and municipalities and the body politic, so to speak, has interfered in the direction of softening the environment?—Certainly.

12341. That is an interference which people in their present disposition will insist on making?—Certainly.

12342. There is no question of going back on that?—It is an inevitable process.

12343. We will take steps to preserve the unfit?—Certainly we shall go on doing so without doubt.

12344. But the State having interfered in that direction, is it almost a natural consequence that they should interfere in another direction also, and that while softening the environment they ought, so to speak, to segregate the unfit from that softened environment and put them in a special environment?—I should think very likely they will do that.

12345. You mean as a result of the logic of facts?—I should think eventually they will do that; there are lots of people asking for that now, and all kinds of things, to regulate marriage and births of children and bringing up of children and, in fact, take over the whole thing.

12346. For instance, to take over the feeding of children We have had that proposal just now: that, of course is rather on the side of softening the environment?—Yes.

12347. That is not a case of segregating the unfit?—No. You mean not letting them propagate themselves?

12348. Putting difficulties in the way, at any rate?—Because they would not do any harm otherwise, would they?

12349. I suppose you ought to distinguish between two kinds of unfit; there are the temporary unfit and the permanently unfit, and it is hard to distinguish at first sight between these two classes. Of the whole total

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who are regarded as unfit, we ought at least to make trial of whether an improvement cannot be made in a considerable percentage—such things, say, as a labour colony?—Yes.

12350. And means might be taken to preclude or prevent from marriage people who had been confined in lunatic asylums, for example, repeatedly, and showed symptoms of disease which were likely to be introduced into the offspring?—Yes.

12351. You think that would be the natural counterpart to the State's action—something of that kind I mean—in softening the environment?—Yes, I should think somebody would probably advocate it.

12352. I would rather get your own opinion on the subject?—As to whether the State ought to do that?

12353. Yes?—I do not know what the State ought to do. It is quite likely the State will do that at some time.

12354. When we speak of whether the State ought to do it or not, what is the standard by which you are judging?—Now you are asking me what is better and what is worse and I cannot say.

12355. In the matter of softening of environment you might raise some question as to whether we ought to soften the environment or not?—Yes; quite so.

12356. Your answer is whether they ought to or not, it will be done?—Yes.

12357. And you think similarly with regard to the interference with the unfit. Very likely the State will do something irrespective of whether it ought to be done or not—"ought" in that sense?—Yes.

12358. Then you say that we are badly in want of fresh data of various things. You say, in your *precis*, that a collection of adequate data is indispensable to any real knowledge of the question. In what directions? Have you any specific suggestions to make?—No, I have not.

12359. You express the general opinion that we want more information, but you are not prepared to make any definite suggestion as to what might be done in the way of collecting that information?—I am quite in accordance with the suggestions which have been made with regard to the systematic and periodical measurements.

TWENTY-SECOND DAY.

Wednesday, 27th April, 1904.

PRESENT.

Mr. ALMERIC W. FITZ ROY (*in the Chair.*)

Colonel G. M. FOX.
Mr. J. G. LEGGE.
Mr. H. M. LINDSELL.
Colonel GEORGE T. ONSLOW.
Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary*).

Dr. MACNAMARA, M.P., called; and Examined.

Dr. Macnamara.

12360. (*Chairman.*) You are Member of Parliament for Camberwell?—Yes.

12361. Your experience as a member of the London School Board, and prior to that, in direct connection with elementary education as a teacher qualifies you to speak upon this subject?—Yes.

12362. In considering the conditions of the parents of the children who you think are in need of assistance you draw a very sharp distinction between the better class and the poorer class?—Yes. I say you can draw a sharp line dividing the working class children into those who were never better cared for, never better physically trained, never better looked after generally, than they are to-day, and those on the other hand who, in the matter of nutrition, clothing, housing, and so on, were never worse off than they are to-day.

12363. You think that recent years have accentuated the differences between those classes?—Yes. I suggest that 80 per cent. of the working class children were never so well off as they are to-day. I think that is the result of the influence of thirty-three years of compulsory public education, the habits of discipline formed in the schools, the physical training given in the schools, and in the organised games of the playgrounds and playing fields, and the elevating effect of the school system upon the home—I lay great stress upon that.

12364. You think that has had an influence?—Yes. It induces a greater pride on the part of working class parents in respect of their children, particularly with regard to cleanliness, clothing, feeding, and so on. All these things have left me perfectly convinced that four-fifths of the working class children are better off than ever they were.

12365. But there are some whom these influences have not touched, and who are relatively worse off than they were?—They are probably not worse off, absolutely.

12366. But relatively?—They are absolutely worse off in regard to housing, but in other matters it is more by way of contrast with the improvement of the others.

12367. Relatively?—Yes.

12368. Of course this estimate is a rough one?—Yes.

12369. I suppose it would vary considerably in different places?—Certainly. There would be districts where the proportions would be entirely reversed; that is to say, you would only have 20 per cent. well looked after in some extremely poor districts.

12370. With regard to London, as a whole, you do not think that there are 20 per cent. of the school children who come to school habitually hungry?—I should not put it so high as that. There are 20 per cent. who come to school habitually improperly fed.

12371. That is owing to parental ignorance?—Parental ignorance, lack of means, and in a minority of cases thriftlessness and self-indulgence.

12372. To general causes rather than to special poverty?—Yes. I should not put it as high as 20 per cent., who come to school habitually hungry. Of course the proportion would vary with the time of year. The proportion would run up in a hard winter when the building trade and allied trades are out of employment.

12373. Coming to the consideration which the London School Board has given to the subject, you lay great stress upon the recommendations of a Committee which sat in the year 1898?—Yes.

12374. Have you the reference to that Committee?—Yes. It is the third Committee which sat in ten years. The reference is "That it be referred to the General Purposes Committee to consider and report whether and what inquiry can be made, before next winter, as to the number of children attending public elementary schools in London, who are probably underfed, and how far the present voluntary provision for school meals is, or is not, effectual." There were three Committees. In the first place, there was the Committee of 1889; they went into the matter and they came to the conclusion that 43,888 children, or 12·8 per cent. of the whole of the London children, came to school habitually hungry, and that volunteer agencies could only meet the needs of half those children. The second Committee in 1894 simply perfected the system of securing statistics. Then there was the Committee of 1898.

12375. It was the Committee of 1898 which actually dealt with the question and came to close quarters with it as it were?—Yes. The majority of the Committee came to a very definite conclusion.

12376. Was it a fairly representative Committee?—Yes. But I ought to say that its main finding was not accepted by the Board.

12377. That I understand. Then I think it would be very useful if you would give us what the conclusions were?—The fundamental conclusion we came to was that voluntary effort alone was not sufficient to meet the needs of the problem of feeding the hungry children. Then we set out the following proposals. In the first place, "It should be deemed to be part of the duty of any authority by law responsible for the compulsory attendance of children at school to ascertain what children, if any, come to school in a state unfit to get normal profit by the school work, whether by reason of underfeeding, physical disability, or otherwise, and that there should be the necessary inspection for that purpose."

12378. What do you mean by necessary inspection? Do you mean medical inspection?—Certainly; I mean inspection both on the part of the Board's officials, and I imagine, in regard to physical disability, a medical inspection. But with regard to underfeeding, the Board itself has, or could have had, machinery other than medical machinery for testing that question. I do not think that you require a medical examination. There are attendance officers and teachers and so on who could do that.

12379. There should be an examination of the condition of the child's home?—Yes. Then secondly, "Where it is ascertained that children are sent to school 'underfed' it should be part of the duty of the authority to see that they are provided, under proper conditions contained in Clause 6."

12380. You make it a preliminary that it should be ascertained whether children are actually sent to school hungry: you would not act on vague surmise or speculation?—No. Then it should be the duty of the authorities to see that they are provided with food. Then we came to the conclusion, "That existing or future voluntary efforts to that end should be supervised by the authority."

12381. Supervised and supplemented?—Yes; that is the next point, "In so far as such voluntary efforts fail to cover the ground, the authority should have the power and the duty to supplement them."

12382. Do you believe that the assumption of that duty by the school authorities could be carried on consistently with the maintenance of voluntary effort: would it not sap it at its source?—It has been carried on for a considerable number of years in a number of Continental cities. It is only fair to say that, as a result, voluntary effort has not increased.

12383. It has been arrested?—Yes.

12384. Do you not think it would dwindle in London?—I cannot say. But certainly it is the fact with regard to one or two municipalities on the Continent that voluntary effort has not only been arrested, but has dwindled as a result.

12385. Do you not think it would have the same result here?—I do not know; I daresay.

12386. You are quite prepared to face that?—Yes, I am not concerned with it.

12387. Except that you admit it would involve a growing charge upon the community?—I think so, yes; a charge which, of course, would be met in part, as you will see, not only by voluntary effort but by payments on the part of parents.

12388. I will come to that presently?—Then we say, That where dinners are provided it is desirable that they should be open to all children, and should be paid for by tickets previously obtained, which parents should pay for, unless they are reported by the Board's officers to be unable by misfortune to find the money; but in no case should any visible distinction be made between paying and non-paying children. Finally, we say, "Where the Board's officers report that the underfed condition of any child is due to the culpable neglect of a parent (whether by reason of drunkenness or other gross misconduct), the Board should have the power and the duty to prosecute the parent for cruelty; and that, in case the offence is persisted in, there should be power to deal with the child under the Industrial Schools Acts."

12389. That of course would only be exercised in extreme cases?—Yes. Broadly that is the scheme. It is fair to the Board to say that the majority of the Board rejected the assumption of responsibility on the part of the public. That was the main breaking point.

12390. Of course, under this system, you anticipate that a great many parents who are quite able to feed their children, and who do it now, would pay for those meals as a measure of convenience?—Oh yes. I call your attention to the fact that in the municipality of Paris, where a system of this sort is in working, practically 62 per cent. of the meals are free; therefore, roughly, 38 per cent. are by purchased tickets.

12391. I suppose you would contemplate recovering from a great many of those parents?—Yes, certainly.

12392. I mean apart from those you prosecute for neglect?—Yes.

12393. Do you think you would stand any good chance of doing that?—I would like to say, shortly, that the great bulk of the working class parents will make provision; they make very great sacrifices for their children; but if they cannot, through accident or misfortune, or illness, I think they ought to be assisted at the public expense without any suggestion of pauperisation. In the final case, if they can make provision, but as the result of thriftlessness, or drunkenness, or negligence they will not, then I would punish them with the utmost severity of the law, and I am not particular about the methods. I would broadly say that I would punish them most severely in that case, but I would not let the children go hungry in order to maintain parental responsibility exactly where it does not exist at the present time.

12394. I can quite understand your being able to deal rigorously with extreme cases, but there must be cases where a kind of *insouciant* thriftlessness is present, where a man is culpable, but whom it would be rather severe to treat as a criminal?—I should endeavour to recover the cost from them.

12395. How are you to do it with a parent of that type?—You would use the same machinery as for recovering the cost of fines for non-attendance at school. It is a very similar class of parent.

12396. You are aware that under the Industrial Schools Act they recover a very small proportion of the charge?—I am aware of that.

12397. Do you think they would be any more successful here?—Probably not. We do recover a very considerable amount of fines. I am thinking of the class of parents that I believe you are thinking of, parents that you could not very well say were criminals but were really careless people, who will not send their children to school. They are fined and their fines are recovered.

12398. Do you think it could be done by arresting the wages of the parents?—That is a very serious proposal to make.

12399. That has been proposed here?—I should not like to answer that offhand.

12400. Do you think that if a thorough investigation into the circumstances of the family preceded any action of the sort, indirect influence might be brought to bear

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upon the parents which would lead to any large amount of money being subscribed?—I think it is very likely in a great many cases.

12401. I mean the influence of sympathetic visitors?—I think it is very likely.

12402. Moral suasion?—Yes, but in the last resort you would have to use the machinery of the law for punishing them. I am quite convinced of that. That would only be with regard to a very small minority.

12403. I suppose you would agree that one or two signal instances of such punishment as you suggest would have a very salutary effect?—Yes; there is a very good instance of the truth of that proposition in the recent administration of the Education Act. Up to 1900 the maximum fine was 5s. for non-attendance at school including costs. From 1900 it has been £1, with the result that on the one hand the school attendance has enormously improved and the number of fines has appreciably decreased.

12404. The parents will not expose themselves to the risk?—The fine has developed a conscience.

12405–6. Subsequent to the decision of the Board upon the report of that Committee you submitted some views of your own on the subject?—Yes. They are elaborations of the main contentions of the Committee and a practical application of the proposals of the Committee to the cases of the various schools then under my charge. I suggest the grouping of schools with a kitchen and dining-hall connected with three or four schools in each case.

12407. Perhaps you had better give your practical suggestions in full?—I can put it very shortly. I propose that a dining-hall should be furnished at the Johanna Street School for the three North Lambeth schools: Johanna Street, Waterloo Road, and Addington Street.

12408. This is a model for the treatment of the problem in every great urban centre?—Yes. I take those three very poor schools, and propose to provide them with a dining-hall and kitchen.

12409. Would you utilise some existing room as a dining-hall, or would you add a dining-hall to the schools?—In these particular cases it would be necessary to add a dining-hall, but I daresay there are rooms which could be utilised.

12410. Would not the halls in most schools be utilisable?—I should object to that.

12411. Why?—I do not think you could disorganise the school hall.

12412. It is used now during the interval when the school is not utilised for educational purposes?—I know that, but there would be a considerable amount of dislocation. The children would come from various schools. You might have 1,000 children dining off soup in the hall. There would be a great many objections.

12413. I think there would, but do you not think that we should be prepared to meet and overcome these objections from the point of view, if this plan is to be adopted, that it should be done at the least possible cost to the community?—I would rather have them dine in the school hall than not at all.

12414. That is the point I put, that if we advocate a great change of this sort, to which a great many people would object, surely it would be better to do it in a form which was open to the least objection?—Yes, I am much obliged to you for putting that before me. I daresay in many cases such a room could be provided in the existing premises, but if not, then I should say it should be provided. It is also true that a school kitchen and boiler, and so on, is already in existence in a great many cases.

12415. You want a very simple apparatus for the kind of meal you would provide?—Yes. There are all sorts of parochial agencies providing teas, and all that material could probably be utilised. Then I suggest that dinner coupons should be procurable by the parents at a convenient public office, say the local town hall or district council office, or whatever it is, to be paid for, or received gratuitously, by the parents, according to the necessity of the case. I want to lay great stress upon the fact that there should be no difference between the style of the coupon, whether purchased or whether obtained gratuitously.

12416. That is the Paris method?—That is the canteen method in Paris, yes. Then the parents would give the children a dinner ticket, and instead of their going home or hanging about the playground, they would go to the dining-hall and get their dinner, at least one meal a day, by that means. That is the Parisian method.

12417. You say in your *précis* that it has been practised in a great many Continental cities; do you mean that a scheme of this sort is the rule in Continental cities?—No, it is not the rule.

12418. It is locally adopted?—Yes, and a similar scheme to this is in existence in Brussels and Vienna.

12419. The municipal authority has adopted it?—The Paris municipal authority is absolutely responsible for making up any deficiency in the funds arising from any cause. In 1897, under the system I have just explained, the Parisian municipality school canteen system distributed 8,250,000 meals. They were not all dinners; some were breakfasts. The total cost, roughly, was £70,000. Of that amount voluntary contributions and the payments for coupons by parents came to, roughly, about £30,000, and the rate therefore would amount to the extent of about £40,000. To take the case of London—London has a population of about twice that of Paris, but I think the child population is about three times as much, or thereabouts. Therefore, you would want, roughly, to put an outside estimate, three times £40,000, viz., £120,000, which is about three farthings in the pound on the rateable value. That would be the outside estimate for a scheme of this sort working in the whole of London.

12420. Assuming nothing was recovered from the parents?—Assuming that nothing was recovered from the parents, but that the parents paid for tickets voluntarily where they could?—We hope, of course, that a great deal would be recovered, but that is assuming that nothing was recovered.

12421. Now with regard to the important point of determining what children are underfed, how would you propose that should be settled?—The school attendance officers and the education authorities have an intimacy of knowledge with regard to the homes and the circumstances of the children which probably is not realised. Their daily visits, and so on, enable them to obtain that knowledge. When the Royal Commission on Housing sat in 1884, I think I am right in saying the whole of the members were very much struck with the enormous amount of intimate knowledge which these attendance officers had of the condition of the poorer people.

12422. That has not diminished, I suppose, by this time?—No; on the contrary. I can speak personally of this matter, because I was for eight years the headmaster of a board school, perhaps the poorest board school in East Bristol; I knew in a very short time the children who were hungry, by their appearance. I knew in another way: when the school was disbanded at midday, day after day, winter and summer, there would be twenty or thirty boys out of, say, 300, who would hang about the playground. I would ask them why they did so. They were very reluctant, of course, to state their case, but by careful observation I found that they stayed about the playground for the simple reason that there was nothing to go home to. I knew they had nothing to eat at all. Obviously those boys had been at any rate, from eight o'clock in the morning till midday with nothing to eat, and there was nothing to eat then. Then another thing; a practised elementary school teacher can tell by the appearance of the child, particularly in cold weather, as to whether it is hungry or not. The teacher may be misled, of course, because the child may be sickening for some disease, but the pasty, worn and wan look and pinched appearance of a child is eloquent testimony as to its condition. It is a very common experience in the poorer elementary schools, especially when the frost commences, that quite a number of children during the course of the first session in the morning become sick, and vomit. Of course some of them may be sickening for measles or scarlet fever.

12423. Some of them may have eaten too much?—I do not think you would say that if—to deal with a very unsavoury subject—you saw the nature of the vomit. I think that would remove that idea at once. The fact is that severe cold upsets these very hungry stomachs at once, and the poor unfortunate child retches. The teacher and the attendance officer together in consultation could with almost scientific accuracy find out the hungry ones.

12424. I could understand that, with regard, perhaps, to a considerable proportion of cases—all the worst cases, at any rate—but I should think there must be a very large residuum of other cases where a teacher, with the closest knowledge, and the most accurate power of observation, might be deceived?—Yes, I think that is likely.

12425. But you think with the knowledge to be obtained from the attendance officer as a corrective of rash conclusions on the part of the teacher, there would not be any great abuse of the system?—I am perfectly convinced that the attendance officer and the teacher together could bring you very near to the actual state of facts.

12426. Supplemented, I suppose, by taking the opinion of a medical officer in cases of doubt?—Certainly, and any other agency that can be secured for the purpose—the managers, for instance, many of whom are in touch with the parents, particularly in the denominational schools, and who know the conditions of the homes.

12427. I suppose you would consider that a medical inspection of schools is a very valuable addition to the machinery?—Yes. That is done in Brussels.

12428. Have you anything to say on that point here?—Yes, I think I have put the case of Brussels in my *précis*. They have ten medical officers upon their staff, and every child is visited once every ten days.

12429. That is unnecessarily frequent, is it not?—I am stating what goes on in Brussels. I call your attention to the final article in Volume II of the "Special Reports on Educational Subjects," issued by the Board of Education. It gives the best description of the case of Brussels. From it, it will be seen that every board school child is medically examined once every ten days. Its eyes, teeth, ears, and general physical condition are overhauled. If it looks weak and puny they give it doses of cod liver oil, or some suitable tonic—zootrophic tonics, and so on—partly secured by a system of voluntary contribution, partly payment by the parents, and partly supplemented by public rate aid.

12430. Have you any idea what the cost of that is?—No, but I would refer the Commission to this final article in Volume II. of these "Special Reports." It is an extremely interesting article, and gives the whole thing very fully.

12431. The cost of applying such a system to London upon that scale would be very considerable, would it not?—No. The Brussels medical system costs between £500 and £700 a year—this examination by a medical man. That is the total cost.

12432. The remuneration of medical men in Brussels must be very small?—It is only part time; they do not give themselves up to it entirely.

12433. But if every child was to be examined once in every ten days, it would cost more here?—*Pro rata* it would cost more.

12434. It would involve the work of a very large medical staff?—Yes. But I think I am right in saying that the cost in Brussels of this medical examination once in every ten days comes to between £500 and £700 a year.

12435. Do you think yourself that such a frequent examination is necessary?—No.

12436. There are a great many schools where that would be wholly superfluous?—I think in every elementary school every child ought to come under medical supervision, but certainly not once every ten days. Take the case of the eyes; the elementary school teacher is only a layman and if a child says it cannot see what is on the blackboard the invariable practice is to bring the child as near to the blackboard as possible. The chances are that its proper place is at the back of the room. The elementary school teacher cannot be expected to know that.

12437. And the same with regard to hearing?—Yes, the same with regard to hearing. Therefore I think it is most desirable that there should be a medical examination, but certainly not on this scale—not once in ten days.

12438. Will you give the Committee your description of the Paris system?—Yes. I put in the following report forwarded in 1898 to the School Board from the Foreign Office:—"PARIS.—The proposal to provide poor children with a free meal in Paris originated in 1879 with M. Mallet, at whose initiative the Conseil Municipal brought forward a suggestion with this purpose. The matter was warmly taken up, and in February, 1881, the broad lines of a somewhat extended scheme were traced by the Préfet de la Seine, and submitted by him to the Mayors of the Arrondissements. The Préfet's circular letter lays down the following essential principles:—(1) Free meals to children known to be in want whether their parents are paupers (on the books of the Bureaux de Bienfaisance) or not. (2) Establishment of canteens at the various schools under the control of the Mayor and School Fund Committee. (3) No meal to be served except on presentation of a token ('bon') which could be bought, or was given gratuitously to the children. (4.) Secrecy as to whether the 'bon' was bought or received free. This last point was to be secured by making all the tokens of identically the same pattern. On one other point the Préfet lays some stress, i.e., the desirability of keeping the distribution of the free tokens out of the teacher's hands. It will be seen that this scheme goes somewhat beyond the original proposal, inasmuch as it allows parents in comfortable circumstances to give a wholesome hot meal at a very low cost—usually less than fifteen centimes—to their children at the school they attend, and the results show that the convenience has been appreciated. The working of the canteens is left entirely to the mayor and School Fund Committees, and canteens are now open in all the Arrondissements except the VIIIth, where there is probably no pauper population, and they appear to be working very successfully. The expenses are borne in the main by subventions from the municipality, but the School Funds Committees also contribute something in most Arrondissements, and there is a considerable revenue from the sale of tokens. The financial question has, however, for some years past been a source of anxiety to the framers of the municipal budget, and in 1891 the Budget Committee report draws attention to the constant increase of the burden which the school canteens are laying on the taxpayers of Paris; the situation does not seem to have improved subsequently, as the municipal grants, which amounted to 545,900 francs in 1890, had risen in 1897 to 912,885 francs. The following table shows the receipts from the sources above mentioned, the total revenue and the proportion of the municipal grant to the total, and some other figures, for the next six years, 1892–1897

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Year.	Subvention from Municipality.	Subvention from School fund Committees.	Receipts from sale of tokens.	Total Receipts from all sources *
	Frs.	Frs.	Frs.	Frs.
1892	688,600	7,911	318,758	1,095,592
1893	764,900	7,570	305,208	1,165,065
1894	787,660	36,472	329,925	1,233,181
1895	833,625	30,366	331,320	1,237,597
1896	867,501	29,900	338,455	1,277,104
1897	912,885	28,100	351,480	1,347,538

Year.	Proportion of Municipal Subvention to total receipts per cent.	Number of meals distributed.	Proportion of free meals per cent.	Schoo Population
1892	62·89	6,971,340	56·11	Returns Incomplete
1893	65·69	7,257,780	58·98	
1894	63·87	8,167,256	60·75	165,977
1895	67·45	8,256,948	61·77	166,713
1896	67·92	8,440,662	61·36	168,811
1897	67·84	8,229,870	61·96	169,832

* Including balances from previous years.

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The Caisse des E'coles are charitable institutions recognised by law. They derive their funds from the subscriptions, bequests and donations of private individuals, and from grants by the Conseil Municipal and local bodies. The mayor in each Arrondissement and some other functionaries are ex-officio members of the Committee, and the societies do much towards the succesful working of the schools." Then I lay very great stress upon the six proposals made by the Special Committee of the School Board in 1898.

12439. The present medical staff of the London School Board would not be sufficient for the purposes of a general medical inspection?—No. But I think that, with a comparatively small addition, security might be taken that every child would be seen from time to time. Of course in the poorer schools it might be necessary to see them oftener, but with regard to the schools in Hampstead, and so on, I say that a child should be seen once during its career, preferably on entry into the school.

12440. Every child should pass under medical review at its entry into the school?—Yes, and in the better class schools that is all that might be necessary.

12441. (*Dr. Tatham.*) How would it be if, in the place of the system you suggest, it were the rule that every child on admission to school was examined by a medical man to see what his physical condition was, and whether he was or was not in such a bodily condition as to profit by instruction. Would that be a good thing?—It would be most desirable.

12442. I mean as a preliminary matter?—Yes. But in the case of the poorer schools you would want to keep in continuous touch if your record is to be of any value.

12443. Supposing you have this as a preliminary, would not that somewhat modify your ideas with regard to subsequent examinations: do you not think that then it would be possible to utilise the school teachers to a much larger extent, given that the children start with a fair bill of health, if I may use the term?—Certainly.

12444. Do you not think that you might then do with a smaller number of medical examinations?—In what I may call a well-placed elementary school, certainly; having got a preliminary statement of a child's condition you might very well then, unless something extraordinary arises, leave it to the teacher. But in the poorer schools, the slum schools, that would not be sufficient. You want to keep in continuous touch with them.

12445. I may tell you frankly that, in putting this question, I have an ulterior object: I think that in the interests of the public health generally, and certainly of children in particular, it is desirable that we should get something approaching a register of sickness?—Yes, I quite agree.

12446. And it is with that object that I am putting the question?—I agree with you entirely.

12447-8. You know at present we have absolutely nothing in England corresponding to that?—I know that.

12449. With regard to our statistics of health, we have to rely absolutely on the statistics of mortality and, as you know, they are very misleading?—Yes.

12450. With regard to children, do you think it is practicable to arrive at anything like an approximate estimate of the number who are underfed—I do not mean actually starved, but insufficiently fed?—Yes. You may safely say that in all the great towns there are always from 10 to 15 per cent., and in the East End of London a larger proportion, of children who are always underfed, and that the proportion increases in hard weather. I accept your term "underfed"—I do not refer to starving children.

12451. No—insufficiently fed?—Yes. The proportion, of course, increases in severe weather, when certain trades are unemployed and when there is a good deal of distress.

12452. You are aware that the Rev. Mr. Rees, of Salford, has given evidence before this Committee upon that point?—No, I was not aware of that.

12453. (*Chairman.*) I think he said that in Salford he did not think there were more than 2 per cent. of children underfed?—Then you come to a definition of terms.

12454. Yours and his may differ?—Yes. I consider a child to be underfed if he is not properly fed. Taking again, my own experience of daily supervision of, say, 300 boys, I know that fifty of those boys, at any rate—not always the same fifty, but at least fifty every day—got nothing except a piece of bread and dripping, or a piece of bread and onion or a raw turnip. From my point of view that child is improperly fed. That is what I meant when I said between 10 and 15 per cent.

12455. (*Dr. Tatham.*) Do you think it would be quite cruel to force that child to pursue the usual school course?—Obviously.

12456. (*Mr. Lindsell.*) Is it your plan to feed the children in every school, or to select certain areas and certain schools?—You might very well begin by certain areas in the poorer parts.

12457. You would leave that to the school authority?—The local authority.

12458. They would proclaim an area, so to speak?—Yes. If you had a centre, a dining hall, anywhere nea any elementary schools, there is no reason, if the parent cares to utilise the mid-day dinner for his child and pay for it, why the child should not go to it. But I would begin with the poorer parts.

12459. You would establish these food centres in the poorer parts?—Yes.

12460. And then you would make no distinction among the children at all; every child who liked to come could do so, provided he complied with the conditions, and his parent supplied him with the money?—Or the ticket.

12461. He would be entitled to it without any inquiry?—So far as the child is concerned, yes; that is most important. I think nothing would be more objectionable than to let one set of children have tickets which are obviously secured for nothing, and another set to have tickets which were paid for. The children are very acute in making distinctions and differentiations, and discriminating between each other.

12462. Every parent would get a ticket; you would not inquire into the circumstances of the parent till afterwards?—I do not think that. On application for a ticket at the municipal office, I think there should be at once some question as to whether he could pay.

12463. There would be some record or some information at the office where the ticket was applied for?—If I came and said, as a parent, "I want a book of coupons," the question would be, "Are you going to pay?" If I said I could not pay, I think that point ought to be looked into.

12464. Supposing the parent said that he could pay?—Then he pays and gets his ticket.

12465. You would allow that?—Certainly.

12466. His payment should cover the whole of the cost?—Yes.

12467. It would cover the whole cost, and you would supply the dinner if the parent asked for the coupons and paid for them?—Certainly. It is an essential part of the system that those who can pay and want to pay should do so.

12468. (*Chairman.*) Do you not think that it would be fair, if the parents availed themselves for their own convenience of this system, that they should pay a little more than cost price, with a view to the surplus helping to meet the cost of the meals which it is necessary to provide for those who could not pay?—Yes, if used as a matter of convenience, I think that should be so.

12469. It would save them a great deal of trouble, and that ought to be computed in what they pay?—Certainly

12470. (*Colonel Onslow.*) In the information you have given us with regard to Paris it would appear that the proportion of municipal subventions and the proportion of free meals represents roughly a difference of about 6 per cent.?—That is so.

12471. Excepting in one year where there was a larger amount from the subvention from school funds?—Yes.

12472. It would appear that 6 per cent. really was the working cost?—Probably that is the case.

12473. Above what is received?—Yes.

12474. Therefore, as the Chairman has said, if you were to make the people who could pay pay a little more it would reduce that?—Yes; probably that 6 per cent. is the working cost, and the suggestion made by the Chairman would probably wipe that out altogether. I think so.

12475. (*Mr. Lindsell.*) Then with regard to the effect it would have upon voluntary effort, do you think, if all the machinery which you now suggest were provided by the school authority, that is to say the whole of the means of supplying the food and so on, that the actual cost of the meals for those who could not afford to pay would be covered by voluntary effort?—It might in the first instance, but it would be quite as well frankly to admit that directly you come in with a public subvention to make up the deficiency, the tendency is for voluntary effort to decrease.

12476. The probability would be that voluntary effort would not cover the difference between the cost price as shown by the takings, and the deficit which would represent the cost of the meals to those who could not pay?—No, I do not suppose that for a moment that it would I think there would be a substantial charge upon the municipality. Personally, I am prepared to face that.

12477. Subject, of course, to increased powers of dealing with a parent who could and would not pay?—Certainly. That is a very essential part of the scheme.

12478. You know that in the days of school fees attendance at school without a fee was not held to be an attendance which exempted a parent from prosecution?—I am very doubtful whether that was ever utilised for the purposes of prosecution.

12479. There was a case of the London School Board where a case was tried, and the Court decided in favour of the Board. It was the case of the *London School Board* v. *Wood*. It was decided that if a child is sent to the school without the school fees, when those are payable, the parent has not caused his child to attend the school within the meaning of the bye-laws. Would it not be possible to provide that a parent who did not cause his child to attend school in accordance with the bye-laws, if he sent him in such a state as not to be fit to receive instruction, should be in the same position?—And then the parent is to be prosecuted for not sending his child to school because he has not fed him? That is fantastic!

12480. I mean that something on those lines might be adopted for getting at the parents?—I think not.

12481. How would you get at the parents?—I should make due inquiry as to what the circumstances of the parent were.

12482. What would the punishment be?—First of all we should endeavour to recover the cost by the ordinary means in the same way as we do now in regard to fines for non-attendance. I suppose there would be a distress warrant if it were necessary, and then, I suppose, failing all that, the parent would go to gaol.

12483. We should have to legislate in some way and make the cost of the food given to the child recoverable?—Yes; we ought to do that. Where the Board's officers report that the underfed condition of any child is due to the culpable neglect of the parents, whether by reason of drunkenness or other gross misconduct, the Board should have the power and the duty of prosecuting the parent for cruelty.

12484. You would bring it in rather under the Prevention of Cruelty to Children Act?—Perhaps an extension of that Act might meet the case.

12485. (*Chairman.*) It is an offence under that Act now, is it not?—Yes; but I should think there would be no prosecution exactly on those lines. You might proceed to recover the cost as you would recover a fine for non-attendance at the present time. I do not know which course would be the better.

12486. (*Mr. Lindsell.*) I know the idea of making it a case of non-attendance, although the child is sent to school, because the child is not fed, may be fantastic, yet something on those lines might be adopted, punishing the parent for neglecting his duties towards his school-going child?—You have two courses open. You can extend the Prevention of Cruelty Act, and punish the parent because the child is not sent to school properly fed, or you can say: "This meal cost so much, you can pay us and you will not, and we will make you," and then proceed against him in the ordinary course by distress warrant, and ultimately by imprisonment, I suppose.

12487. You would have no course of action against a parent without making it an offence?—Both of these proposals of proceeding against the parent would clearly involve additional legislation.

12488. And that might be done either by an extension of the Prevention of Cruelty to Children Act, or possibly under the Education Act?—It would have to be an extension of it to recover the cost of the food in the same way as you now recover a fine for non-attendance at school.

12489. And if the parent habitually and without reasonable cause still continued to refuse to provide the child with food you would bring in the Industrial Schools Act?—Yes. There you do not want any further legislation. In the case of habitual neglect I should think the existing law would be sufficient.

12490. It would involve putting a child in with a rather different class of children?—You mean as regards the nature of the neglect?

12491. I mean that the ordinary child who is sent to an Industrial School probably comes of criminal parents and has himself been brought up in criminal surroundings. Would not it be rather hard to send a child to an Industrial School who does not belong to that class?—Yes. You would only use the Industrial Schools Act, I think, in extreme cases; and indeed the existence of the machinery such as I have suggested to meet the case of parents who do not feed their children, and the penalties which follow, would reduce the number of cases you would have to take under the Industrial Schools Act.

12492. Who would be the judge when the parent applied at the central office? The information in the possession of the officials who gave the coupons would be derived, I suppose, from the teachers and the attendance officers of the schools in the district?—Yes; and of course, so far as England and Wales are concerned, they are now municipal officers.

12493. Exactly?—It is in the hands of the municipality.

12494. And probably would not involve any very large increase of officials?—Oh, no, I think not.

12495. That seems to be the general impression. But, of course, the present medical position is slightly different, and that would involve an increase of staff?—Yes; that would involve an increase in the medical staff, clearly. There are a great many educational authorities—the great bulk I should think—who do not utilise the services of a medical officer at all in their ordinary routine.

12496. A few of the large ones do?—Yes, but outside those the thing is unknown. It is only a few of the large towns like Liverpool, Manchester, and Leeds, who utilise their services.

12497. But now that the authorities are one in many cases—the sanitary and the school authority—simply augmenting the staff of the medical officer of health might do it?—Yes; without prejudice to my view as to the best view of constituting the local authority the authority, that is an advantage.

12498. (*Mr. Legge.*) Reverting to the question of admitting children to industrial schools: you are aware that there are two classes of those schools in which there are not supposed to be any criminals' children—the truant schools, and the day industrial schools?—Yes.

12499. The machinery you suggest would enable children to be dealt with in that way?—They might go to the truant school.

12500. Or the day industrial school?—Yes.

12501. I must revert also to the question of the recovery of money from the parents; that is a point on which the public will worry a great deal?—They will lay great stress upon that, and quite properly.

12502. I think it is a pity that in the six points which were set out in that resolution of the members of the Committee that point was not made a little clearer?—We only deal with it in the sixth.

12503. I suggest that you meant to have put it in the fifth, where you say that tickets could be previously

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obtained, and the parents should pay for them unless they are reported by the Board's officers to be unable by misfortune to find the money?—Yes.

12504. And I suggest that, as regards that, rather than the procedure by distress warrant, and so on, which I have been fighting to get clear of for years, we should adopt the procedure under the Prevention of Cruelty to Children Act, and under the Youthful Offenders' Act, namely, the Bastardy Procedure, which is very summary?—Yes. I mentioned the procedure by distress warrant, and so on, because that is the procedure now in connection with default in respect of attendance at school. But I have also mentioned as an alternative, and perhaps a better alternative, the Prevention of Cruelty to Children Act's procedure.

12505. I have that now in force as regards the recovery of moneys under the Industrial Schools Act?—Yes.

12506. And it is having a very marked effect?—That experience would be useful if any new scheme of this sort were adopted.

12507. Though I am bound to say the proportion of parents who cheerfully go to prison instead of paying seems to be going up very rapidly. I know you are very well acquainted with the day industrial school system, and I should like to ask you whether you do not think it would be a good extension of your scheme if, besides the introduction into a certain number of schools of the advantages for giving children food, you also secured for a certain class of the population the other advantages of a day industrial school, that is to say, the special attention to manual training, so as to fit them for what is more likely to be their future life than any form of commerce?—Surely, the ordinary public elementary school has a great deal of manual training? Do you mean industrial training?

12508. Yes, industrial training?—Yes; I think that would be desirable. I understand you suggest that the day industrial school system might be very well widened in its operation?

12509. Extended?—Yes. So as to take up a very much larger number of children in the poorer parts, so that they may thereby get the advantage of the industrial training at the industrial schools?

12510. Yes?—I think that is desirable.

12511. I do not mean that such schools need necessarily be certified by the Home Office.—I understand that.

12512. In fact, that the day school curriculum should be extended so as to embrace such a variety of school as that?—Yes. Are you now making a suggestion in respect to the ordinary day school curriculum, or merely proposing that a larger number should come under the ægis of the day industrial school system?

12513. I mean that a certain number of schools should be established in such districts as Lambeth, which you quoted, and the curriculum in those schools should be on the lines of a day industrial school.—That is a rather serious proposition.

12514. (*Chairman.*) Do you mean with a view to dealing with the feeding problem?

12515. (*Mr. Legge.*) No.

12516. (*Chairman.*) It is in connection with that?

12517. (*Mr. Legge.*) We have had a good deal of evidence, particularly from Leeds, as to the inadequacy of our educational elementary school system to fit a large number of children for the part they have to play in life.—I think I follow exactly what you are endeavouring to put to me—that it would be well to extend the principle of the day industrial school curriculum to a considerable number of schools in the poorer parts, so that the instruction in those ordinary day schools might partake more largely than it does now of an industrial character, of a practical character?

12518. Yes.—That is a very serious proposition. Because a child happens to be born in a very poor part I do not think you are entitled to rob him of the foundation—which will not be very deep in any case, because he will have to leave school very early—of a really thorough general education. I think you do him the greatest wrong if you do that. If you are going to introduce largely the system of a day industrial school—making brushes, carpentry, boot-making, and so on—you are to that extent going to act detrimentally in regard to the general instruction of the school, because you are going to utilise the time which is now applied to general education; that is obvious. I should hesitate very seriously before I committed any child, because of the fact that it was attending in a very poor school in a poor locality, to such an education as would increase the difficulties in the way of his improvement and of advancing himself, in such a way as he probably would do if he had industry, and so on, upon the foundation of a thoroughly general education, apart from mere industrialism. There is a great deal to be said for the proposition you put to me; the elementary school work is not quite practical enough, and does not lead up sufficiently to the daily life of the people in the poorer parts, but I should shrink from restricting the curriculum in such a way as would increase the difficulties of the upward and onward movement of the poor child simply because he was born in a poor locality.

12519. (*Chairman.*) Still, the interests of a child might be watched and safeguarded if he showed signs of greater intelligence?—You mean by a system of scholarships and exhibitions?

12520. Or by removing him to a school of a better type?—Yes. That does not exist now, however, to the extent that it ought to.

12521. (*Mr. Lindsell.*) Then there is the point that a child given the facilities of a general intellectual education would probably pick up the other things far more readily in later life on account of the development that he had in an earlier stage?—If a child has a foundation of what I may call a more or less philosophic general education on a very small scale, it is very easy then to specialise.

12522. (*Mr. Legge.*) I am going to press you on this point. I am prepared to deny that a child at Drury Lane is under any disability such as you suggest, as compared with a child in the ordinary day school in a poor district. I think if you test a Drury Lane child, and if you test the school as a whole, by any method you please, you will find that their philosophic or literary education of three hours a day is just as high in that poor school as you will find in any of the other schools. Of course you have a much more regular attendance for one thing?—Yes.

12523. You appreciate the value of that?—Yes.

12524. And you have the extremely close touch which is got in such a school between the teacher and the child?—That is so. Of course that is a very special class of school. I dare say that is so. Heaven forbid that I should say anything against Drury Lane, or any similar school. But I must be allowed to insist upon the necessity, if possible, of giving the poorest child the foundation of a general education.

12525. But if it is found that he is not sacrificed, but is rather advanced, by having his other faculties also developed, you would not object to it?—Clearly not. I should encourage it if your premise is correct.

12526. Have you considered the question of Children's Courts, special Courts for dealing with educational cases?—Yes.

12527. Are you in favour of such a system?—We have constantly advocated that. You mean for non-attendance, particularly.

12528. Yes, and for trying Industrial School cases?—Yes. The London School Board and most of the educational authorities in the country have long pointed out the undesirability of associating parents in such cases with the ordinary cases which come up for Police Court hearing.

12529. (*Mr. Lindsell.*) They are dealt with in London now separately from the stipendiary magistrates?—Yes; they are dealt with by the justices, but they are not dealt with in separate Courts. There are no special Courts. All my sympathies go in the direction of special Courts for those cases.

12530. (*Mr. Legge.*) You have given the reason which has moved various educational authorities to advocate such a course, but have you ever thought of this, which has come forcibly before me, that, as a matter of fact, a child going into a Police Court under present conditions—a child in a certain class of society—comes out a hero?—Yes.

12531. And that having a special Court would remove this halo from his forehead?—I daresay as time goes on the same might be true of that special Court in regard to that child: he also might come out with a halo in time. But still I am very warmly in sympathy with the proposal that they should not be associated with the ordinary procedure of the Police Courts for these purposes.

12532. Has the recent dispute in Leeds between the stipendiary magistrate and the Education Committee come to your notice?—No.

12533. That is an illustration of the difficulty which might arise in trying to recover money from parents for food supplied to their children by summary process?—I am not familiar with it.

12534. It is a dispute as to whether the Education Committee in recovering money from the parents for the support of their children in Day Industrial Schools have not been acting cruelly to the parents?—I am not familiar with it.

12535. We have had a suggestion before us of an anthropometrical census, and some witnesses have advocated the use of none but skilled operators; others have thought that as regards school children the teacher in every school could qualify himself for the purpose of taking the simple measurements required, just as in factories the certifying surgeon might: what do you think of that?—If you are going to take an anthropometrical census it should be done very scientifically and very thoroughly, otherwise it is practically useless.

12536. You know the particulars which are required—height, weight, and so on?—I can well imagine what they would be. I daresay the teachers could qualify—in fact, I am sure they could—but I think, on the whole, if I were going in for a scientific set of statistics—and I think it is a great pity that we have not had them all along since 1870, because we should then be able to make some interesting comparisons—I should see to it that that was done in the very best way by persons who are specialists in the making and the taking of such a record.

12537. (*Chairman.*) Do you think that a way of dealing with these underfed children may be based upon the massing of them in special schools?—Would that be a method of differentiation which would work satisfactorily?—The schools would have to be day industrial schools in their character; you would have to gather them over considerable areas.

12538. I suppose those children are more or less congregated in certain parts of London?—Yes, great masses of them are. But, of course, there are cases spread all over the place. I should be very glad to get anything done, but I think on the whole the system I suggest of associating a dining-hall with groups of schools, beginning with the poorer districts, would be the better.

12539. There is nothing inconsistent in a coincidence of the two systems?—No, that is so.

12540. As each might be found to work better in certain districts?—Yes, possibly.

12541. Do you think it matters much when an underfed child gets its meal?—I would like him to get a breakfast. If you are only going to provide him with a meal at midday, the morning is one of torture to him if he is absolutely hungry, and I would like him to get a breakfast in extreme cases.

12542. Do you know the name of Dr. Robert Hutchison, at all?—No.

12543. He is a well-known authority on the subject, and he was nominated to give evidence here by the Royal College of Physicians. He gave the Committee to understand that a child ought to have a certain amount of nourishment during the twenty-four hours, and that it does not very much matter how you divide it up, except that it is more important to have a meal before physical exercise than before mental exercise, and that, therefore, the mid-day dinner is more important than breakfast?—Of course a mid-day dinner is more practicable, but there are lots of children coming to the poor elementary schools with regard to whom I should feel easier in my own mind if they got a breakfast as well as a dinner.

Dr. Macnamara.

12544. A basin of porridge?—Yes.

12545. That is a most excellent food from the point of view of breakfast?—Yes.

12546. Have you formed any opinion as to what the cost of this meal would be, and what its character should be, in order to get the greatest possible return for that cost?—Judging by the Parisian example, it would cost £120,000 in London to carry that system out.

12547. What would you give for that amount?—Lentil soup, for instance, and jam pudding.

12548. Soup and bread, and cake occasionally?—I do not know about cake. I should invariably give them soup of some sort, and pudding.

12549. Do you contemplate in cases of real destitution that the Poor Law administration should be brought into play at all?—More than it is at present? Well, of course, everybody knows that the Poor Law administration is not very favourably viewed by the people themselves, and my feeding system would break down at once, I am sure, if the Poor Law had much to do with it.

12550 The system you advocate?—Yes. It would be very much to the children's detriment if it were associated in any way with the Poor Law administration.

12551. Would it not be a means of applying pressure to the parents if they disliked the operation of the Poor Law?—Yes, I daresay it would.

12552. You admit that?—Yes, I do.

12553. It is not altogether to be ignored as a means of pressure?—No, but if this were under the auspices of the Poor Law in any way you might as well give it up at once. The children would then suffer because of the parents' dislike of the system.

12554. I mean that the school authority should apply to the Poor Law authority for payment in those extreme cases where it was necessary?—You might deal with it in that way, but I should not prefer that myself.

12555. (*Mr. Legge.*) You know you have the power under the London School Board to do that in the industrial schools now?—Yes.

12556. (*Chairman.*) They do not do it.

12557. (*Mr. Legge.*) It is not done in London.

12558. (*Witness.*) There is good reason for it. It is held to be objectionable procedure, so far as the parents are concerned. We do not do it.

12559. (*Mr. Legge.*) It is done in certain parts of the country. The amounts collected on behalf of the parents have been dwindling.

12560. (*Chairman.*) Do you think it is right and proper that the susceptibilities of a parent who neglects his duty should be dealt with so tenderly by the community?—No. But when we have a variety of courses open to us I suggest that, in the interests of the children whom we have before us, it would be desirable to take the line of least resistance. There are various ways of dealing with a parent, and if he can be dealt with without at the very outset rendering him in a defiant mood, he should. I would avoid the Poor Law system. I think it is desirable that you should do so.

12561. You propose to invoke the criminal law in the last resort?—Yes, in the case of gross neglect of children, and as a last resource.

Friday, 29th April 1904.

TWENTY-THIRD DAY.

PRESENT.

Mr. ALMERIC W. FITZ ROY (*in the Chair*).

Colonel G. M. FOX.
Mr. J. G. LEGGE.
Mr. H. M. LINDSELL.
Colonel GEORGE T. ONSLOW.
Mr. JOHN STRUTHERS
Dr. J. F. W. TATHAM.

Mr. ERNEST POOLEY (*Secretary*).

Sir LAMBERT H. ORMSBY, M.D., called; and Examined.

Sir L. Ormsby.

12562. (*Chairman.*) You are President of the Royal College of Surgeons in Ireland, senior surgeon of the Meath Hospital and County Dublin Infirmary, senior surgeon of the National Children's Hospital, Dublin, and Chairman of the Association for the Housing of the Very Poor, Dublin?—Yes.

12563. You have formed a bad opinion of the condition of the lower strata of society to be found in large towns, have you not?—I have.

12564. You might enumerate here what you hold to be the conditions of their life which are so depressing?—In the lower strata of society in large towns I consider their surroundings and domestic home life are in a very depressing condition, there is a total neglect of every hygienic and sanitary rule of life, and those conditions I say are perhaps made up of the insanitary dwellings, the insufficient and improper food, insufficient clothing, and breathing and re-breathing from week's end to week's end the same polluted and contaminated air; and then they have no means of recreation or athletic exercises to throw off those effects.

12565. You sum up there pretty much the gist of most of the evidence we have had on the subject; would you say those conditions are worse in Dublin?—Yes, I would say they are worse.

12566. Is that owing to municipal neglect?—I think the lower orders of the Irish, as a rule, are much poorer than the lower orders of the ordinary English inhabitants of the slum population in the towns. I have been in Birmingham, and I have gone through the slums at the suggestion of a clergyman there who wrote a little book on "The Tragedies of Life." I was very interested in the subject, because it appeared to me to be very much in the same condition which exists in Dublin. I went round, and I saw a good deal that was nearly as bad as I find exists in Dublin.

12567. Is that lately?—About six months ago.

12568. I suppose the temperament of the Irish tends to make them very careless and thriftless, does it not?—Very careless and thriftless, that is their character.

12569. And their standards of comfort and decency are not particularly high?—No, they do not seem to care. They are very careless about life, they do not seem to realise their position.

12570. They take things very easily?—They take things as they come.

12571. Except politics?—Yes; they are rather inclined to politics and think a great deal about such things.

12572. You think that these conditions that you describe are particularly detrimental to infant life?—I do.

12573. Will you kindly tell us what you think on that point?—I am attached to a large Children's Hospital, and in the out-patient department I take my turn of duty three days a week. I see a large number of women and children, and infants; frequently a poor slattern mother brings her infant and it looks in a dying state, and then probably two or three days afterwards she comes to me and says that the child died and wants a certificate of death. They have a habit in Dublin of insuring the infants, and before they can get the insurance money they must have a doctor's certificate of death. A very amusing thing, though it has nothing to do with the case, occurred in Dublin—I daresay you saw it in the newspapers—where a woman was supposed to be dead and was waked. Her daughter-in-law went to the doctor, who had seen this old woman some time before, and said the patient was dead. In the medical certificate there is a saving clause for a medical man—"As I am informed, So-and-so died on such and such a date." Her daughter-in law, having received the death certificate, went off and got the insurance money, and when the old woman did not get her share of it she peached about it. It all came out she was not dead at all.

12574. And the medical certificate had been granted?—Yes. The poor doctor has been chaffed most frightfully about it since.

12575. Does he not deserve something stronger than chaff?—He says he only stated in the certificate "As I am informed." Many of these mothers come to me and say that their baby died. How am I to know whether the baby died or not? I am unable to visit the cases.

12576. Then I should refuse the certificate. Would not that meet the case?—If you refuse the certificate they will not get any money to bury the child, and they have no money, so the corpse would remain unburied.

12577. Then the authorities must bury it. Do not you think by granting certificates under those circumstances you encourage the abuse of infant insurance?—Yes, but I think it is very seldom such a case as that occurs. It was the late Sir Dominic Corrigan who got the clause inserted in the medical registration certificate "As I am informed."

12578. It seems to lend itself to abuse?—But it would be a very great hardship on some people if the doctor refused a medical certificate.

12579. But in your opinion this infant insurance practice is not a good one?—No, I think it is very improper.

12580. You think it is liable to abuse?—Yes.

12581. The only security which apparently attaches to this insurance is the medical certificate, and if it is granted in this loose way you do aggravate the abuses of the insurance system?—Yes, but the child is nearly always dead.

12582. It is the cause of death they want to know?—I think by insuring these they run a very big risk always.

12583. Which they are prepared to take?—Yes.

12584. All they want to know is the mere fact that the child is dead?—Yes.

12585. They do not care whether it has been done to death, or has died of neglect?—That is the risk they run—the death of the child, no matter by what means, insures the money being granted.

12586. It is part of the sporting instinct which characterises the Irish race. Would you like to see this practice of child insurance checked?—Yes. I think in all cases the children should be examined medically.

12587. Do you mean before insurance?—Yes, before

insurance I think they should be medically examined. In these low, cheap insurances they would not pay a medical man to examine them, and they just fill up a form and pay the necessary fee without medical examination.

12588. Do they as a rule insure them for a larger sum than is required for burying ?—I think it is generally about £3 or £4.

12589. They can bury a child for less than that ?—Yes, but they want a drink, you know, and the expenses of a wake.

12590. Would you be disposed to say that before the death of a child of tender years is registered at all a medical certificate should be necessary ?—Yes, and it is always now necessary.

12591. You think that would be a safeguard ?—I think it would, and I think it would stop a great many children being insured at all. I know there are very few children that I would insure from what I know of the risks they run and the care they get.

12592. In regard to the condition of Dublin, which, I presume, you have in your mind when you say what you do on the conditions of big towns, has not the municipality done anything towards improving the state of things ?—They have done a great deal towards improving the houses. At the present moment there are four large housing schemes, some of which are completed.

12593. Improvement schemes ?—Yes. The first in order of establishment was the Dublin Artisans' Dwellings. They have built an enormous number of houses, and very good sanitary houses. These were built particularly for the artisan class. Then the scheme of Lord Iveagh—the Guinness' Trust—which caters for a higher social scale than the ordinary artisan. Then we have the Municipal Body of the Dublin Corporation, who have cleared large areas in Dublin at an enormous cost. I will give you an example of that. The Bride Street area (which is very close to where I brought His Majesty the King round to see these dwellings) was taken by them—three acres of ground. To merely clear the ground it cost £36,000; that was before they put a stone or a brick upon it. The fourth is the one which I have the honour to be chairman of, The Association for the Housing of the Very Poor. The word "very" was coined by Sir Charles Cameron. (*A document was handed to the Chairman.*)

12594. I think he said something on the subject ?—Yes, he said to me that those three schemes, the Guinness' Trust, the Dublin Artisans' Dwellings Company, and the Dublin Corporation's scheme, only tapped a certain class of the lower orders of social strata. The very poor could not get into these rooms because they were all too high rented. Then, The Association for the Housing of the Very Poor started in the year 1897, and our object was to give dwellings at 1s. 6d. a week. We presume that the workers, who are the people who would inhabit those houses, would only be able to earn from 10s. to 12s. a week—people like sandwich men who carry notices about, hawkers, and casual labourers.

12595. Casual labourers ?—Yes, casual labourers. We thought that 1s. 6d. a week would be a very small sum. We first started by buying a property containing a number of houses, and we paid £2,000 for it. Then we had to equip it for all sanitary requirements, and it cost us £2,000 more. Then we came to the conclusion that we would not buy already built property, but we would build blocks *de novo*. This was a case in point. We paid £2,000 for the houses, and to put them in proper sanitary order, in order to suit the Public Health requirements, it cost us £2,000 more. But notwithstanding that, we are able to pay on that small property 3 per cent. We have endeavoured in that scheme to mix up philanthropy on strict business principles. But to show you how municipalities are really fleeced as regards acquiring ground in the city, the corporation for the same amount of acreage paid £36,000 for clearing the ground, whereas I, as an individual, was able to get the same amount of acreage for £2,000. Of course I need hardly tell you, we all know that when a Municipal body makes an offer the price goes up, but I purchased it for the amount I have named. I do not know whether the people knew what I wanted it for. They probably thought I was purchasing it as an investment. I quietly acquired it, and then handed it over to the company. Of course in the deed it was put down in the name of the Chairman of The Housing of the Very Poor. You will see we are introducing ideas in this scheme which, in Dublin at any rate, has never been introduced before. One fact is that we are not going to allow the people to bring their beds into the rooms. We are going to have bed recesses, which we have provided, and we are going to have hooks in the wall, and provide wire-woven beds for them, which will be our property. Our caretaker, as the tenant goes in or goes out, will have them painted and properly attended to. There is another thing which we find, namely, that the lavatories and w.c.'s are always going out of order in the three other building undertakings mentioned, when they are common to three or four families. Children will put things into the pan, and so forth. When the caretaker comes round it is impossible to say who did it; they never can find out. Now, in our scheme we are going to have a lavatory and w.c. all self-contained—for one family only, who will be responsible for its safe keeping.

Sir L. Ormsby.

12596. For each tenement ?—For each tenement. Of course, naturally, it is a little more expensive, but still it will give them increased facilities. I do not know whether you know the inner life of the Irish people, but they are very peculiar, and even careless. At the women and children's dispensary I find that constipation is the bane of these people.

12597. From tea ?—No, from carelessness. They will not go up to the w.c. when they meet anybody on the stairs. That is not peculiar to women. We find that is so, and I had a chat with the architect about it.

12598. Do you take any steps to prevent overcrowding in these tenements when you once let them to a family ?—Yes, we do our best. The Dublin Corporation—and I believe it is the case with other municipal bodies also—send inspectors round at night to make midnight inspections, to see how many are in each room. We let a room to a man and his wife, and he probably will let it off again. I believe overcrowding does occur to an enormous extent.

12599. Cannot your caretaker report ?—Yes, he reports whenever he finds it out, and the people get notice to leave if they continue to transgress.

12600. From you ?—Yes, from us.

12601. I suppose the Dublin Corporation takes some steps to prevent overcrowding ?—They do. I know that for a fact. The assistant gardener of Merrion Square told me that he did not understand why the inspector came in the middle of the night. But the inspector wanted to see how many people he had in one room. They do pay surprise visits in the middle of the night at irregular times, in order to ascertain that. That is the only way it can be done.

12602. A great deal is being done to improve the conditions even in Dublin ?—Yes, a great deal has been done.

12603. You may expect to reap the advantage in the condition of health of the people in a few years ?—Yes. Sir Charles Cameron has closed 3,000 houses in the last ten years as unfit for human habitation.

12604. What has taken their place ? Have the areas been cleared ?—A good many houses are still standing, although uninhabited, because the corporation have nearly exhausted their borrowing powers. I suppose when they are able to borrow more money further housing schemes will go on. But I am very strong indeed on the subject of housing the poor as a means of improving the general condition.

12605. From your experience in connection with this company you believe it can be done upon lines which are remunerative ?—I do believe so if it is properly worked. We have in our Association paid 3 per cent. ever since it was started.

12606. There is no reason why it should be a burden upon the community if the town council undertakes it ?—None whatever. But I do believe that private enterprise is more likley to be remunerative than municipal enterprise, and I think that has been proved elsewhere.

12607. It is more vigilant, I suppose ?—Yes, it is more vigilant, and it is more individual in the matter. For instance, we meet monthly, and we have our reports. Naturally, everybody who is on the directorate are enthusiasts in this housing scheme, whereas with sub-committees of municipal bodies they attend irregularly, and when they do attend they are very anxious to get away, and they depend on their secretary, or whoever he

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is, to give them reports. But we are really enthusiastic about the matter, and look into every detail

12608. You tap the sentiment of philanthropy?—Yes we think we can run it on business lines and make it pay.

12609. Do you think the effect of these movements is at all to raise the standard of effort among the private owners?—The private owners naturally do not look at us with favour, because they think we are taking a means of livelihood away from them—that is, house-jobbers.

12610. Does it not lead to some competition on their part to make the conditions of their houses a little better?—The Public Health Department demand now that they shall supply all sanitary requirements for the houses, but it is hard to carry it out fully, for most of the tenement houses in Dublin now occupied were houses which were occupied by well to do people, and by one family only. The requirements were sufficient for one family, of course, but when you put six or seven families into the house the sanitary requirements naturally would be deplorably deficient. As a mere matter of sanitary arrangements you have them, because they have to keep the law, but they are very indifferent. I have frequently looked at the back yards of the houses, and seen the sanitary conditions. They were not fit for pigs, although they carried out the law. They were there, but of a very indifferent character.

12611. They were of imperfect construction?—Yes. And filthy in condition. Naturally, it would be impossible to pay for inspection sufficient for all these.

12612. Would not occasional prosecutions answer in raising the standard of cleanliness to some extent?—They do prosecute. I am sorry to say, as an Irishman, that I think some of my countrymen are innately dirty.

12613. You find a great many people in England so too?—I do not say that the upper Irish classes are, but the lower orders are. I have noticed very frequently in examining the people that their outer clothing is very good. But when I have examined their under clothing I have been shocked.

12614. It is often the case, is it not, that when they have good clothing they prefer to wear bad?—No, I think the Irish like to wear the best they have.

12615. We understand there is a great deal of pawning of their clothing?—Yes, there is a great deal of that.

12616. They anticipate their wages?—All their clothing is, generally speaking, in the pawnshop from Monday morning till Saturday afternoon. Their weekly money is paid on Saturday, and then the things are taken for the Sunday's amusement; and then on Monday morning in they go, as regularly as clockwork.

12617. Perhaps it tends to the clothes being kept clean and tidy, which may be better than if they were kept in their own houses?—Yes. They only have one day to wear them. That is the usual thing. If anybody happens to watch a pawnshop on Saturday he will see droves going in to get their clothes out, and on Monday they go in again.

12618. The people are always in advance of their resources, in fact?—Yes, they are. That is their thriftlessness. It is a very curious thing. I gave a lecture not long ago to the Trades Council—a kind of club for the people, and I got statistics of what was done with the money of the labourer who only got £1 a week, and the artisan who got 6s. a day, nearly £2 a week. I found that the family of the labourer at £1 a week got more advantages out of that £1 a week than the artisan's wife and children got out of the £2 a week. The labourer and his wife said they had no money for drink, whereas the artisans spent a great deal of money on drink.

12619. And that, of course, depresses all the conditions of their life?—Yes, the labourer at £1 a week and his family live better than an artisan as regards food and clothing.

12620. In Ireland you have not to deal with the same tendency of the aggregation of the population in great towns which we have in this country, I mean the great towns in Ireland are few and far between?—No, not to the same extent, but there is a great deal of migration from the country parts. There is always a great deal of emigration, which I mention later on.

12621. But is there much drifting of peasantry into the towns?—There is, because they come to look for work. They do come into the cities from the country.

12622. Has not the depletion of the rural population by emigration left more work for those who remain behind?—No, I think they are not able to work. They are the weaklings who are left behind. It struck me very much not long ago when I was in the South of France, to see every inch of the land cultivated, and then to go through miles and miles of Ireland and see not a particle of cultivation present.

12623. Would it repay cultivation?—Indeed, I think it would. Of course Sir Horace Plunket and the Board of Agriculture are doing wonders, and I believe will do more for encouraging the industrial and agricultural resources of the country.

12624. That I understand to be the case?—I believe so. There are certain teachers now in every department, teachers as regards agriculture, dairy work, poultry, bees and so on.

12625. Should you say that the Irish peasantry are responding to the invitation?—They are to some extent, but not nearly to the extent that I assume they will later on.

12626. It will be progressive?—An Irishman is a very curious person. When anything comes from the Government he begins to think what it is for, and he is not sure exactly what this great movement means. Of course the lower orders of the Irish are principally guided by their clerical advisers, and if their clerical advisers encourage them to take advantage of these opportunities they will do so.

12627. But clerical opinion in Ireland is in favour of Sir Horace Plunket's scheme. The Bishop of Ross, who gave evidence here, spoke as enthusiastically as you do about it?—Yes. I think the more they encourage the people to adopt them the more likely it will be to be a success.

12628. You think that some of the degeneration in the rural districts is due to changes of food?—Yes. I was recently standing at Westland Row Station, Dublin, and I saw a policeman who was six feet seven in height. I said "Where did you come from?" He said, "I came from County Clare." I said, "What did they feed you on?" "Well," he said, "I took a bit of anything that was going." I said, "I want you to be particular." He said, "I fed upon potatoes and bacon, and I had a fair amount of milk." He was a splendid man. I asked him if he had any brothers, and he said he had. I asked if they were all as tall as he was, and as finely built. He said they were not quite so tall, but they were very well built. Of course, with regard to the Dublin Metropolitan Police—I do not know if any gentlemen round this table have seen them—but all I can say is, a finer body of men I do not think I have ever come across.

12629. I think that is true of the country constabulary all over Ireland?—No, the Royal Irish Constabulary are smaller men.

12630. But still they are fine men?—Yes. I think that the Royal Irish Constabulary are sprung from the upper farmer class. I think the Metropolitan Police are not of quite so high a standard socially as the Royal Irish Constabulary. But I should say of the two the Dublin Metropolitan Police are the finer body of men. They say that in Dublin there are more public houses and more places of worship than any town of equal size in any part of the world. Of course the publicans are always very anxious to keep in with the police.

12631. Do you think drunkenness is increasing in Dublin?—I do.

12632. And emphatically among women?—Yes, and emphatically among women. Naturally we can easily understand that that must have in the long run a depreciating condition as regards their offspring. Another point—I suppose it occurs in England as well as it does in Ireland—is with regard to women nursing their babies too long. I have seen women frequently nursing their babies for two years, with the object of course of preventing them having another child.

12633. They say they do that in some parts of England, but on the whole, the evidence has been that mothers nurse their babies only for a short time, and very often not at all—that two or three months exhausts the capacity of the mother, even if she is willing to suckle her child?—Yes.

12634. In one part of your *précis* you say when the baby comes the mothers are too weak to suckle it?—Yes; that is so occasionally.

12635. That is the town bred mothers?—Yes.

12636. Where they do suckle them they suckle them too long?—Occasionally.

12637. Is there much employment of mothers?—I do not think that in Dublin there is as much work for married women as in other towns. For instance, Dublin is not a city of mills and manufactories by any means; it is not like Belfast; in Belfast, of course, the city is full of manufactories and a very large number of women are employed.

12638. And the same in the towns round about?—Yes; more particularly in the North of Ireland where the flax and the linen industries are so largely worked. In Dublin there is a very large biscuit manufactory—Jacobs' Manufactory, something like Huntley & Palmer's; they employ a very large number of women.

12639. You think the effect of the migration into the town is to make the next generation of a weaker type?—Yes.

12640. And to that extent you think that there is some ground for believing that progressive deterioration occurs?—I am perfectly convinced that there is progressive deterioration among that stratum in Dublin. I have not the slightest doubt about the matter. I can see it myself, I have been now practising in Dublin for thirty-five years, and I have always been very observant. I have been attached as surgeon in two hospitals and have done a great deal of the out patient work and also before I acted as dispensary medical officer in one of the City dispensaries. I therefore had ample opportunity of seeing them in their ungarnished state, not only at the dispensaries but also in their own dwellings.

12641. Then you say that the people who come into the towns from the rural districts are of a weak type to start with?—I think they are, because the people that are left behind do not, as a matter of fact, work their land—I do not know why they do not—they think they will get easier employment in the cities.

12642. You admit that there are a good many agencies besides these housing schemes which you have described, which are working in the cause of improvement?—There are. There are a great many gymnasia now started. I sometimes take the Chair in the Dublin gymnasium, and I am charmed to see the young men coming there to take advantage of the opportunities afforded. But I am sorry to say it is only a certain class who attend these gymnasiums, that is, clerks and such people—the very lower classes do not take advantage of it. They could if they chose. Then both the Protestant and Catholic Church in Dublin have got up what is called Boys' Brigades.

12643. Does that tap the lower classes?—Yes; that is about the only thing that taps the poorer classes. But those who join the Boys' Brigades, I think probably, are the better class of the poorer class.

12644. The lowest class resist almost any agency?—Yes; these poor little boys who sell papers in the street are of miserable physique, and all the winter evenings they are only half clad, and naturally run a great risk of getting pneumonia. We have a good many cases of pneumonia in the Children's Hospital among those children.

12645. Is anything being done to give them a knowledge of how to utilise their resources by obtaining the best food?—I think attached to each parish there are some committees who endeavour to improve their conditions. I think in England that is carried out more fully than it is in Ireland. That idea of teaching the lower class of people is quite a new idea in Ireland.

12646. Are the Irish people suspicious of any such efforts?—No, I think not, but they are so poor and so careless and so indifferent as to what is really good for them that they do not seem to take very much notice of it or show any anxiety to be better.

12647. I suppose you would agree with what other witnesses have stated, that during the last thirty or forty years, practically since the famine, there has been a considerable change, which is detrimental to health, in the character of the food of the Irish people?—Yes. I have supplied you with a document containing the history of the daily life of a typical child in the slums of the city. You see she had "Tea, bread, and sometimes butter." It is only sometimes they have butter.

12648. When you mention "stew," what does that include: is it a vegetable stew, or is there any substratum of meat in it?—I suppose they probably get a little meat. The various butchers lay aside a certain amount of very indifferent meat which they sell at a very cheap rate. On Saturday night you see these people going round the butchers' stalls, this indifferent meat is all placed to one side, and they sometimes get a supply at a very small cost. *Sir L. Ormsby.*

12649. It is curious that potatoes are not mentioned in this dietary?—In the country, of course, they eat nothing but potatoes.

12650. So long as they last?—Yes.

12651. And then they have recourse to Indian meal, I understand?—Yes.

12652. That is not a very good thing, is it?—No; it is not as good probably as potatoes with a little buttermilk, or butter, or oleaginous material of some kind—I do not care if they get it in fat bacon. You may say that American bacon is bad, but the fat is there, and it is the fat which is wanted.

12653. Do they never eat preparations of oatmeal in any form?—Yes, sometimes.

12654. (*Dr. Tatham.*) You would have the fat there?—Yes.

12655. (*Chairman.*) In going through your list of remedies you mention the number of cubic feet which should be provided. Do I understand that no effort is made to enforce that minimum standard?—Of course the public health authority do enforce it where they can, but it would require a very much larger number of inspectors than they have; probably it would require a regiment. They would be eternally going round.

12656. Would not one or two prosecutions have a salutary effect?—They do prosecute.

12657. When you make that distinction between 200 cubic feet for a child and 400 cubic feet for an adult, do you think that is sound? Does not the child during the earlier years of life want more pure air than the adult, during the period of development?—I take that merely from the Public Health authority's figures.

12658. Do you think it is a sound distinction to draw?—I do not think a baby would want so much air as an adult.

12659. But a child?—I should say a child about twelve or fourteen years of age would probably want as much air to develop it as an adult. Of course that 200 or 400 cubic feet is a very relative kind of thing.

12660. It is the minimum?—Yes; one would like to have more, but very often you get considerably less.

12661. Has anything been done to increase the number of recreation and play-grounds?—Yes. Lord Ardilaun first began by opening Stephen's Green, and you can see the little ragged children from the various lanes and back streets close to Stephen's Green playing there. There is a place allotted to them and they can gambol about and fall over each other and enjoy themselves thoroughly.

12662. Dublin is not badly off for open spaces?—No With regard to the square in which I live in, Merrion Square, there have been very many suggestions made that we should open that to the public. But what the Commissioners felt is that every class should have a recreation ground for themselves, and as there is a recreation ground exactly opposite Merrion Square, called Leinster Lawn, open to the public, which is very large—I think it contains three or four acres—it is only fair that another class of people should have some place for themselves.

12663. You have some other squares?—Yes; and they can all be entered by the public by paying one or two guineas a year. But Lord Meath, who owns a great deal of the slum property in that part of Dublin called the Coombe, has opened playgrounds, and he has put a man there in uniform who sees the children do not indulge in any dangerous form of recreation from the swings and so on.

12664. There is apparatus there?—Yes, nearly all the city churches have opened pleasure-grounds, with seats, and places for the children of the poor to play about in.

12665. You do not think the Irish child suffers from any abuse of school attendance or anything of that sort, or over-pressure from education?—Parents frequently come to me to sign a certificate to say that the child is not fit to go to school.

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12666. They are not compelled to, are they?—They are compelled. There is compulsory attendance at school now for every child in Dublin.

12667. But it is not very rigorously enforced, is it?—I think it is. The reason I think it is is simply that many mothers come to me and say that if they do not get a certificate from me they will probably get prosecuted. They are quite satisfied if I write: "This child is in my opinion unfit to attend school for a week," and sign my name. I frequently have to do that in the out-patient department of the Children's Hospital.

12668. Do you think the children in the rural districts attend school too early? It has been suggested to us that it would be a good thing if in the rural districts where children could live a healthy life out of school, they should not come to school till they were six or seven years of age?—I am rather of that opinion. I do not think it is necessary to raise the standard of education for children who are to devote themselves to agriculture. I think when you educate them too much they begin to look higher and give up work as agricultural labourers.

12669. It is rather from the point of view of whether they would not learn better if they did not attend school too soon—whether their bodies would not develop better with advantage to the mind?—I should be inclined to think that it would be far better. We do not want tadpoles, all head and no body. I would far prefer that their bodies should be seen to before their heads. I have had a strong opinion about that in regard to all classes of society. Although it is a very dangerous question to enter upon, I do not think that ladies entering universities is to the advantage of their physique afterwards. I think the more they develop their brains the less they impress strength and robustness upon their offspring. That is my opinion, for what it is worth. I think they often cease to breed altogether.

12670. You mean that their physical powers are diminished?—Yes, because, whatever others may think, my opinion is that wherever robustness comes it comes from the mother, not from the father.

12671. You think that a close application to sedentary life would be bad for women who would become mothers?—Yes.

12672. In regard to the dairies in Dublin, is sufficient precaution taken to see that the milk supply which is available for the poor is fairly pure?—I have spoken to inspectors on that subject, and I would say that there is no day in Dublin but that there is some prosecution instituted against somebody for deficiency in certain constituents of good wholesome milk.

12673. Do you exact a proper standard of cleanliness?—The inspectors are most careful, so far as they can be. There are 500 dairies, and I find that there are nearly a dozen inspectors eternally going round and getting samples of milk. They do it at irregular hours, so as to try if possible to enforce at any risk or any cost that the poor shall be supplied with good wholesome milk.

12674. All this milk comes into Dublin from the country?—Yes. Some cows are kept in the city in dairy yards, but the Public Health authorities in Dublin are very anxious to get rid of all the city dairies. They cannot very well do it as there are some vested rights in the matter, but later on they hope to have every one of these dairies taken out of the city.

12675. Do they exact as high a standard of cleanliness as they can?—They do, but I do not think much of the city dairies.

12676. Milk is very difficult to protect from contamination?—Yes, very. There are so many ways in which impurities may enter the milk. You know they talk about scalding the pails and all that kind of thing, but you see the dairy boys who milk the cows with dirty hands—the foulest possible. Then there is a great deal of water that gets into it.

12677. Now I will ask you a few questions about the lunacy matter which has been given great prominence by witnesses who have been here from Ireland?—Before you come to that, I do not know whether you have noticed in my *precis* that there are 21,000 families in the City of Dublin occupying one room.

12678. Is it not often the case that those rooms are very large ones—parts of some old houses?—Yes. If it is a dining or drawing-room it is a large room, but people occupy the smallest possible rooms that you could hardly whip a cat in.

12679. What is the average size of the families in those rooms?—There are four or five who occupy them.

12680. Is not that a point which the municipality have attempted to tackle?—They have attempted to combat that.

12681. Does it not require drastic measures to deal with it?—The magistrates naturally hesitate to impose penalties upon them because the poor people are not able to get better accommodation. Then the difficulty which Sir Charles Cameron has experienced, if you close them, where are the people to go to, unless you have others ready built for them to enter?

12682. Does not a problem of that sort tend to solve itself if you take the necessary steps to create the problem? It is solving itself by the organisations which I have mentioned, but it will take a considerable time. In Dublin, which I know the most about, it will take a considerable time to supply the proper housing accommodation which is required for the very poor.

12683. But the tendency is in that direction?—The tendency is towards improvement.

12684. Then with regard to lunacy. These figures which you have given confirm the impression that other people have given us?—Yes, they do.

12685. That increase of lunacy in Ireland is very serious?—It is taken from the statistics.

12686. We were told that forty or fifty years ago one in 700 of the Irish population were lunatics and now it is one in 170. You are inclined to believe that there are considerations which show that the state of things is not really so bad as those figures might lead us to think?—I explained that by saying that people are put into asylums now who were never put into asylums before. Owing to the low death rate in the asylums the inmates accumulate and the admission rate goes on from year to year, and naturally it helps to swell those numbers. Of course the two ways of diminishing apparently the amount of lunacy in any given year is from death and recovery. The death rate is about 7 per cent. and the recovery rate about 34 per cent.

12687. How many of those who recover lapse, do you suppose?—If they are acute cases I would say perhaps a third of them relapse.

12688. Have you any idea what the comparative figures are for England?—No, I have not. *This* is the last report of the Irish Inspectors of Lunacy (*handed to the Chairman*). I daresay you have seen that.

12689. Yes.—Then there are a number of old people who get softening of the brain or slightly demented; they are not really mad, but people will not take the trouble of minding them, and they go to a magistrate and two doctors who can certify for them—and they manage to get them in.

12690. They are merely cases of senile decay, I suppose?—Yes.

12691. There is one element in the production of lunacy which you have not to deal with to such a great extent in Ireland, and that is syphilis?—No, there is not so much syphilis. I have this information from the two inspectors, Sir George O'Farrell and Dr. Courtenay, and from Dr. Woods, the medical inspector of perhaps the largest asylum outside Dublin, that is, Cork Asylum. I am told that it is very seldom that they put down syphilis as a cause of insanity. That is not the case I believe in England. Of course general paralysis of the insane is incurable, and it is frequently caused by syphilis.

12692. There is not such a large proportion of cases of that kind?—No. There is one cause which the inspectors lay very great stress upon, and that is heredity.

12693. A lunatic taint which is transmitted?—Yes, they nearly always can trace it back to the father or grandfather—or uncle or aunt—or somebody in connection with them. There is a history in these cases.

12694. Lunatics then are not inclined to be sterile?—No, I should not think they were.

12695. Why do you think the death rate is so low amongst Irish lunatics?—It is due to the cause of insanity and to the great care taken. Of course they get the same care in England. I have visited English asylums as well

as Irish asylums and it appeared to me that the arrangements were very much the same. I do not think the Irish asylums as regards care and equipment are one whit behind the English asylums.

12696. Is it the case that insanity in England is more closely associated with bad physical condition than it is in Ireland?—Perhaps it is so. They say that figures are able to prove anything.

12697. It is to some extent the outcome of degeneracy?—I should think so.

12698. You affirm what others have said as to the increase of lunacy in Ireland being largely due to the flow of emigration?—I do, because, as a matter of fact, it is only the robust members of the family that ever leave the country.

12699. The laws in the United States make it impossible that the others should go there, do they not?—They do; they send them home.

12700. And the shipping companies will not embark them for that reason, because of the risk of having to bring them back?—Yes, and they have to be medically examined. Of course it is natural that when the weaklings are left behind the existence of life is more keen.

12701. And you attribute something of it to the excitable and nervous temperament of the Irish race?—Yes, they are very excitable.

12702. They are easily thrown off their balance?—Yes, very easily. The Irish people in the rural districts do not drink continuously, but fairs occur frequently—they occur every week in different parts, and although the people may not attend them always, yet when they do they generally have a very big bout of drink.

12703. (*Dr. Tatham.*) I think it is your opinion that the question of physical deterioration very much centres round that question which you have illustrated in detail, namely, the question of the housing of the poor?—Yes, that is my strong opinion, and next to that I think that the food comes in.

12704. But you put the housing of the population as the first cause?—Yes, I would.

12705. You have spoken of the attempts which the Corporation of Dublin have made from time to time to improve the condition of the houses, and you have mentioned the enormous cost of so doing, as compared with your own experiment in connection with the erection of dwellings in Somer Street?—Yes, and Werburgh Street. That is the place which we bought, which was already built upon.

12706. Your private improvement scheme?—Yes.

12707. You think that in the direction of private improvement schemes rather than of schemes carried out by the municipal authorities lies the greatest hope of the improvement in the housing of the working classes?—I say it can be carried out on more economical lines. Both have the same object in view, but if I had £50,000, as a private individual I could do more than if I had £50,000 coming from a municipal body. When you want to buy a property the price goes up immediately for a municipal body, whereas in the case of a private individual nobody knows what you are purchasing for; you do not give them any information till the purchase is completed. I gave you an example, which I think is a very striking one, that for the same amount of area the Corporation of Dublin had to pay £36,000, whereas I, as a private individual, bought the same amount of area for £2,020, quite in the same part of Dublin, and quite as necessary. It is in a part of Dublin where the poor do congregate and where the artisans require dwelling houses.

12708. Does the experience of the Dublin Corporation go to show that although houses may be provided for the very poor it does not at all follow that the very poor get into them?—They do not get into them, because the Corporation naturally try to get as much rent as they can to pay the interest on the borrowed money. Most of the money is borrowed from the Board of Works, or on Government loans, and they pay the interest and capital at the same time, and if they get in a certain class of people who are unable to pay, of course they get nothing out of it, and they have to go to the expense of going to the Police Court or the Recorder's Court, as the case may be, to get them evicted. In any case they are generally three weeks without rent. They give notice and before they can bring them to trial three weeks are lost, and therefore they lose the rent for this period of time.

12709. Have you in Dublin any organisation for domiciliary visits among the poor?—Only charitable ones. There is a Catholic Association called the *Vincent de Paul*. It is a kind of room-keepers' society. The poor people make applications for charity, and before any money is granted some member of the Committee makes visits and sees exactly whether what has been stated is correct or not as regards their poverty. Of course every gentleman round this table knows that there is a great deal of imposition in the disposition of charity—there is a great deal of misrepresentation, and very often people get charity who have no right to it, and a great many people who have a right to it do not get it.

12710. Are you aware of the work which, for a good many years past, the Ladies' Health Society of Manchester has been doing amongst the poor?—Yes, but that has not been adopted to the same extent in Ireland. Ireland, naturally, is a queer place. We have two troublesome questions in Ireland—I would not like to go so far as to say we would be better without both—they are religion and politics. They strongly come in the way. If a Protestant organisation starts the Catholic community probably feel that perhaps their own organisation should assist them, and *vice versa*. I could say a great deal more, but you can easily understand this is a rather burning question to enter upon, and I would prefer not to do so.

12711. In your dispensary practice you spoke of the prevalence of tuberculosis?—Tuberculosis is very common among the shop-girls. They seem to suffer from tuberculosis.

12712. Of the lungs?—Yes, mainly.

12713. Something like three deaths in every thousand of the population?—Yes; I believe that is correct.

12714. It is very high?—Yes.

12715. Very much higher than in England?—Yes, I know that.

12716. With regard to the mesenteric form of tuberculosis amongst children, is that very common in your experience?—No; I got our Resident to give me a few particulars. In the Children's Hospital, out of 258 cases, this is how they run: tubercular meningitis, five cases; tubercular glands in the neck, twelve cases; tubercular disease of the knee, five cases; tubercular disease of the foot, twelve cases; tubercular disease of the hand, four cases; and tuberculosis of the lungs, six cases. All the others were of course the same disease, only in different places. Then there is rickets—twenty cases of genu varum and genu valgum, that is knock-knees and bow-legs, which are common things amongst children. We generally call them rickets.

12717. (*Chairman.*) Owing to soft bones?—Yes.

12718. (*Dr. Tatham.*) Very largely due to improper feeding, I suppose?—Yes. There is a point about that which I know is not accepted by chemists and physiologists, but I believe it thoroughly, although I cannot prove it—that is that where cities are supplied with water which does not contain much lime, deformities of the lower limbs in children are much more prevalent. You know the water supply of Dublin is very good. It comes from a place nearly forty miles from Dublin, and after coming so far there is very little lime in it. Sir Charles Cameron does not agree with that; he says it does not make any difference whatever. I do not know what the Glasgow water is like.

12719. (*Chairman.*) There is very little lime in that water.

12720. (*Dr. Tatham.*) It is distilled water practically? I had it from Sir William MacEwen that the deformities of the lower limbs in Glasgow are very prevalent.

12721. (*Chairman.*) They were, but we had evidence that they had diminished; in fact it was said that rickets had almost disappeared in the last twenty years.

12722. (*Dr. Tatham.*) In spite of the fact that the water contained no lime?—Then, probably, we must look for some other reason.

12723. With regard to typhus. I have no doubt in earlier days you had a good deal of experience of that?—Yes.

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12724. Is that in your judgment becoming rarer in Dublin?—I think so. We have a good deal of typhoid fever in the autumn in Dublin, but I do not think myself that it is greater than it was; I think it is somewhat less.

12725. I am speaking of typhus?—I think typhus is fast disappearing.

12726. Twenty years ago it was otherwise?—Yes. I do not know when I saw a case of typhus last. I do not remember. It is certainly very seldom in the last ten years. I remember when I was clinical clerk to the late Dr. Stokes typhus was a very common thing—that was thirty-five years ago. I thought you were referring to typhoid.

12727. Unfortunately in certain parts of England we are not quite so successful. There is typhus, at times, in Liverpool, as you know?—Yes.

12728. You spoke just now of pneumonia as existing in certain institutions; do you refer to the epidemic form of pneumonia?—No.

12729. The infective?—No, I do not refer to that.

12730. The ordinary?—The ordinary pneumonia, which comes on from various causes—insufficient clothing in severe weather. What I was thinking of was the little paper boys who go about barefooted.

12731. Bronchial pneumonia?—Yes.

12732. Then you spoke of drunkenness among the women. Do you think that is rather increasing generally amongst the population?—I do. I think among the ordinary Dublin artisan class that is so. It is more in their case than in the case of the labourers, because, as I said before, the labourer and his wife have not much money; they must pay for a certain amount of food, and they must pay their rent. A man goes round every Monday for his rent, and if he does not get it he gives them notice to go, so that they have to put that by first. No matter what they drink on Sunday they must have the Monday's rent ready. I do think that the women drink perhaps more than they did.

12733. That probably is one cause of the increasing neglect of children?—Yes, I think so. I think that is really the bed rock of the whole question, the care of the growing young.

12734. And you spoke of the feeding of children as being, in your judgment, the cause second in importance?—Yes.

12735. Do you think that, as a matter of fact, children get practically no sound milk at all—I mean children of the working classes?—They get very little.

12736. And such as they get is not what we call whole milk?—No, I do not think it is, because, first of all, I think it is stale when they get it—it is not fresh.

12737. It is decomposing?—More or less, and you could not tell how long it has been there notwithstanding the necessary inspections and analysis of it by proper authorities.

12738. Is a good deal of it separated milk?—Yes. I do not know whether you gentlemen are aware that there is a great deal of what they call creameries in Ireland now. They are establishing them all through the country. It is very interesting to hear the different opinions. One set of people say it is the salvation of some of the country districts; others again say it is the ruin of the country districts. Now the salvation of the country districts is this, that they get quick money for their milk—they get it at once when they leave it at the creameries. And where the ruin would arise is that they get back the skim milk devoid of all the important constituents that are so useful for development and nutrition. They get back this skim milk which is really useless to feed children or even young stock—even pigs.

12739. And it is upon this wretched stuff that the poor children have to live, if they live at all?—That is all they get.

12740. There are some valuable chemical constituents left in it are there not.

12741. (*Dr. Tatham.*) Yes.

12742. (*Mr. Lindsell.*) It is the separator which has done it?—Yes.

12743. (*Mr. Struthers.*) If it were taken along with other foods which contain the constituents which are lacking in the milk it would be useful?—Yes.

12744. (*Dr. Tatham.*) That is practically the only food they get?—Yes, they may have potatoes with it.

12745. But without fat—that is the important thing?—Yes, they want fat.

12746. With regard to cancer, is that increasing in Ireland or not?—I think it is increasing. I have no reason to know it more than the statistics that have been published by the Registrar General. He mentioned Armagh as the county where it is most prevalent. In reading over that report, and the individual testimony of different medical officers, I really could not come to any definite conclusion as to whether Armagh was the county in Ireland which suffered most from cancer, or not. Some people say it is owing to the dampness of the situation in which the houses are built and so forth.

12747. Do you, as a hospital surgeon, notice that cancer is increasing?—No; as a hospital surgeon I can say there is always a run of cancer cases, but I cannot say there are more than there were. I am a member of the Cancer Commission here in London, and I know from statistics collected from the three countries that the view which is now held is that it is increasing and that there are various reasons for it.

12748. Do you know whether it is increasing in England?—Yes; I know it is. It is perhaps due to the mode, the anxieties, and the struggle for life being much greater. I think mental reasons help in the production of cancer. It does not seem to me to refer to one social class; it seems to affect all classes.

12749. (*Chairman.*) You do not think it is due to a purely parasitical growth?—That is a doubtful question. I do not know what is the cause of it. I could not give any opinion about it, because so many different views have been put forward and have been given up.

12750. (*Dr. Tatham.*) Is the death rate in Ireland decreasing? It is scarcely fair to ask you that perhaps?—I do not know, but *this* is the list of births and deaths in Ireland for 1903. (*Document handed to the Chairman.*)

12751. With regard to the attendance of children at school, do you think that to any large extent children attending school do so insufficiently fed or half starved?—Yes; I think they are insufficiently fed.

12752. Is there any organisation by which young children can be fed in the school?—No, I do not think that in our schools there is. I think it would be a very good thing if it were arranged.

12753. There is no voluntary arrangement?—No, there is no voluntary arrangement, as far as I know, in Ireland at the present time. But I have often thought it would be a very useful means if the school rates or school funds could be applied in that direction.

12754. At present, I believe, they cannot?—I believe they cannot.

12755. As a surgeon you think that if you insist on the children being educated they ought to be fed?—Yes; never mind where they get the means. They certainly cannot work in a hungry state—none of us can.

12756. (*Mr. Lindsell.*) I think you mentioned two or three times the little paper boys?—Yes.

12757. Is street trading very marked in Dublin among the very young?—Yes, it is; but the Dublin Corporation have lately got powers through some bye-law to limit it.

12758. There was an Act of Parliament passed last year dealing specially with that subject?—Yes, and they are now putting it in force. I think it would be a very good thing indeed if it could be so done. Anybody on a winter's evening, say about December or January, could see these wretched little boys, half-clad and hungry-looking, selling their newspapers in the streets; of course they sell other things besides.

12759. Matches, and so on?—Matches principally. Of course the selling of matches is merely a means of evading being taken up by the police for begging. The matches are only humbug; they do not want to sell them. At least they offer matches to ladies who do not generally require them, but that is merely to say that they are trading. They do it for begging purposes.

12760. There was no attempt beforehand to regulate the sale of newspapers, and so on?—No.

12761. But they are going to adopt this Act?—Yes.

12762. (*Colonel Onslow.*) Mr. Legge, who has had to leave, asked me to ask you one or two questions. You are in favour of re-housing of the very poor being left in the hands of private persons? Would you see any advantage in the supervision of such associations by a public authority, such supervision being in co-operation and not as a check?—As a matter of fact, inspectors inspect our dwellings just in the same way as they do the corporation dwellings.

12763. You would welcome assistance from them?—We are only too anxious; as a matter of fact the medical officer of the district only met me the other day, and he said: "By the way, I was very pleased in going through those houses belonging to your association; they compare most favourably with other parts of my district." "Oh, yes," I said. "I am glad you went round." He said: "Of course the corporation officials go round as well, and I always find the more inspectors we have the better." Now, I remember the Dublin hospitals forty years ago, and the appearance of the equipment of all the hospitals in Dublin, with no exception whatever, are all wonderfully improved. I believe it is due to those various inspecting bodies: each body going round suggests some little thing, and that is brought before the managing committee, and then these things are carried out. In the same way, if Sir Charles Cameron, as the chief executive public health officer, would suggest to our association that such and such a thing was necessary, it would be brought before our committee, and we would naturally comply with it, because our anxiety is to have these places as an object lesson to other institutions, and the more perfect we make them the more natural would it be for extension to take place in other directions. And furthermore, as we are a purely charitable body—at least we are a charitable and business body, as anybody who likes can take shares in it for £1—and all who subscribe for our shares we should be glad to welcome. We are only too anxious to increase our list of shareholders.

12764. Would you welcome arrangements whereby a private association such as yours could borrow money from the public authorities on easy terms?—Yes; we are about to borrow money now from the Board of Works.

12765. Mr. Legge has another suggestion, that another method of securing such assistance would be a grant on easy terms from a public authority of sites on which private associations could set to work; what do you think of that?—I think it would be a very admirable system. Clontarf, one of the suburbs of Dublin, has lately been annexed to the city area of Dublin, and the Corporation have some ground there. We stated to the Corporation, "If you will give us that ground rent free, or for one shilling a year, we will, as we progress, place dwellings upon it." We will do that if they give us a practically free site, but we cannot make it pay financially if we are to pay a large sum for the site. In fact in these schemes, which have been carried out in the large towns of England, say, Liverpool, Birmingham, and Manchester, the purchase of the site for a large amount has prevented them making such projects a financial success. If they get the site free, or nearly free, I have not the slightest doubt that they could do an enormous amount of good to the class who require help in this direction, and make them pay the municipality or whatever body took it in hand.

12766. I should like to ask one or two questions on my own behalf. I see that you say in your *precis* that means should be taken to prevent young boys of tender years from smoking and drinking. I should like to have your opinion of the effects of smoking on boys of tender years; we have heard some rather different opinions. Some say that it has not a large effect, but that it would be better that they should not do it?—Everything helps, no matter in what degree. I have no objection to smoking, although I do not happen to be a smoker. Twenty years ago I threw a cigar out of my mouth and said I would not smoke again. Nor have I done so. But I do not object to it. But I do object to a growing child smoking. I do believe that it has some deteriorating effect, but I cannot tell in what direction.

12767. You agree with the general idea which was prevalent some years ago that no young boy should dream of smoking?—Of course smoking is very much more practised now. You see gentlemen smoking in the street, which was never done twenty years ago. Now it is a common thing. You seldom see anybody walking about without smoking either pipe, cigar, or cigarette.

12768. With regard to quite small boys, you hardly ever saw them smoking twenty years ago?—Hardly ever.

12769. You think that smoking, especially this shocking bad tobacco and cigarettes of all kinds, is deleterious?—I think that cigarette smoking has assisted degeneration. It is not pipes which these boys smoke, but it is generally the butt ends of cigars, which other people throw away.

12770–71. Then you say that you consider drink, especially amongst women, is greatly on the increase; I suppose that has only increased in comparatively recent years. It is surely less than it was 100 years ago, is it not?—I do not know. I think drink is cheaper. I think porter is cheaper. The poorer class in Dublin drink an enormous quantity of porter. We have got the largest brewery in the world in Dublin, and the people certainly help to make it larger.

12772. (*Colonel Onslow.*) Would not the general condition of the vast population of a city like Dublin be a great deal better than they were 100 years ago?—I do not think they are much. There is a great deal of migration from the country to the city, and I do think that drinking among the lower classes has increased. I have no means of knowing, because I cannot compare them with what they were 100 years ago.

12773. We have no statistics?—No.

12774. The only thing we can go by is accounts of it, stories really, and pictures?—Yes.

12775. And the general impression which one has received?—Yes. I should say that drinking among the lower orders has increased. That is my opinion. The reason which I base that upon is that I see it very generally adopted in all classes. Where there is poverty I generally find that drink is somewhere about in connection with the family. Then I think the drink is cheaper. Porter is very cheap; you can get a glass of porter for a penny.

12776. (*Mr. Lindsell.*) Do you look upon porter as a great intoxicant. Is not the injury arising from drink rather more from the alcohol contained in it—from spirits?—Quite so. But, as a matter of fact, I would say that country people drink more whisky and the city people drink more porter. I know that the percentage of alcohol in the porter is very much less than the alcohol in the whisky. I mentioned here that it is bad whisky. If they drank good whisky it would be different. It is a matter of very great regret to me that good Irish whisky does not seem to come to England at all. If you drank good Irish whisky you would never drink Scotch whisky. In Ireland the lower order of Irish do not care for whisky unless it has what they call a "bite" on it. It must have something to catch their throat. I suppose it is whisky containing all kinds of impurities. But in towns, particularly in Dublin, porter is the staple drink of the lower orders.

12777. And what they get drunk on?—Yes; it is wonderful what capacity they have. I had a man in hospital with a broken leg—he broke it when he was drunk. He said: "I was having a pint when I broke my leg." I said, "How many pints did you take?" He said, "I drank about ten pints." Porter is a very nutritious thing in reason; in fact, it agrees with invalids. I would sooner order porter than many tonics, and it is very cheap.

12778. Do you include tea in these deleterious drinks?—Of course the tea they drink is stewed tea. All the Irish are very fond of tea.

12779. Some people attribute the increase of lunacy to the increase of rank tea that they drink?—I do not know about that.

12780. (*Mr. Struthers.*) I understood in Ireland that they were particular about their tea, and that they only bought expensive tea?—Yes; the very best. That is a very peculiar thing, that even if they are hard up they will give the best price for it.

12781. What do they do with it; do they brew it?—Yes; they stew it on hobs on the fires.

12782. I see you are of opinion that religion has something to do with lunacy?—Yes. The Irish of a certain class are a very religious race, and sometimes they get imbued with religious delusions. I have met with a good many such cases.

12783. You perhaps think that this strong composition of religion, which is one of the great features in Ireland,

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may have something to do with the increase of feeling and consequently increase of lunacy?—I daresay that might be so. Drink and hereditary causes are the two principal causes. If there is a great increase of lunacy in Ireland it is due to temperament.

12784. What you said about so many of the lunatics having relations who are afflicted suggests that intermarriage may be a cause, does it not?—Yes, but I am informed by the higher clerics of the Roman Catholic Church that they prohibit it wherever they possibly can, but when people want to get married they have a way of eluding those kind of things; they go to another parish. The Catholic Church clerics have a wonderful power for good over their own people. The people will be guided by their own priest when they will not be guided by any body else. I will give you an example. There is a large saw-mill and other machinery works with which I am connected—the Dublin, Wicklow, and Wexford Railway Co.,—to which I am consulting surgeon, and very frequently accidents occur there. A man comes into hospital with a leg or arm seriously injured. I say, "I am very sorry, but that leg or arm will have to come off." He says, "I will not have it off." Then I say, "Will you sacrifice your life and your limb too?" And the man replies, "I do not care, I won't have any operation done." I say to the house surgeon, "Send for the priest." There is a rule of the Church that you must not perform any serious operation without the ministrations of a clergyman. The priest comes, and I say, "Father So-and-So, this poor fellow has got a mangled limb and it will have to be removed, otherwise he will lose his life." He goes in and talks to the patient, and presently he comes out and says "All right, go on." The man does whatever the priest says. It saves time. We always use that precaution. It is a very serious thing for a man to realise who the minute before was all right and then, as the result of an accident, has a mangled limb; it comes so quickly that he does not like to lose a limb. In that way the clergyman always has more influence than the medical man in advising the necessary operation to be performed.

12785. We had from one of the clergy themselves, the Bishop of Ross, the fact that this taint of lunacy is very wide-spread, so many families have it?—Yes. I believe that is due to hereditary causes. I think that heredity has a great deal to do with the production of lunacy.

12786. I see you agree with the common opinion that it is the able-bodied and enterprising who emigrate?—Undoubtedly.

12787. You have never made any inquiry yourself on the subject as to the kind of people who did emigrate?—Oh yes, because I know as a matter of fact that they cannot emigrate unless they are examined by medical officers; I know that shipping companies will not take them.

12788. That secures a certain minimum, no doubt, but my own experience amongst certain rural districts in Scotland is that it is not the most enterprising who emigrate, but those who fail at home?—Yes, but you know emigration either from England or Scotland does not compare at all with Ireland, because there are very much fewer classes in England and Scotland emigrate compared with Ireland. Nearly everybody emigrates from Ireland in a certain class, at least one member of a family. You often say, "Where is your sister?" "She is in America." "Where is your brother?" "In America." Nearly all go to America.

12789. It is very common throughout the country?—Yes.

12790. Of course there can be no question as to the propriety of feeding the school children if you are going to give them any education at all. But is it not equally important to feed children who are not at school?—Most certainly.

12791. Might it not be desirable to secure that the children who are not at school should have food as well as those who are?—Certainly.

12792. To provide for the better feeding of infants for example?—Yes. I believe that is the cause of the question which you are now investigating—the want of care in the feeding and the want of care in every possible way of the young. I am a New Zealander by birth and I was there till I was fourteen, and my remembrance of the young colonials is this: There is no poverty there, none whatever. Everybody can get enough and plenty to eat of what is good for them. Living an outdoor life as they do the youth there become as strong as a horse. I am told by medical officers who saw the New Zealanders that went to the South African War that they were the finest body of men which came from any country.

12793. The point I want to get at is this: However important the feeding of school children may be we must not regard that as the whole problem: it is only one aspect of it?—It is only one aspect of it.

12794. Because if you allow those children who are underfed to be away from school they would not be any better off?—No, they would probably be better off at school if there was feeding going on.

12795. If they were at home or playing about the streets they would be exerting themselves physically or mentally probably as much as at the school?—Yes.

12796. Probably they are more at rest at school?—With regard to sitting at a desk, I believe that is a cause of spinal curvature.

12797. That is another question?—Until we have a better system of posture for school children I believe that poring over desks has a contracting influence. I have often examined their chests. I have not gone very particularly into the question of physique, but I look generally at the height, weight, and chest measurement as three very important points in the physique of a child, and I must say that those who are always at a desk are more likely to have contracted chests.

12798. You will be glad to know that a system of physical exercise for schools has now been proposed, in which the attention of the teachers is very strongly drawn to this point, of the position of the children when at school, if they are sitting at desks at all, as well as a recommendation that they should be as little at the desk as possible?—Quite so. I believe that long continued posture in one position is very productive of various spinal distortions.

12799. (*Chairman.*) There is one question I wish to ask you with regard to the birth rate. Do you think from your experience of Ireland that there is anything in the idea which has been represented to us that there is a tendency among the superior stocks of all classes towards a diminished rate of reproduction?—I do not believe it. I know what you are alluding to, but I do not believe in Ireland it is adopted to any great extent.

12800. Is it not so?—No, not at all to the same extent as adopted in other countries. If suggested the people would generally refuse to use any means, because it would be "against the tenets of their Church." I believe that the well disposed classes, as a rule, would not adopt any means for the prevention of children.

12801. You do not think the families of the better stocks of all classes are diminishing?—No.

12802. (*Dr. Tatham.*) Reverting for a moment to a point Mr. Struthers put to you just now, you expressed the opinion, in which we all agree with you, that it is very necessary indeed that young children should be well fed under any circumstances?—Most assuredly.

12803. But the question I want to put to you further is, Do you or do you not think that it is more necessary that a child who is to be subjected to the ordinary process of instruction should be well fed?—I do.

12804. That is the point?—I remember hearing an address from Lord Wolseley when he said that he would far prefer children to be ignoramuses, as regards their brain work, as long as their bodies were improved in the same ratio. I would sooner see them with a good physique than tadpoles—all head and no body.

TWENTY-FOURTH DAY.

Monday, 2nd May, 1904.

PRESENT

Mr. ALMERIC W. FITZ ROY (*in the Chair*).

Colonel G. M. FOX.
Mr. H. M. LINDSELL.
Colonel GEORGE T. ONSLOW
Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary*).

Mr. ARTHUR H. CHEATLE, F.R.C.S., called; and Examined.

12805. (*Chairman.*) You are Assistant Aural Surgeon to King's College Hospital?—Yes.

12806. And Surgeon to the Royal Ear Hospital?—Yes.

12807. Where is that?—In Soho.

12808. Have you given special attention to the subject of ear disease as evidence of degeneration?—I made this examination in 1902 with the express idea of bringing the matter before the public and before the Education Board.

12809. This examination of children at Hanwell?—Yes.

12810. Of course they are *ex hypothesi* of a degenerate type?—Many of them come from the worst districts of London.

12811. They are children who from birth have suffered from such causes as are probably degenerative in their character?—Yes; those in the "Main School" come from Southwark and the City of London, while those in the "Ophthalmic School" are drafted from the Poor Law Schools all over London.

12812. Is that at Hanwell too?—Yes. One is called the Ophthalmic School and the other the Main School. As a matter of fact, there is not much difference in what was found. There was just as much disease in the children coming from all parts of London as those coming from the City of London and Southwark in the Main School.

12813. There is a good deal of connection between eye and ear disease?—A certain amount.

12814. There is one particular type of disease which is called *retinitis pigmentosa* of the eye, which is associated with deafness, is there not?—No, *keratitis*, due to syphilis.

12815. Not *retinitis pigmentosa*?—Not often.

12818. Mr. Tweedy attributed the amount of *retinitis pigmentosa* he found in children from the rural districts to the effect of intermarriage there?—Oh yes, that is so.

12820. What do you say as to its connection with deafness?—It must be very slight, but there is a definite eye trouble which is due to syphilis, interstitial *keratitis*. They get complete deafness from interstitial *keratitis* in the eyes, and a very bad form of deafness indeed.

12821. You appear to discover the principal cause of deafness in adenoids?—It is one of the very greatest causes.

12822. What is its origin?—It is an enlarged tonsil at the back of the nose.

12823. Why is it so prevalent now?—It is extremely difficult to say. I doubt if it is more prevalent now than it was some years ago.

12824. You do not think so?—No. We have evidence from pictures that it was prevalent in the times of the Old Masters.

12826. You know that the contraction of the jaw which you speak of was prevalent in those days?—Yes; and the open mouth, the dropped jaw.

12826. I suppose it is as a rule congenital?—Some children are born with it; that is to say, they are unable to take the breast because they cannot breathe, but with others it seems to come later on, about one year or two years old.

12827. Is that due to environment?—It is difficult to say, because adenoids are very frequent among the upper classes.

12829. You are not in a position to form any opinion as to what the causes are, nor is the profession?—No, not as to why these tonsils should become enlarged. Of course we are hampered by the fact that it is almost as common among the upper classes, in fact quite as common, where children are in healthy surroundings, as among the poor. *Mr. Cheatle.*

12830. So that you are not disposed to say that it is a thing which should be associated with degeneration?—No; my idea is that it was quite as prevalent years ago as it is now.

12831. There is only one way of treating it, and that is by removal?—Yes.

12833. (*Colonel Fox.*) When you refer to the pictures of the "Old Masters" you mean that they painted people whose mouths were open?—Yes; you see evidence of it in the portraits.

12834. The mouths are open or the jaw dropped?—Yes; it is the same thing, the mouths open and the jaw dropped.

12835. (*Chairman.*) You found only a very small proportion of those you examined in the Hanwell School where the trouble was not due to adenoids?—Yes.

12836. What are the effects which you trace to adenoids?—First of all, the mouth-breathing, with all its attendant evils.

12837. That means want of expansion of the lungs?—That is one thing.

12838. Want of proper oxygenisation of the blood?—Yes; contracted chest, stunted growth; they are stunted both intellectually and physically. Of course the nose is meant to filter and warm and moisten the air which is breathed in, and if they breathe through their mouth those various things do not happen.

12839. There is vulnerability to infection also?—Yes.

12840. Therefore it may be a fertile source of zymotic disease?—Yes; and then they get facial deformity.

12841. That reacts upon the teeth?—Yes.

12842. And then they snore during sleep?—No, it is more than that; they have disturbed nights.

12843. It affects them too?—Yes.

12844. (*Colonel Fox.*) It means if they breathe cold air through their mouths it has a bad effect upon them?—Certainly; air which is unwarmed, unmoistened and unfiltered.

12845. (*Chairman.*) Do you notice special mental deficiencies connected with these people?—Yes, that has been brought out by Dr. Thomas Barr, of Glasgow. I quote it in that small book of my own which I have put in. There is a marked difference intellectually between those who are deaf and those who are not. Then also Dr. Permewan, of Liverpool, has worked on the subject. I did not work at it from that point of view in Hanwell. Dr. Thomas Barr, of Glasgow, in his Report found that in 140 there were twice as many with defective hearing among the backward children as among the forward children.

12846. That was due to adenoids?—To deafness, defective hearing. Of course adenoids is a fertile source of deafness.

12847. I suppose that would be naturally the case—a deaf child does not receive and register the same number of impressions?—I think it is more than that. They are dull mentally.

12848. You think they are actually dull mentally?—Yes.

Mr. Cheatle.

12849. It is not merely that their minds are deficient through want of exercise?—No, they are dull mentally, as well as being unable to receive stimuli.

12850. The only remedy is the removal of the adenoids?—Quite so.

12851. You think that with a view to the discovery of these cases among the young some sort of medical inspection of schools is almost essential?—Yes.

12852. Are the tests of defective hearing and the signs of ear disease such as in the first instance the teacher might discover with a little training? Of course you want medical supervision in the background, but could you trust the teacher in any large number of cases to form a *prima facie* opinion?—Some of these cases are only commencing, and they would not be detected by the teacher.

12853. Would not there be signs which would suggest it to the teacher?—There may be a discharge from the ear, and of course the deafness in class and the dropped mouth could all be recognised by the teacher.

12854. Features of that sort could be recognised?—Yes.

12855. But there are more occult conditions which would require medical examination?—Yes. For instance, a child with malignant disease at the back of his nose presents very much the same appearance as a child with adenoids.

12856. That is so, is it?—Yes. There are other causes of nasal obstruction besides adenoids which they would not recognise. And the same with diseases of the ear; there are some causes of deafness which want very careful examination from many points of view before we can come to a determination as to what is the real cause of the deafness.

12857. Would an ordinary medical practitioner be qualified to form an opinion on any of these cases?—He must have a special training in diseases of the ear.

12858. That does not, I suppose, form part of the ordinary medical practitioner's training, does it?—In the New University of London they put it in the curriculum that every man shall attend a course of aural surgery.

12859. That would so far qualify a man?—It is difficult to say, because they are not examined in it.

12860. They are not examined in it?—No; they get perhaps a question now and then in their examination for their degree, but they are not thoroughly examined in ear disease.

12861. It would complicate the matter very greatly if you had to have a specialist for every form of special ailment?—That would be unnecessary I think. Of course we have it at the hospitals.

12862. But I mean on your educational staff?—I think it would be quite enough if a man had been through a thorough course of aural surgery. He need not necessarily be a specialist, but he must be able to separate one disease from another.

12683. In appointing a medical officer to supervise the schools, the authority which appoints him should have regard to his qualification in that respect?—Yes, and also with regard to the eye.

12864. So that you would want no specialists?—No, but specially trained men. The skin also is an important thing.

12865. How do you propose to educate mothers up to the standard of requirement which may prevent some of these maladies or weaknesses developing themselves in their children?—It has been proposed to do it by popular lectures. I think that is a very difficult thing. I think the principal thing is to educate the child at school.

12866. You cannot compel people to attend lectures?—No, it is very difficult.

12867. And the child is very apt to forget what it learns at school?—Yes, but something sticks.

12868. Do you not think that by domiciliary visits of properly qualified persons like the ladies connected with the Manchester Health Society it might be done?—

12869. That is perhaps the best way of bringing home the knowledge to them, and a system of health visitors might be organised in connection with the sanitary supervision of the local authority?—Certainly.

12870. And that would probably be a more effective way of bringing home to mothers what are the proper conditions than any other?—Certainly.

12871. I suppose from what you know of the effective teaching of hygiene in elementary schools you are not prepared to attach much importance to it?—I do not know.

12872. Children leave school at fourteen and girls do not become mothers till eighteen or nineteen at the earliest?—They might be taught to keep the windows open and so forth.

12873. The general idea of what are healthy conditions might be instilled into them?—Yes.

12874. (*Dr. Tatham.*) Do you think that if it were a system practically part of the law of the land that every child should be examined at least on entering the school, they would then be able to get hold of the cases which might benefit from treatment?—Certainly.

12875. Even although subsequent medical examinations might be at long intervals; it would be a great thing I take it, from what you say, that they should be at any rate examined on their entrance to school?—Certainly.

12876. In that case you might probably detect some of the cases which are beginning?—Yes, and those cases of adenoids would be detected.

12877. You would very likely save the hearing of the child?—Yes, and the life too, not only from the ear point of view, but from tubercle and various other things.

12878. In fact you would regard that as a very desirable thing to be brought about?—Yes.

12879. Is it your experience that syphilis is increasing?—I am not prepared to say that. I see the effects of syphilis in a very fair number of cases in children, but I have no data to go on to say it is increasing.

12880. Mr. Tweedy was asked this by the Chairman, "Do you include syphilitic diseases of the eye under that?" and he said: "I think there are fewer and certainly less severe forms of syphilitic disease of the eye than there were twenty-five or thirty years ago. I do not mean to say that there is less syphilis. I do not know"?—Quite so.

12881. (*Chairman.*) Should you say that there was less disease of the ear attributable to syphilis than there used to be?—No, there is no difference at all.

12882. But there is not more?—There is certainly not more.

12883. (*Mr. Lindsell.*) I suppose these diseases, such as adenoids and so on, are constitutional to a great extent; they are not necessarily caused by bad surroundings?—No, they are not necessarily caused by bad surroundings, because we see that condition very much in the upper classes and in the middle class as well.

12884. The real point is that when they get to the age when they can be examined, like the school age and so on, they ought to be immediately brought under remedies?—Certainly.

12885. There should be greater facilities for obtaining remedies?—Certainly.

12886. How far would the education of children in the laws of hygiene and good air and so on affect the question?—I imagine these children would become fathers and mothers in their time, and then they will remember something of what they have been taught at school as regards fresh air, etc.

12887. Fresh air would not prevent a child having adenoids?—Not at all; I was answering the question from the general health point of view, because the poorer classes always have their windows and doors shut, both in the country and London, and they cannot be healthy if they do not have fresh air.

12888. If they attended to the laws of health in that way that would produce a better general state of health in their offspring?—Yes.

12889. And would therefore indirectly tend to decrease the tendency to these special nose and ear diseases?—Yes—cleanliness and fresh air.

12890. (*Colonel Onslow.*) With regard to the competence of ordinary medical men to detect diseases of the ear, I presume that medical men, like the officers of unions, must have a great deal to do with children and must be constantly coming across these things; would not they therefore be competent to examine the children in the schools without any special training?—Many of them have had no training in ear disease at all, and perhaps do not know what to do when they see it. Nearly every student who passes through the hospital, either during the time that he is qualifying or after he is qualified, realises the necessity of being able to recognise and treat the ordinary forms of ear disease, and he goes back to his hospital or goes to an ear hospital and has a thorough course, and then he is in a very good position.

12891. It has been rather indicated that medical examination in schools on special points like the ear, the eye and the teeth, which will require special knowledge, would be reserved by an ordinary medical man, a man in general practice, in order to be examined by a specialist afterwards?—Yes. That should be so, if they were not quite able to determine it.

12892. If they had a suspicion. It would not be necessary for a specialist, say in the ear or the eye, to be appointed to examine all the children?—No, it would not be necessary, it would be a needless expense.

12893. It would be sufficient to have what you might call a general practitioner, and when he observed anything beyond him which he had suspicion of then he would refer it to a specialist?—Yes. But I should insist on the medical officer producing good evidence that he had been through a satisfactory course in eye and ear disease.

12894. And, in fact that he is a competent man to judge?—Yes; he would be then.

12895. I see you make a remark here in your *précis* on the public services; you say that they demand practically perfect hearing in both ears. Are you aware of the present recommendation with regard to the examination for the Army and Navy?—Do you mean the method of examination?

12896. Yes. Do you know it?—No, I do not.

12897. I presume an Army or Navy surgeon would be fairly competent to ascertain any defects in those respects, would he not?—From the point of view of defects of hearing they are able to distinguish quite well whether a recruit is able to join the Army or the Navy.

12898. Unless a discharge was present they would not be able to detect any internal defect in the ear?—Some of them would, because in the Medical Staff College they have to pass through a long course before they get their majority, and during that time they have to take up a special subject, and a certain number of men take up the subject of otology, diseases of the ear, and they have a very good course indeed. Some Army men are very well competent.

12899. And also the Naval men?—I do not know about them. The Navy has not quite such an elaborate scheme.

12900. No; they have not the opportunity really. They are always abroad practically?—They bring the medical Army officers home from abroad to go through this course.

12901. It would be a very good thing if they had the same system in the Navy?—Yes.

12902. (*Colonel Fox.*) Do you think that if young children were constantly taught to breathe through their noses instead of through their mouths at school during their physical training, and at other times, that would have a tendency to decrease the number of cases of adenoids? Do you think that if the nose were used in a proper way it would reduce the number?—It is difficult for many of these children to breathe through their noses at all; they are so blocked up by adenoids.

12903. When quite young?—Yes. It would be impossible to make a good many of them breathe through the nose at all. It would be cruelty to insist upon it. They cannot do it.

12904. The glands are always there in all cases?—Yes.

12905. Those glands are affected, I suppose, by breathing through the mouth instead of the nose?—Yes.

12906. Is not the best remedy for that to train up children to breathe through their noses?—It is a very important factor.

12907. And by doing so perhaps preventing that growth of the glands?—It is a very important factor indeed, but if the mass is very great, as it is in a great number of cases, you cannot make them breathe through their noses; it is a physical impossibility for them to do so. *Mr. Cheatle.*

12908. In a bad case?—Yes. It does have a good effect in slighter cases; there is no doubt about that.

12909. I ask that question because we have laid it down in the new code of physical training in schools that great attention should be paid to what we call breathing exercises, and they should insist upon children during the exercise breathing through their noses instead of through their mouths?—It is a very excellent thing.

12910. Do you think that would have a decidedly good effect?—Certainly.

12911. (*Chairman.*) What are these tests of hearing which could be applied by teachers most simply and effectually?—It must be done in a quiet room. The only way of testing children's hearing is not with the watch, because you always get contrary answers with regard to a watch, but with the voice, the whispered voice.

12912. The whispered voice is the best test?—Yes. That is the test that I used in examining the Hanwell children.

12913. That was the test which you applied?—Yes. Every child was placed at a distance of 18 feet away, and simple questions were asked in a quiet whisper, questions which they could easily understand and easily answer, with their eyes shut, first testing one ear and then the other.

12914. That is a plan the teachers might very easily adopt?—Yes.

12915. Do you think there are any forms of deafness which may properly be associated with the presence of degenerative tendencies?—I cannot answer that in the affirmative. I do not know.

12916. With regard to the cases of deafness which you traced in many of these children at Hanwell, you are not prepared to say that any of those were due to depressed environment except so far as they were the reaction from a bad state of general health?—That is so.

12917. It would tend to make some of these forms of malady worse?—Certainly. Of course, one of the things specially dangerous to health and life is the discharge from the ears.

12918. Is that a disease of syphilitic origin?—No; it is due to invasion of the middle ear by a specific organism, that is to say, the poison gets into the middle ear behind the drum.

12919. Where from?—From the back of the nose.

12920. It is traceable from the nose?—Yes, and it is a very common result of scarlet fever, diphtheria, measles and smallpox.

12921. Is it set up apart from the occurrence of disease of that sort?—Oh, yes; an ordinary cold may do it.

12922. And if neglected, what are the ultimate effects?—A certain number of lives will be lost.

12923. Does it permanently unfit a person who suffers from it?—Certainly.

12924. It acts both upon the mind and body?—Yes, certainly. Besides, they are deaf as well with it on the side from which they have the discharge coming. In some instances it is due to tubercle as well.

12925. It is easily treated?—Sometimes it is very easily treated. It only wants careful cleanliness and the removal of the adenoids, because they are an important factor in it too. Other cases want rather a severe operation to put them right.

12926. In point of fact would you be prepared to say that the existence of adenoids is at the root of 80 per cent. of the cases of ear diseases with which you are familiar?—It is a very great factor.

12927. And there is no means of saying what adenoids are due to?—No, except that it is an enlargement of the gland.

12928. Are any investigations being made with a view to tracing adenoids to their source?—We are always working at that, of course.

Mr. Cheatle.

12929. But your investigations have thrown no light upon it yet ?—Of course you get it in good surroundings and in bad surroundings, and it is difficult to say. Some of them are definitely tuberculous.

12930. But not a large proportion ?—No, say 5 per cent., perhaps, are tuberculous in origin. Adenoids seem to run in some families—all the children will have adenoids in the family. Perhaps it will be seen that the father or mother have suffered in the same way before them.

12931. We were told here that the practice of sucking india-rubber nipples led to the contraction of the children's jaws, the upper one particularly, do you think it has that effect ?—Yes, especially if they have adenoids.

12932. It would aggravate the conditions ?—Yes

12933. The tendency of the adenoids to become troublesome would be accentuated ?—Yes.

12934. (*Dr. Tatham.*) In the case of the 5 per cent. of cases of adenoids due to tubercle, do you find concomitant tuberculous disease of the lung ?—Sometimes, and tuberculous disease of the glands of the neck.

12935. It is not generally primarily situated in the adenoid ?—The idea is that it is—that that is the point of infection.

12936. (*Chairman.*) That is the original site of the tubercle ?—Yes. The nose is in an unhealthy state and renders infection more likely.

Dr. Lewis A. Hawkes, M.D., M.C., called ; and Examined.

Dr. Hawkes.

12937. (*Chairman.*) Will you kindly state your qualifications and what has been your medical experience ?—I am a graduate of the University of Edinburgh.

12938. And you have been in general practice in London ?—I had a number of years' hospital work.

12939. In London ?—I was a short time in the Birmingham General Hospital and in the Children's Hospital, and I was for some years at the Ventnor Consumption Hospital. Then I came to Fore Street to the Metropolitan Dispensary, before I really went into general practice in London.

12940. Are you connected with that Dispensary now ?—No.

12941. But you were for some years ?—Yes.

12943. How many years have you been in general practice since you left the Dispensary ?—About seven years.

12944. In Finsbury ?—Yes.

12945. Therefore you have had special opportunities of considering what the conditions of the people are ?—I have been in Finsbury really since 1891, because nearly the whole of my work lies in Finsbury itself.

12946. During the ten years that you have known Finsbury has the condition of things, as far as the whole of the people are concerned, grown worse ?—No, I do not think so. So many houses are being pulled down. Since I first went to the City there has been a great change. I used to look after streets of inhabited houses which have now all been pulled down.

12947. Were they streets of insanitary houses to a large extent ?—Yes, to a large extent.

12948. There has been a good deal of improvement in that way within your experience ?—Yes.

12949. Proceeding now to deal with the different periods of child life that you mention in the *précis*, there is a very large infant mortality in Finsbury still ?—Yes.

12950. You say that in 1903 the death rate of infants between one and five years old was 43·7 per cent. of the whole ?—Yes.

12951. I suppose you associate that to a large extent with the very large number of one and two tenement houses ?—Partly, yes.

12952. We have had some evidence with regard to that before. From some figures sent to me I find that in Finsbury the death rate per 1,000 in those houses was 38·9, and the rate among occupants of four or more rooms was 5·6, and of the whole borough 19·6 ?—That shows a very extraordinary condition. In the latter part of my *précis* I have explained partly what I think is one of the important reasons for the mortality.

12953. You attribute a great deal of the health of the new born child to the conditions of the mother's health ?—Yes.

12955. Has the number of mothers who suckle their children, or the period for which they are able to do it, diminished, so far as you know ?—I am rather afraid the number is diminishing. There is the tendency to give up suckling.

12956. I suppose in some cases that is a good thing, because the mother is not in a condition to suckle ?—Really it is, providing, of course, she is judicious in her feeding afterwards.

12957. But where a mother is capable and healthy, do you think that she is disinclined to do her duty in that respect ?—It partly depends whether she is going to work.

12958. Is there much married women's factory labour in London ?—Not to a great extent, but there is a great deal of work done at home. A woman before her marriage is perhaps employed in some kind of work, and after her marriage she goes and brings the work home.

12959. That should not interfere with her suckling her child ?—It takes her away from home, going backwards and forwards, very often.

12960. Should you say that the conditions which affect the health of the mothers in Finsbury from your experience are worse than they were, or less bad ?—The one great point about it is the drinking tendency.

12961. That you think is growing ?—I am afraid that is growing.

12962. Among women ?—Yes.

12963. That is a point about which there has been a little difference of opinion. Of course the judicia statistics do not bear that out, but that only means that there may be more drunken women who do not come under the cognisance of the police ?—There is more quiet drinking.

12964. I think Dr. Wiglesworth, who is an authority on the subject, says that pregnant women as a result of their condition are apt to take to drink ?—My own view, which I arrived at after working at it for some time, was that it was greatly due to dyspepsia—to a condition of chronic gastric catarrh.

12965. You mean they take it to give them a sensation of warmth and comfort ?—To relieve the pain. That is how it begins I think with many of them.

12966. For that you must go back to badly cooked food ?—Yes ; I have mentioned that.

12967. Both insufficient food, which is due to poverty, and badly cooked food, which is due to want of knowledge of how to deal with the material they have ?—Quite so.

12968. In that respect do you think the condition of things is worse than it was ; do you observe more ignorance in mothers of families now in regard to the preparation of food than was the case formerly ?—I do not think they are a bit better than they were.

12969. I suppose the immense number of tinned meats which are put upon the market rather tends to discourage them from getting a better knowledge—they can do without any considerable knowledge of cooking ?—I think everything depends upon the environment. If the woman lives in a house where there is apparatus to cook with she will cook ; but as in an enormous number of cases she has very inadequate apparatus, she can only boil or fry, and the surroundings and so on are such that it is impossible for her to cook decently. Then very likely she does not know how. That is a very important condition, one which I do not think is taken up properly. I have discussed that at the end of my *précis*.

12970. What do you mean by "auto-starvation" when you speak of the condition of the mothers ?—I refer to that later on, but I can take it now if you wish. I take it rather in connection with the third period, because I look upon the third period as that when the deterioration is most likely to take place.

12971. That is after school age ?—Yes.

12972. Then we will pass on ?—Of course there is the question of feeding a child. The bottle-feeding of infants is admittedly an important factor, and of course in those one-tenement houses the tendency of most of these people is to give their children cheap tinned milk. That is what I used to notice very much. It was not a question of giving

them cow's milk from the dairy, but there was such a great quantity of cheap tinned milk.

12973. And I suppose after the first twenty-four hours that the pot is opened it is liable to contamination?—Yes. It remains open upon the mantelpiece until it is finished, during which time it is likely to be contaminated by the dust and dirt in the room.

12974. Do you think tinned milk in itself is deleterious?—I think it is deficient in nourishing properties.

12975. So I suppose is a great deal of the cow's milk?—Yes, and the mother's own milk, so far as that goes. The cream has been removed very largely from the tinned milk, and it has been worked up with added sugar.

12976. Do they use many of these patent foods, such as Nestlé's Food, and Mellin's Food?—Yes, that is a question of expense. But Robinson's Groats, and foods of the same character, are used, and of course they are grossly abused, because quite young children are fed upon these semi-solid foods, as I call them. No infant's stomach can stand them very long.

12977. What is the remedy for this? How can you bring the proper sort of food within reach of these people?—I am on a committee in Finsbury which has as one of its objects the introduction of a system for providing sterilized milk for infants—not at the expense of the municipal authorities, as was carried on in Battersea.

12978. It would not be done by the municipality?—No.

12979. We were told the other day that sterilized milk is scorbutic in its tendencies?—I am afraid a more skilled man than I must express an opinion upon that.

12980. (*Colonel Fox.*) Dr. Vincent said that there was no nourishment in sterilized milk at all—the sterilization destroyed all nourishment?—I have no doubt you would find someone else who will disagree with him. But anyhow it is better than some of the stuff they give their children. It may not be a perfect way of doing it, but I think it is certainly less dangerous.

12981. (*Chairman.*) At present you say that tinned milk is the staple food?—I should say tinned milk is the staple food. Milk bought in some of the small shops is kept by the addition of preservatives, especially that which remains over at the end of the day. Preserved milks are a great source of danger.

12982. They contain boracic acid?—Yes, and formaldehyde. In Finsbury it has been found that the smaller the shop the greater the amount of preservatives.

12983. What you want is to organise some system by which what the parents want per diem can be delivered to them direct from the distributing agency which supplies properly sterilized milk?—Yes. That is a possible way of doing it. Apart from that you have the very important factor of the amount of common sense the mother has, and that is generally rather at a minimum.

12984. I suppose if steps were taken by domiciliary visits, or some system of that sort, she may acquire sufficient knowledge?—I think so, and if the midwives instructed the mothers more thoroughly.

12985. During the first ten days they are bound under the Act to give the mother all the advice which they should do?—But they have to be capable of giving advice.

12986. It is hoped that that will be so?—Yes, it is hoped so. The Queen's Jubilee nurses, whom I helped to introduce into Finsbury, are an enormous educational factor. They are trained in hygiene as well as nursing. They go to the people with the definite purpose of nursing, and give no relief in money. With the Bible woman and the missionary woman of course there is always a suggestion with the people they visit of what they can get out of it afterwards.

12987. You say they are a very useful agency?—Yes, they are. I had a frightful time to get them in. The women used to abuse me, but I said "You will have me and the nurses, or if you will not have the nurses I shall not come," and after they had realised what a little cleanliness and tidiness really meant there was never any difficulty afterwards.

12988. They are amenable to it?—Yes, when once you get hold of them, but of course the difficulty was to get hold of them.

12989. Did they resent interference, or regard it with suspicion?—They used to call them "them char ladies." But afterwards, when I used to offer to send a nurse to a child the mother would say, "I can do what the nurse did last time." So that it had really made an impression. I consider that the work I did through them was almost greater than any other work I did.

12990. With reference to the use of patent foods, I suppose they do not pause to consider whether they are the sort they require for the purposes for which they are applied, even if they are good in themselves?—I think the patent food they use is often the one recommended by the next door neighbour, or anyone else.

12991. What character of patent foods do you refer to in your *précis*?—They use all the different kinds of foods which are not expensive.

12992. Allenbury's?—Yes, sometimes—those who have got the money.

12993. Nestlé's?—Yes.

12994. Horlick's Malted Milk?—Benger's Food is rather largely used on medical advice. It is not expensive, and I used to get them to use that largely.

12995. That was not for very young children?—No, but even for young children it will be found good. I have tried it. It is the only one. Soaked biscuits and groats are favourite foods.

12996. Moistened in milk?—Yes. These semi-liquid foods are likely to turn acid when taken.

12997. And produce acute inflammation of the intestines, of which a great number of them die?—Yes. With regard to the question of preservatives, I had a case the other day of a child who was brought up on a patent apparatus—Soxhlett's apparatus was used. It suddenly developed a violent attack of enteric trouble. It was traced to the cream, added to the milk—to which a preservative had been added—so that illness can be produced even when every care is taken to prevent germ contamination.

12998. The tendency of the mothers to inebriety makes the difficulty of feeding their children much greater?—They have never been taught to think for themselves. They do not think.

12999. I suppose a drunken mother is rather impervious to advice under any circumstances?—Yes, she is rather a terrible person.

13000. Do many children die of overlaying?—Yes, a good many die in Finsbury from overlaying. I cannot give you the figures.

13001. Is that due to drunken parents as a rule?—Yes, I should say so. Nearly all the children are overlaid between Friday night and Monday morning.

13002. Could not the local sanitary authority insist, where there are young children, on the provision of separate cots for them?—I do not think you realise the conditions under which they live sometimes. I have gone into a room and found a whole family herded together, black as tinkers, all mixed up.

13003. In one bed?—Yes; father and mother and perhaps two or three children in one bed, and other children lying on a shakedown at the bottom of their bed.

13004. Surely conditions of that sort might be dealt with drastically by the local authority if they utilised the powers they possess?—You cannot march into these people's rooms in the middle of the night, and that is the only way you can do it.

13005. Why not? If you are suspicious of the fact that the conditions are fatal to decency and health I should have thought you could have done it?—It is very rare that it is known. In the case I alluded to I remember it was one Sunday morning. The people had two or three rooms and they could easily have occupied those.

13006. They preferred to occupy one room?—Yes, for the sake of the warmth. It was in winter. They were mugged up in one room.

13007. I should have thought with a proper system of inspection by the local authority conditions of that sort might be discovered and dealt with?—I do not think so. I do not see how you are going to do it. Registered tenement houses can be visited at any time.

Dr. Hawkes.

13008. For instance, if you come across a case of this sort can you not report it to the local authority?—Certainly; but the case I alluded to is some years ago. I do not come across it now. Had we the same active medical officer in those days as we have now I certainly would have done so.

13009. You think in all those respects there is a great deal of improvement now?—Yes, there is an improvement.

13010. I suppose the substitution of the Metropolitan Borough Councils for the old vestries is an improvement?—Yes, distinctly. Everything must depend on the powers of the medical officer of health.

13011. And the way he is supported?—Yes, and whether he is keen himself. If he is keen and well-supported there is nothing that he cannot do.

13012. Do many children fall into the fire?—I only came across cases where children were left alone, where the mothers had gone out. They go out to public houses on the pretence of shopping, and leave the children alone.

13013. Taking the school period, which you described as from five to fifteen years, there the death rate is very small?—Before I come to that, might I emphasise one point, namely, the question of control—the teaching of self-control and self-restraint. There is a great lack of training children in this direction. A child by the time he comes into school is often a most unruly and intractable person. That is due more or less to injudicious correction.

13014. There is coercion?—Yes, and very injudicious correction. You find that the children of the poor from their earliest years are a great deal more spoiled than children of the better class.

13015. To save themselves trouble, I suppose?—To keep them good and keep them from making a noise.

13016. They get everything they ask for?—Practically. They are given things to play with which they ought not to have. At quite an early age they get halfpence and farthings to buy all sorts of sweets and unwholesome things.

13017. How would you remedy that?—I am afraid it is only by educating the mother. Many of these women never seem to be able to carry more than one idea in their heads at a time. After I had been working about eighteen months in the Metropolitan Dispensary my one idea was to take every child as soon as it was born and put it away in a Government home of some kind.

13018. Withdraw it from its mother?—Yes; take it away from its surroundings. I became thoroughly sick and disgusted at the want of common sense of the mothers, it seemed such uphill work to teach them anything.

13019. Is that general or is it only found among the lowest stratum?—It was found among many of the people I worked among.

13020. Do you find that among the wives of men earning good wages?—Yes; they are often just as bad.

13021. You find as hopeless ignorance?—Yes.

13022. As in the casual labourer's wife?—Yes. It is largely dependent on what the woman had been before marriage. If she had been a domestic servant in a decent house she made a good wife.

13023. That is the best training?—Yes. Those who had been general servants in small houses or shops were often dirty and slatternly. Then the factory girls, some of them made good wives, others were ignorant, and went from bad to worse. You have an awful feeling of the want of thought and the want of common sense among them. It is the acting on the impulse of the moment which is the serious thing.

13024. You have not thought how that can be corrected?—Only by gradually improving the condition of those who are growing up.

13025. Do you think that compulsory attendance at continuation classes of all girls between fourteen and seventeen who are not in domestic service, devoting the time spent in these continuation schools to lessons in household management, tending to children and the preparation of food and so on, would be of service?—I would like to see a kind of female conscription from sixteen to eighteen. I would not bother about teaching board school children cooking and laundry work, but I would teach them later.

13026. You would make them attend schools devoted to those subjects?—Yes.

13027. That, you think, would produce a very good result?—Yes; that would be a very great improvement.

13028. It would appear that girls in domestic service do not require this teaching?—No; they do not.

13029. Would it be involving those who are in factory employment, or other sorts of work, in an excessive strain to ask them to attend these classes twice a week?—I am afraid there is a good deal in that. My wife, who is a medical woman, lectured on first aid and home nursing at the Evening Continuation Schools, and she has told me of the condition of the girls in some slum districts who have come to the lectures in the evening after a long day's work; she says they are quite incapable and unable to listen to anything; they cannot take it in. It has to be put in the very simplest way.

13030. That would be an obstacle?—That is the obstacle. They are underfed also, and that is a thing which I cannot insist upon too strongly. I cannot get people to take up from my point of view the question of the self-underfeeding of all these people.

13031. Not because they have not got resources?—No; but because they do not understand it.

13032. They prefer to spend their money in other ways?—Yes; and, of course, the circumstances of factory life lead to conditions which take it out of them so much.

13033. It creates a distaste for domestic life altogether, does it not?—Yes; it does. It is extremely difficult to get a girl to take up service unless her mother has been in service before.

13034. But the daughter of a factory-bred woman becomes a factory hand?—Yes.

13035. You regard this period of school life as the most crucial?—It is the healthiest period.

13036. And, I suppose, it is the period where development in a good direction or degeneration in a bad direction steps in?—I think the school period is really the opportunity for giving a child a good physical send-off, and then he will be better able to resist the difficulties which may meet him in his later period.

13037. Do you think that the child at school age gets more regularly fed as compared with the children before that period or after?—I think most distinctly so.

13038. I suppose there is a large amount of neglect?—There is undoubtedly a large amount of neglect.

13039. Do you think the number of children who come to school underfed, or illfed, is considerable?—I am afraid that in certain districts, and in certain parts of our district, it is so.

13040. Is that wilful or necessary neglect?—I am afraid wilful. Of course they have not much food, and what they have is poor in quality, but the mother is probably lying in bed.

13041. She is very lazy?—Yes.

13042. And the child has to go off to school on an empty stomach?—Yes.

13043. So that the system of feeding in the school itself would have to take account of all these home conditions, and if they did, do you think there would be any difficulty in making the parents pecuniarily liable for any expenditure on behalf of the child at school?—I should like to see you get it back afterwards.

13044. You might take it from their wages?—When a man is a costermonger you do not know what his money is. I may say that I used to go into a Mission Hall where penny dinners were provided, and I knew practically the parent of every child there, and I could pick out the children whose mothers could perfectly well have afforded to give them food.

13045. Were they a large proportion?—No; I will say that for them. But there were a certain number of idle, lazy mothers who would sooner give their children a halfpenny or a penny and send it out than prepare a meal for them herself.

13046. If they were asked to do it would they give the child money and allow it to hand it over to the school authority who supplied the meal, in order to save themselves trouble?—Yes.

13047. You think they would be induced to do that?—I think they might.

13048. To a large extent?—I think in all these cases if you are going to give food to the children some investigation should be made.

13049. Into the home conditions?—Yes.

13050. You think that is a condition precedent?—Yes; I would make that imperative. One knows the hypocrisy of these people and the awful way in which they lie about things.

13051. I suppose in a great many cases the necessity of medical examination would come in there. If the child is assumed to be ill-fed perhaps the teacher could not altogether determine that?—I hold very strong views on the question of medical examination of school children.

13052. You think there should be a system of that sort?—Yes.

13053. Every child should be submitted to it on entry?—Yes, and I think every child should be examined properly. I do not mean the sort of superficial examination which is done now, but it should be properly examined. There are certain points which should be taken, and on those points it should be possible to shape the way in which that child's work should be laid out.

13054. You must understand that in most of the schools it is not possible to modify the course to suit the requirements of every child; there are a certain number who ought to be taught in special schools perhaps. That is one point?—I am referring not so much to the mental conditions.

13055. You are referring to the physical conditions?—Yes. I think we have a right to expect the State to provide them with healthy bodies.

13056. By suitable physical exercises, and so on, and proper time given to them?—Yes. We who see something of these lads after they leave school know how utterly worthless half the knowledge they have gained is. They are simply hopelessly ignorant six months after they have left school, unless they are going in for some trade, and then they simply specialise on that.

13057. Would you repeat this examination?—Yes, in all deficient cases.

13058. Periodically?—Periodically.

13059. How often?—I would certainly do it once a year.

13060. That you think would be enough?—Of course there would be certain children you would pick out with temporary deformities who might require to be sent more often.

13061. From the positions they assume in class and so on?—Yes; and sitting down to read. I have written to schoolmasters on the subject, and they have poohpoohed it; they do not see that there is anything wrong.

13062. Do you think that teachers, as a rule, are qualified to assist towards the results which you expect to flow from a medical examination; are they able to detect physical defects, as a rule?—No, they do not know; they are ignorant except of external conditions which they notice; internal ailments can only be found by qualified men.

13063. If they are encouraged?—I do think they do what they can.

13064. You think they would not be indisposed, if they had more knowledge, to assist the objects you have in view?—No, I do not think they would. There is one point with regard to that pointing out what, to my mind, is one of the necessities on the question of physical education. Last autumn I was asked by one of the big Polytechnics to examine a number of young men to see whether they were suitable for gymnastic work. There were fifty-three men. I spent some little time on them; I gave each man about seven or eight minutes' examination, roughly. These were men not only from London but from all parts of England. There were not 10 per cent. of those men who were sound. They were a fine healthy looking lot of men, and one would have said that there was nothing the matter with them. Their average age was 18·3 years.

13065. About the age of recruits?—Yes. Sixteen of these men had bad sight; some of them wore glasses, and some of them did not know that they had bad sight; twenty-seven out of the fifty-three had troubles with their throat and nose. *Dr. Hawkes.*

13066. From adenoids, probably?—Adenoids, tonsils, and teeth. Fifteen of them had, I will not say diseased hearts, but in such a condition that I would not let them do very much heavy work. Sixteen had weak chests.

13067. Phthisis, do you mean?—No, only general weakness. Seven of them had a tendency to spinal curvature; thirty had flat feet and twenty-four had varicocele of the testicles. It was a most extraordinary thing.

13068. Who were these men?—These were young men, young engineers, men starting engineering work. Their ages varied; the youngest was fourteen and the oldest thirty.

13069. You examined them for the Polytechnic?—Yes.

13070. They were men whom you would call the flower of the working classes?—Certainly. Some of them were well educated; some of them had come from Board schools. I was absolutely astonished.

13071. How many of those men would have been rejected if they had been intending recruits?—I should think 80 per cent.

13072. (*Colonel Onslow.*) Under the Government regulations I should think the whole lot would have been rejected?—Pretty well. There was hardly a sound man among them.

13075. (*Mr. Lindsell.*) What was the trade they were going into?—Electrical Engineering.

13076. They were candidates for the appointment?—Yes, in fact they were joining a class.

13078. (*Colonel Onslow.*) They were about the average working class?—Yes, some of them, and some were of a better class.

13079. (*Mr. Lindsell.*) Did they come from all over the country?—Yes, all over the country.

13080. (*Chairman.*) Do you think that fact points to there being a great amount of degeneration?—All I can say is that if you take haphazard fifty-three men, whom nobody imagines have anything the matter with them, and you discover facts like that—well, I should like to take fifty-three men somewhere else, and see if they are the same. With regard to the varicocele, I believe that is from bicycling, from the pressure of the saddle. They will not let a man pass into the Service with that.

13081. You really think it was due to bicycling?—Yes.

13082. That was the largest figure of the lot, was it not?—No, flat feet was the largest figure of the lot—that was thirty out of fifty-three.

13083. What do you attribute that to?—I do not know I cannot understand. They are all healthy looking men and active men; many of them play football.

13084. In the rural districts the heavy soil leads to flat feet?—Yes. If they wore heavy boots it would perhaps account for it. With regard to the other things, I could account for them, but I could not see how flat feet came in except from general slackness.

13085. Then some of them could not hear?—A few had deafness, but comparatively few.

13086. We cannot associate from the evidence we have had, either deafness or defects of the sight with any tendency to degeneration?—No, but they may be factors afterwards.

13087. They may tend to produce it?—Yes. You have, no doubt, had evidence of eye-strain and the effects it produces, and, of course, undoubtedly adenoids and tonsils enormously interfere with the conditions of development.

13088. But they do not seem to be associated with what are called degenerative conditions?—No.

13089. We had a medical authority on that subject, and he said that adenoids were just as common in the upper classes as in the lower?—Yes.

Dr. Hawkes.

13090. (*Colonel Onslow.*) Would not flat feet be partly attributable to a ricketty condition in extreme youth—a weakness of the bones in the leg ?—It might be that. It shows the ligaments must be weak. I wish to point out that if those young men had been examined in their younger days those flat feet could have been corrected by gymnastics.

13091. (*Chairman.*) Where money is plentiful how do these people spend it ? Do they spend it on their children; are they interested in their children ?—Not very.

13092. When money is not plentiful I suppose the children are the first to suffer ?—Yes.

13093. Do you meet many who are self-sacrificing ?—When any excess of money comes in it does not go to the house as a general rule ?

13094. It goes in amusements or luxuries ?—Yes. There is one case which immediately arises to my mind. I went one day to a house and found a man, whose child had got pneumonia ; I found him sitting by the fire in his best clothes. I said to him, " Are you on strike or out of a job ? " " Oh no," he said, " I won £10 on the Cesarewitch." His wife never got a penny of that. The man simply drank and betted away the whole of that £10. There was no suggestion of giving it to his wife or even to pay for medical assistance. Eventually when I sent a nurse and gave instructions that the child should be sponged all over he said he would see her blowed first. She was shot out and I was shot out too.

13095. That was a working man ?—Yes. I saw that man's wife and attended her when they had hardly a sixpence in the house. It is one of the results of gambling

13096. Was he in regular work ?—Yes, at the time, but he took a holiday until that £10 was gone. I am afraid that is a typical case.

13097. Is there much gambling ?—Oh yes, there is gambling among men and women and children.

13098. In the form of betting or of cards ?—Betting and playing at cards. It is done with small sums, but a small sum among that class is greater than £5 to anyone else, but the women have taken to betting and that is a worse thing.

13099. It is a love of excitement ?—Yes, always excitement, something fresh.

13100. I should have thought the conditions of their life were not so hopelessly stagnant as they were. I should have thought that there were more means of employing their energies in other directions ?—Yes, but if you live among them you find that the love of excitement is the one thing that keeps them going. There is so much said about the kindness of the poor to one another. Well, there is a great deal of kindness, but, of course, that kindness does not last. It exists for the time when they are sympathetic ; they will do anything. They will all come in and help and do anything, but if the illness extends and you want something done it will not be done. I remember one case where the people had to come to me and report to me at the dispensary about the condition of a patient ; I used to find that someone else was sent, but that someone had to be paid 2d. to come down. The kindness is only due to impulse and sympathy which is created on the spur of the moment, but it passes away.

13101. Coming to this period before marriage which is the period between school and adolescence, there you think the degenerative tendencies are most likely to set in ?—Yes.

13102. There is no parental control which is of any value ?—That is so.

13103. And the children practically shift for themselves ? —Within certain limits

13104. They get occupations which provide them with money ?—Which make them semi-independent.

13105. Do the parents annex any part of their earnings ? —In a great many cases they do. I am an active member of the Charity Organisation Society in the city, and I see more of it in connection with that work. We see cases where a great proportion of the earnings will be given. The child has a certain amount to spend on itself.

13106. You think in proportion to what it earns the child obtains a good deal of care and consideration from the parent, in the way of food at any rate, although it may be badly cooked and so on ?—In the early stage there is a certain amount of control, and, therefore, parents practically take the whole and give the child so much back. But as the child gets older and earns a little more, that little more is not always stated to the parent I think.

13107. And that they spend on themselves ?—Yes.

13108. Badly, very often ?—I am afraid very often badly.

13109. You think that girls are worse off because they stint themselves in food in order to buy clothes ?—Yes. The great thing with regard to girls which seems to drag them down is that they are at an age when they want air and want plenty of food. When I was appointed Resident Medical Officer to the Metropolitan Dispensary the committee decided to open the Institution in the evening, in order to assist the workers who were unable to leave their employment during the day.

No other Charitable Institution in the City does this.

The work developed, until I used to see from sixty to one hundred people in the evenings on which we were open. All those people were working in the City, because I refused to allow anyone to come on unless he or she was actually doing so. They live in every part of outer London, from Enfield right away to Walthamstow.

13110. They were not resident in Finsbury ?—Not all of them ; they were typical of the residents of outer London. Many of them have a heavy meal just before going to bed—sleep badly—wake tired and heavy with a nasty taste in the mouth. Do not use a tooth brush or cleanse the mouth—swallow a cup of strong tea and rush off to catch an early workman's train. They come up to London and have an hour to wait before they begin to work with nothing but a cup of tea.

13111. Only a cup of tea before they start ?—Yes, that is the only thing they touch.

13112. Not bread ?—No, just tea—strong tea. They work from eight till twelve on a cup of tea ; and then by the time dinner time comes they are really fagged out and tired and do not care for food, and what food they have is either brought from home or it comes from a cook shop. Only too often it is pickles and vinegar and a little bread. I know the little shops all round me, and I used to see at twelve o'clock every day a string of girls with cups containing a little pickled cabbage or picallili and so on.

13113. There is a great want of a proper type of restaurant for the poor, is there not ?—There are many restaurants, but they do not care to go to them.

13114. Of the type which would give them what they want ?—They want the food for nothing. They will not spend money if they can help it—certainly the girls will not—on getting proper food. Of course, there are those vegetarian places, which are cheap. Then they go on that very scanty meal till the afternoon, and then they have another cup of strong tea with perhaps a piece of bread. Their work is perhaps from six to eight or nine and they go back by train, getting home about nine-thirty or ten, and then they have a meal, when they are thoroughly fagged out.

13115. They must take a long time getting home ? —They have their last meal at nine or ten. They get home any time between these hours, but they do not take their last meal until just before they go to bed.

13116. That is their best meal in the day ?—I do not know ; it is often bread and cheese and beer.

13117. (*Colonel Onslow.*) Are you speaking of girls, or men and boys ?—The girls ; the men and boys feed themselves. I could not understand how it was. I got so many people. Medicine does them no good, because they are living this ridiculous sort of life. I used to talk till I was sick and tired of it. I used to begin by getting them to take milk instead of a cup of tea. If I could do that I could do a lot. That was a commencement.

13118. Give them a foundation ?—Yes, but they will not understand. The only thing is to teach those people.

13119. (*Chairman.*) These girls are living in their parents' houses?—Yes.

13120. Are they of no use to advise them?—They are as bad as the children. They get dyspepsia naturally, as you can quite understand, after this has gone on for a few months, and they gradually drift into a state of chronic catarrh of the stomach with constipation.

13121. Girls of sixteen or seventeen?—From sixteen onwards, because the younger children do have a little breakfast. It is when they get a little bit beyond control that they do that.

13122. It would be almost impossible to get that class of girl into the continuation school that you were talking about?—That is the difficulty, that is to say, if she has to do it and work at the same time; she is not fit. That girl is not fit when she gets home at night to do any brain work, because she is starved—she has starved herself. It is not that there is not food there, but she is so stupid and she is following the traditions of her mother and relations. They all do so, and it is the cause of half the drinking among the women.

13123. I should have thought that their desire to feel fit would have made them feed themselves sufficiently?—Yes, but they are so hopelessly ignorant in matters of that kind. I was led to make observations, and 80 per cent. of the women who came to me when I was at the dispensary lived in that way.

13124. I should have thought it was the primary human instinct to eat enough food if it could be got?—But to show how little it is understood and how little it is taken up I may tell you that I used to be spoken of as "the doctor who asked people if they had had any breakfast."

13125. As though they thought it was a monomania on your part?—Exactly; as if it were a fad of mine.

13126. What are the conditions in respect of clothing: They do not spend the money on warm things, I suppose?—They spend it on the externals.

13127. On things which attract attention?—Yes.

13128. Fine feathers?—Yes; the scanty clothing underneath is often deplorable; it is sometimes heartrending when I come to examine some of these unfortunate people.

13129. I suppose that often sets up pulmonary disease?—Yes, I am afraid it does very much. Then, of course, there is the question of the condition of women going into public houses in England. There is a man in the detective force in New Zealand whom I know who came over here, and he told me that the one thing that struck him was the number of women to be seen drinking in the public houses in England.

13130. Do they not do that in New Zealand?—It is not considered a right thing.

13131. It is public opinion which prevents them?—Yes. You go on any Saturday you like where any factory girls are coming out of their work and have just been paid and you will see them like flies round public houses, five and six in a little group. They all go in. It is not one drink and then come out, but it is etiquette that each shall stand in turn.

13132. In what occupations are these women?—Every possible kind: collar makers, artificial flower makers, baby linen workers, collar ironers—a most unhealthy trade—feather curlers and box makers and book folders. Box making is largely carried on in and near the City.

13133. Do many of them actually work under unhealthy conditions?—Of course they work under much more healthy conditions than they used to do. But if they are doing work at home, then the conditions are very bad, indeed, very often, because you have piles and piles of boxes and foul smelling glue and size about the house—it is perfectly sickening.

13134. There are certain parts of the Factory Acts which touch home work?—Yes.

13135. They are evaded?—Yes, they are quite evaded.

13136. Taking the period of married life, do people marry prematurely now so much as they used to do?—No, I do not think so.

13137. Dr. Tatham will tell you that from the Registrar General's returns early marriages are not so frequent as they were?—Yes, and from my own observation that is so. *Dr. Hawkes.*

13138. Then the occupations which you have been describing would tend to give them a distaste of home life?—Yes.

13139. And to make them useless as mothers?—Yes.

13140. What do you mean by "Choice of home," in your *précis*?—A great deal depends on what a man is doing. If a man has to live near his work he must take what accommodation he can get. That is really what it means. It is not as if there was any choice.

13141. Having regard to the late hour that these girls have to get back, it seems preferable that they should live in London?—Or within a very much shorter distance of London. If you could manage to do something in that direction it would be of advantage, because, after all, they are often going from one slum to another.

13142. Then we come to the point as to whether the housing of Finsbury is not better than it was. You say that within your knowledge a very large number of insanitary inadequate houses have been pulled down?—Yes, but factories have been built in their places

13143. There has not been any supply of proper houses in their places?—They are gradually building, I think.

13144. What you refer to is the demolition of houses for factories?—Yes. There has not been much building in my time. The Peabody Trust have built dwellings, and there are some other model dwellings in Finsbury, but since then there has been very little building.

13145. Within Finsbury itself there has been very little building?—Practically none.

13146. Do you think the Borough Council of Finsbury or the County Council will do anything in that area?—The County Council have just taken the site of Reid's brewery in Holborn. That is being developed now.

13147. Are you aware of any tendency on the part of factory owners to live out of London, to transfer their factories to less crowded areas where the rates and rents are lower?—No. I know it has been done.

13148. You have not come across any tendency in that direction?—No. But, of course, it is the character of the houses. That is one of the things which I should like to speak of, that these people have to go into these houses, and parts of the London area are always changing its character, going down, down, down!

13149. But surely there are counter tendencies towards improvement?—No, the people go into houses which were only built for one family; that is to say, there is one kitchen, one water closet, one sink. That is all very well for one family, but when every floor and sometimes every room in the house is let separately, that kitchen belongs to the person who rents that particular room, and the result is that you find a small room with only just a common little grate in it. There is no oven, there is no water laid on; all the cooking has to be done at this little grate with a saucepan and a frying pan, and possibly a gridiron. That is the only way they have for cooking unless they go to the bakehouses.

13150. Could not you get at the owner and make it his duty, if he lets his house to more than one family, to provide proper appliances for family life?—I asked our medical officer of health whether that could be done, and he said, "No, we have no control over them; we cannot step in and say that they must do this, that, and the other." You must remember that this has been going on for many years. This is one of the great reasons of the bad feeding; it is not that the people cannot cook, but that they have not appliances. It is impossible to do anything like that, and when you have to consider the difficulties of badly ventilated rooms, smoky chimneys, and the quality of coal these people buy, you will see they are great. These people only buy the poor coal, you do not get much heat out of it. I think that has been a very important factor, and I think, of course, that is one of the advantages of these industrial dwellings which have been built, that they do have proper cooking apparatus. In the Peabody Trust Buildings some time ago they put

Dr. Hawkes. gas stoves practically in nearly every room, or in every two and three tenement rooms, in the Finsbury blocks, but they put the gas stoves in the open room and there was no arrangement made for ventilation and getting rid of the fumes at all.

13151. Do you mean the fumes escaped into the room?—Yes.

13152. (*Colonel Fox.*) The same as from a gas burner?—Yes.

13153. (*Colonel Onslow.*) Who is the responsible person for that?—I do not know; I suppose the Trust. People sleep in these rooms and then ventilation is generally not too good. These stoves were on the penny-in-the-slot principle and very expensive. I think a great many of them are given up and not used at all. It always seemed to me a most disgraceful thing to put them into the rooms in the way they did.

13154. (*Chairman.*) How many tenants are there in these one-roomed tenements?—I should say two adults and not more than two or three children.

13155. That is surely too many for health?—Yes, it is.

13156. Is any attempt made to enforce a minimum amount of cubic feet of air, because that is within the competence of the borough council?—There again comes in a difficulty, unless you make a midnight visit.

13157. But you must do it?—That is all very well if you have a big slum street. But next door to the house where I am living I think there are four families. I have not the faintest idea how many people really live in that place.

13158. Surely the local authority could obtain the information if they chose?—But they must be registered, I think. This is a point upon which I do not know the law, but I rather think that is so.

13159. They have the power to enact bye-laws to require a certain minimum amount of cubic space for every occupant of a house which is let as a lodging?—Which is not registered?

Unregistered tenements are practically private houses. If a man came to me in the middle of the night and wanted to see how many people were sleeping in my house I should not permit him to do so. I know perfectly well in our own district if the medical officer of health had the chance he would jump at it, but his hands are tied, and very grievously tied. I very much wanted him to interfere with the people in the top floor, who were distinctly creating a nuisance.

13161. (*Chairman.*) Lodging or tenement, it is the same. Surely he was not prevented from interfering there, was he?—Yes, they were not registered.

13162. The local authority are entitled to regard as a nuisance any house which is overcrowded to a degree which is in their opinion prejudicial to health?—Yes.

13163. Surely they have the power to ascertain whether the facts are such or not?—Under those circumstances they would have power, surely, to go in at any time to any house, and they have not got that.

13164. But supposing they know?—How are they to know?

13165. There must be means of finding out, if proper steps are taken to do so, what number of persons may be in any one of these tenements; they must know what the extent of a family is, or they could easily obtain the knowledge?—I am afraid it would be rather difficult to carry out.

13166. I should have thought that the Charity Organisation Society in their investigations might very often provide the knowledge that is necessary?—Certainly, but we are not yet, of course, so much in touch with them that we can very well do it. Then it is not the people who say they live there, but it is the people who do live there.

13167. I suppose the number of children that any given couple have is a matter of common knowledge?—Not necessarily.

13168. The school attendance officer must know something about the conditions?—Yes.

13169. (*Colonel Onslow.*) They are not always of the same family?—No. You may have nurse-children brought in on the quiet. The school attendance officer does not know exactly how many rooms these people have got. It is just like an ordinary dwelling house, you go up the stairs, and there is a door here and a door there. There may be one family occupying both rooms, or one in each room. It is very difficult to find out whether that is so. You cannot compel the landlord to give you any information.

13170. You think there is no remedy?—I would say in any case where a man is found to be letting his place out in tenements he should be made to put in a stove of some kind or the other so that, at any rate, cooking can be done decently.

13171. You would make the owner responsible for the supply of proper cooking apparatus to any house let in tenements?—I would make the man who lets the house out in tenements responsible. He is often a man who has got the fag-end of a lease; he is for the moment the owner, and he is doing it simply as a speculation, simply for profit, and of course profit without any regard to the circumstances. The Finsbury death-rate of the one-roomed tenements was 38·9.

13172. (*Dr. Tatham.*) We had evidence a few days ago from Dr. Vincent. In that evidence he made certain statements about sterilised milk, and I said to him, "You know that in the medical profession it is certainly a very common practice to recommend that the ordinary milk supply shall be boiled before it is taken for the purpose of preventing the spread of enteric and other fevers," and he said "Yes." Then I asked, "Do you think that is a wise precaution?" and he said "No." I asked, "What would you do, then," and he replied, "I would prevent it. I have a little homily on the heating of milk. The whole principle is to prevent the development of these bacteria." Do you agree with the condemnation of the practice of boiling milk before it is taken?—Yes, I do. What I should like to see would be to go down to the bed-rock, and have so much supervision from London of all dairies, the registration of dairies, so that we could have proper milk, and know that the surroundings where the milk was obtained and where the cows were milked were such that the risk of germs and the risk of bacilli was very much reduced.

13173. But having regard to the conditions under which the present milk supply is obtainable, do you think it would or would not be advisable to boil the milk?—I think it is advisable to boil it.

13174. You do not think the boiling of the milk or sterilising it would take away its properties?—It might, but I think it is less dangerous than the other.

13175. You think that the practice of the profession in recommending the sterilising of milk is a good one?—Yes.

13176. Under present conditions?—Yes.

13177. Is illegitimacy on the increase according to your experience?—Immorality is. But owing to the way in which pernicious literature is able to be bought now, I should say that actual illegitimacy is not any greater; I do not think it is increasing. But, of course, you have to remember the enormous sale and advertising of various suggestions to people for prevention of children. In many places you cannot go into a single public urinal without seeing an advertisement which has been gummed up there. Of course they are taken down very soon, but there is somebody round again who puts them up again. There is not much self-control among the people. The excitement produced by drink and a want of self-control leads to immorality. I think that very little drink is quite enough to upset them. There is another point of course, namely, the abuse by big girls of little boys. A girl who has arrived at puberty not wanting to take the risk of having anything to do with a man gets hold of a little boy. I had several cases of that.

13178. (*Colonel Onslow.*) What aged boys?—About nine, ten, or eleven. Of course the surroundings in which they live make it almost impossible for them to have very much moral control. The language of the women is so dreadful. Nice decent looking women, directly they get a little bit out of temper simply let fly the most foul and filthy oaths. Of course there is also the self-abuse which goes on amongst small boys pretty generally. The life of being herded up in these model dwellings has great

disadvantages. One bad woman on a stair will do no end of damage. They get drink in their houses; they send out for beer. It is the sly drinking in the house which is the curse.

13179. (*Dr. Tatham.*) In the neighbourhood where you live is it known to you whether the mortality is very much greater amongst illegitimate children than it is amongst legitimate children?—No; I do not think it is except where there is destruction immediately at birth. Afterwards, I think not. A very funny thing is that where you have illegitimate children they are generally the children of some rather respectable girl who has been led astray. It is not the down-right rough-and-tumbl.. person who comes to grief in that way. Somehow or other they manage to escape. It is this unfortunate girl of rather a better class. I know there are a number of children going about now who are nominally the children of certain people. The child grows up when they remain perfectly respectable. There has not been lustfulness; it has been a temporary departure from the moral standard, and, of course, the children are as much cared for as if they were legitimate.

13180. We have had evidence here that illegitimate children die at a very much greater rate than legitimate children?—They are put out at these nursing places sometimes.

13181. Do you know the mortality in England and Wales, for instance?—I should say most distinctly that these nursing places are kept by horrible people. Every now and then I come across some of them. They are dreadful women. I think the supervision there needs regulating distinctly. I do not refer to licensed nurses—but when the child is nursed out on the quiet.

13182. (*Mr. Lindsell.*) Have you considered this question of feeding in schools, providing meals at the school itself? You say, of course, that when a child is badly fed it is principally the fault of the parent?—Yes.

13183. Of course, as you know, there are certain parts of London which provide meals for the children at school?—Yes.

13184. Would you be in favour of that being a municipal affair?—No, I am afraid not.

13185. It would do a great deal more harm than good?—I think so. And you have to remember this, that you must pick out cases by investigating them. If you have definite signs of the necessity for it, then I think it might be possible. But you must remember that if one child goes and is known to have a free breakfast, although that child may absolutely need it on account of the abject poverty of the home, immediately the other neighbours will all be up in arms and want to have their children fed; and they will lie to you about their earnings.

13186. Suppose the parent had to buy so many coupons and there was a bureau established by the school authority where the parent could go and either purchase that, or state that his poverty did not enable him to purchase it and so obtain it, each case would be investigated on its merits. If the parent did not pay there would be some means of recovering the cost?—Yes.

13187. Either as a debt or by some summary process unless the parent could prove absolute poverty preventing him from paying. He would have to prove absolute disability to purchase the thing before some duly constituted authority?—Yes; I quite see what you mean, but it seems to me if you are going to that point it would be very much better, if you are going to feed a child in that way, to take him away out of his environment; you are reducing the personal responsibility of the parent in that way. Where they pay for the food you are not. Of course you must have a proper sum, you must not cut the throat of every provision dealer all round, because that is what you are doing. You are taking the bread out of the mouths to some extent of the smaller dealers who would have supplied that food in the ordinary way. You do it on a big scale; that is all very well, but of course there are other people to be considered first. If feeding is carried out by the authorities, efforts should be made not to crush the small provision dealer who is hardly able to make a living.

13188. Is not the condition of the child almost the first thing to be considered. If you insist on the child coming to school and compel him to go through a certain school curriculum, and the medical adviser tells you that the child wants proper food and is therefore unable to go through that curriculum, ought you not first to feed the child and then deal with the parent according as he is able to pay or not?—You must have powers of punishing the parent very considerably. *Dr. Hawkes.*

13189. For neglect?—You have got to take the condition of the parent himself. If you give him half an inch he will take it, and, of course, that is the difficulty. It is not as if that money which is saved by the parent—because there would be some saved—was put by and there was any thrift. In such a very large proportion of cases that money is simply going on to the publican.

13190. But if the court made a payment order on the parent by some summary process like the bastardy order?—You are referring to people who are absolutely poor?

13191. No; I am talking of those who drink and neglect their children rather than those who are unable to feed them?—You might get it out of them.

13192. There would be a power of discrimination?—Without absolute and close investigation and the power of severely punishing them, I do not think you could do it. You must have that. You must have some deterrent, and a strong deterrent, behind you. You must have every possible power.

13193. Dr. Macnamara's opinion was that the teacher would be absolutely capable of forming an opinion as to what children in his school were suffering from want of food?—That may be.

13194. He would report the case to the school authority, who would instruct the school officer, who would investigate the circumstances of the parent, which they do, of course, now to a great extent?—But how can the school officer possibly investigate? You want to increase your staff of school inspectors enormously.

13195. They say they could do it without a large increase?—You have to verify earnings. You must do that. You have to verify every blessed point you have got. As a worker of the Charity Organisation Society I have gone into some of these details, and I know how perfectly ridiculous it is without very close investigation and very elaborate investigation to really get at the truth. Remember that in a large number of our cases we are absolutely and deliberately deceived. We do not find the truth, especially in regard to what is being earned. You must verify where the man is being employed if you want to get the actual facts. We even know that a man will pay his foreman to misstate his wages.

13196. If a case was one of extremely bad surroundings you could send the child to a day industrial school where he would be fed.—That would be the thing—get him out of the way. You want a healthy place where the boys can go. But I know there is a difficulty about the parents. I should like to take them all away really, but there is the question of parental responsibility, and one does not quite know where to draw the line. If you relieve parental responsibility, take it all away from them, they simply go on; they will breed fast enough then.

13197. You would be in favour, if free meals were given at all, of giving them at special schools?—Yes.

13198. And not give them in the public elementary schools generally?—No, certainly not.

13199. You would not be in favour of a scheme for grouping certain schools round a cookery centre where meals were supplied to every child, and those parents could pay for it should do so?—No, absolutely not. I would take certain parts which are bad and are known to be bad. But remember this, that the part which is bad to-day may be inhabited by well-to-do workmen later on. You have started a system, and no matter what changes take place in the neighbourhood you go on with that system, and therefore that is where one of your great dangers will be. Take Hoxton; you know Hoxton by repute, possibly?

13200. Yes.—That is one of the worst areas going. But that is gradually being improved. If you have a system of free feeding there, all the children of respectable people who come there will expect to have free feeding for their children. In the same way a neighbourhood may suddenly go down.

Dr. Hawkes.

13201. You know that free feeding is one of the demands of the Labour Party?—Yes, but I do not agree with them

13202. But you know it is mooted?—Yes, I think the whole thing is quite ridiculous. Then of course the original idea which I had when I came fresh to it, of taking every child away from his parents and putting it into a home, is what you are bringing it to, because you are feeding and clothing the children, and all that the father and mother have to do is to provide a roof for them to sleep under. You are not doing them any good.

13203. In Lambeth there is at present a large system of free meals undertaken by a charitable agency?—That is all right, because they will probably take care that things are not overdone. But that is not the State. Just in the same way with regard to the milk supply for children: I am not at all in favour of a municipal milk supply, but I am in favour of its being carried out by private agencies. It is less likely to be red-tapey. I think the stereotyped condition of anything which is done by the State makes such a difference.

13204. I think the idea was that the school authority should provide all the paraphernalia and machinery, and only carry it out so far as it paid its way, any deficiency being made up not by the State but by voluntary benevolence.

13205. The tendency, you think, is for the voluntary agency to die out?—Yes, it would be absorbed and they would not have the power of resistance against the others.

13206. (*Colonel Onslow.*) With regard to the milk in small shops, does not that come under the Adulteration of Foods Act?—Yes, and when they are found out they are fined. But for one person who is found out, there are plenty of others who are not.

13207. You were speaking of the Queen's nurses: the work which they do appears to be very similar to that done by the Ladies' Health Society in Manchester: do you know the working of that Society?—No, I know you have Queen's nurses there.

13208. There is an Association: they are under the aegis of the Corporation, I believe?—Yes.

13209. Women go about and instruct the mothers not only how to keep the children clean but how to keep their houses clean, what they ought to eat, and so on. It is a voluntary Association. They have paid women who have come from the lower orders themselves, and they are superintended by ladies. They are not a charitable institution?—You must actually teach by demonstration, then they may learn. It is a very singular thing: I cannot understand the mental development of these people, because you tell them apparently a simple thing and they will not remember it. They will listen to a long conversation between other people and they will go out and repeat it word for word. I used to be very much struck with that.

13210. I understand that with regard to this Health Society, when they hear of a birth they will go in and see how the mother is getting on; they ingratiate themselves into the people's good graces and they take charge, rock the baby, and look after things generally, and teach the mother practically there and then what to do?—Quite so.

13211. I presume that is similar?—That is the thing; it is the practical example. It is no good talking to them.

13212. A great deal might be done if that system, either by a system of Queen's nurses or health societies, were started all over the kingdom in town and country?—Yes, but it should always be provided in these cases that these nurses and people do not give any money at all.

13213. It should be neither religious nor should it give money?—No. The Bible-woman nurse is a most awful person—dreadful.

13214. You mentioned just now that it is not the custom in New Zealand, and it was also not the custom some years ago in this country, for young girls to go into public houses; do you know that it is a common practice now for young men to take young girls into public houses?—Yes.

13215. That was not a common matter years ago?—No, I know.

13216. It was not the correct thing to do, but now it is common?—Yes, and it is extraordinary how high up you see that. People who have got on a little bit used to go to the public houses when they were younger, and they still go. Of course some of them go to the saloon bar. Men apparently quite respectable will do that.

13217. The railway refreshment bar do you mean?—No, the saloon bar of a public house. They pay a little extra and get just the same sort of stuff. I do think that the liquor question is a very important one—the control of the liquor. I maintain that half of these ailments which people suffer from are due to beer and bad spirits It produces a constitutional condition which ends in a state of irritability which makes them lose their self-control easily.

13218. (*Chairman.*) I think I understood you to say that the local authority was unable to enter any house at night with a view to determining whether there was overcrowding or not?—Yes.

13219. Are you familiar with the Public Health Act of 1875?—No.

13220. Would you be surprised to learn that by one section it is distinctly laid down that it is the duty of every local authority to cause to be made from time to time an inspection of their district with a view to ascertain what nuisances exist calling for abatement under the powers of the Act; secondly, would you be surprised to learn that by section 102 the local authority, or any of their officers, shall be admitted into any premises for the purpose of examining into the existence of any nuisance thereon; and would you further be surprised to know that by section 91 (5) a nuisance is defined, among other things, as "any house or part of a house so overcrowded as to be dangerous or injurious to the health of the inmates, whether or not members of the same family"?—You must give them legal notice, I suppose?

13221-5. No?—I was certainly under the impression that you must give notice of what you were going to do. Surprise visits are the only thing to be of any good, but I am not a Medical Officer of Health, and so am not familiar with the details of the Acts.

13226. There is no question about what the powers under the Act are?—The question is whether it says that any notice is to be given.

13227. No, there is no notice?—They are like rabbits. If at the top of the street it is found that anyone is making an inspection they run out into the backyard and into the back street. There is the question of having to do it in such a way that the people do not get to know. In Whitecross Street, which used to be one of the most important market streets in London, if the weight inspector suddenly appears, practically before he has had time himself to test a weight the knowledge has gone on both sides up and down the street.

13228. I have no doubt that is the case?—And that is the difficulty with inspections.

13229. (*Colonel Onslow.*) That is exactly what the police say with regard to finding criminals?—Yes.

13230. (*Chairman.*) But it is difficult to say that these inspections are not necessary, because they are the absolute duty of the local authority?—I will discuss that point with Dr. Newman. I am sorry you have not got him to give you a little evidence. He has done more for Finsbury in the short time he has been there than anybody else.

13231. I fancy the local authorities and medical officers are very often not fully aware of the powers they have?—I think that may be so.

13232. I am afraid the Local Government Board do not do what they might to bring to their knowledge the powers they possess?—No.

TWENTY-FIFTH DAY.

Wednesday, 11th May, 1904.

PRESENT

Mr. ALMERIC W. FITZ ROY (*in the Chair*).

Colonel G. M. FOX.
Mr. H. M. LINDSELL.
Colonel GEORGE T. ONSLOW.
Mr. JOHN STRUTHERS.
Dr. J. F. W. TATHAM.

Mr. ERNEST H. POOLEY (*Secretary*).

Dr. AIRY, H.M.I., called; and Examined.

Dr. Airy.

13233. (*Chairman.*) How many years were you at Birmingham?—Twenty-eight, but the dinners have only gone on for about twenty years.

13234. They have been in operation for about twenty years?—Twenty years, more or less.

13235. What was the first idea of the establishment of these dinners there?—The first idea was that they should be self-supporting, and we took the idea from Mr. Moore Eade, of Gateshead, who was really the pioneer of this.

13236. He was the Chairman of the Newcastle School Board, was he not?—I am not sure. His experiment was at Gateshead. We started by having penny dinners with the idea of having no such thing as charity entering into the matter, and that they should be self-supporting.

13237. Was it the School Board who started it?—No; it was started by Mr. George Dixon, who was the Chairman of the School Board. It was done with the goodwill of the School Board.

13238. You had their concurrence and sympathy?—Yes. It was a complete failure, because we found we were doing a rapidly declining business among the wealthy and aristocratic classes. So after a short experimental time we gave that up absolutely. It was a failure, because we found at once that the children who could pay a penny for a dinner preferred to pay a penny at home.

13239. Is that always the case? I do not know whether the employment of women is considerable in Birmingham?—Yes, it is very large, and that is the only exception. Under the normal state of things where there was a parent who could prepare the dinner, both the parents and the children preferred the dinner to be given at home for children who could afford as much as a penny. We then reduced the cost to a halfpenny, and then came a revelation which was astounding to me, that there were many hundreds of children, and even thousands, who could no more find a halfpenny for a dinner than they could find half-a-sovereign.

13240. That is so in Birmingham?—Yes, and it is so in London. It did not touch the starving children at all, and it was the starving children that we had in our minds. We did not know when we started that the children who could afford a penny were not starving; we did not know that the children who could afford a halfpenny were not starving. We thought things over, and we decided to throw Herbert Spencer to the winds, and our old idea with regard to its being self-supporting, and about its being a charity; we threw all those considerations to the wind, and became a charity, and decided to give a dinner free to the starving children. Then we had to consider the principles upon which we would act, and we decided in the first place that only those should be helped who could expect practically nothing if we did not give it to them. Secondly—and this is most important, and I emphasise it in any such scheme—that only such a meal should be given as would not compete in any way with the meal which could be provided even in a very poor home.

13241. You mean in respect to its quality?—I mean that if a child could get a decent dinner at home at all it was far better that it should get it there than that it should come to us.

13242. The test was whether it would turn up its nose at the dinner you provided or not?—No, I should put it rather more strongly than that. If the child could get a dinner at all which would carry it through, we would not interfere with the home arrangements. We considered that we were bound to take only what you may call starving children, from whatever cause they were starving.

13243. Neglect may have been one of the causes?—Yes. Then we decided that cases for help should be selected with the greatest care. That is done by three different people—by the head teacher of the school, by the class teacher in whose class the boy or girl is, and by the visiting officers.

13244. The class teacher is the first to suggest a child, I suppose?—Yes.

13245. And you find the co-operation of the three is sufficient to secure the object you have in view?—Quite sufficient, I believe.

13246. That, of course, was Dr. Macnamara's point—the collaboration of the three?—I should say at once that I have not the slightest doubt there is a little abuse. I am willing to admit it at once. There may be 5 per cent of abuse, but if you can show me any charity which has less than 5 per cent. of abuse I shall be surprised. I do not think there is 5 per cent. or anything like it, but I will put it at that. Then we tried to ascertain about how many children there were in a normal state of starvation in Birmingham, apart from all accidental circumstances such as the parents being thrown out of work or anything else—how many you might be sure either got nothing at all in the middle of the day or, at the outside, got a little bit of bread with a little lard or grease scraped on it. That took us a little time to do, but we reckoned there were in Birmingham then about 2,400 or 2,500 children for whom we ought to provide in any normal state of things. There was a population of about 400,000 people. Then there was a varying amount of children who depended on the state of employment.

13247. What difference did that make to your estimate?—In one winter——

13248. It was in the winter, of course?—Yes. We only feed the children during the winter months—for want of money, for one thing. I am sorry that I have not got our figures here for all the years we have been at work. But you can take it from me that in one year when there was a very prolonged winter the number of meals doubled—that instead of there being about 200,000 dinners distributed there were about 400,000 dinners. I wish to press this particularly, that the moment the conditions of employment improved the number fell off again to its normal state. By our system of not competing with the home, of only giving a dinner that will carry a child through, we avoid the slightest appearance of pauperisation. So far from causing this the case is rather the contrary. In many cases that I know of, parents who have been helped have been ashamed of themselves and have started helping their children.

13249. Should you say that the fluctuations of employment in Birmingham were greater or less than in most other big manufacturing centres?—I should say

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on the whole less, because Birmingham does not depend upon one employment.

13250. It has a great variety of employments?—Yes. But the moment you get a severe and prolonged winter it touches all employments almost.

13251. In regard to female labour, is there a large proportion? There is, of course, not so much as in the textile industries?—There are many girls employed.

13252. But not married women? There are not many employments which would draw married women into the factory or workshop?—No.

13253. We should like to hear your description of the methods employed?—This is a point on which I venture to suggest I may possibly say something useful to the Committee. We began with ten centres. We had large coppers for soup at ten centres, to which the children came from all outlying schools. The School Board allowed us in each of those centres to canvas off some twenty or thirty yards of playground, perhaps five yards wide, and the cooking was done at one end. There the soup and the bread and jam, which I will tell you about presently, were prepared. The process was simply this: we had to do everything to simplify matters. It had to be a rough business, but it was an effective one. The children come, and form file, and then they walk up, and as they walk up they take a spoon out of a basket and go up to where the voluntary helpers are distributing the soup. They take their bowl of soup and go on to benches on the other side of the canvassed shed, and sit down and eat their soup. The moment they have done they put their basin and spoon into another basket, and as they go out they take a large slab of bread and jam, and eat that in the street. The School Board allowed us to do this without any rent, and they gave us the gas.

13254. What are the constituents of this soup?—It is chiefly lentil soup now.

13255. Is there any animal stock in it?—Yes, there is a certain amount but not very much. It has been found by incessant experiment—because this has been an experimental business year by year—that lentil soup was the best. A starving child cannot take anything good; its stomach rejects it at once. We gave far too good soup at first. It had to be found out by experiment what they would stand.

13256. Those were mid-day meals, of course?—Yes; I will come to the breakfasts in a moment. Then the cooking of those meals is done by paid labour, but the distribution is done by the voluntary help of ladies at each centre. There is a rota at each centre and there are two ladies who attend each day. Our manager I will refer to directly—he is a most capable, suggestive man. We were very much distressed at the fact that the children would come a mile or a mile and a half to eat this poor dinner, and they would come through slush and snow and wet, and we wanted to prevent that. A system of baskets was invented. There is a system of baskets at present in use by which the soup can be kept absolutely hot for more than an hour. I have tried it at both ends, and I find it is almost as hot as when it comes out of the copper. We reduced the number of centres to four or five, and now all the outlying schools send their baskets with a paper saying how many dinners they want. Those dinners are put into the basket at a quarter to twelve or twelve o'clock, and then the staff of the school help in distributing the meals at that school.

13257. That is an economy, is it not?—Yes, but we do not do it for that purpose.

13258. But it has that further effect?—Yes, it is extremely useful. The staff of the school are very ready now to help. But the whole thing has come through constant improvement in the machinery. Starting with the principles which I mentioned, we said, "We are going to give a dinner in the rough, but something which is good enough to keep starving children going, and help them," and what the teachers think of it is shown by the fact that a considerable proportion of the money raised is raised by the teachers themselves. I have told you what the dinner is. Now comes the most astounding economic fact with which I have ever come in contact. We give that dinner, a large bowl of soup—in fact they have two or three bowls if they like—and a large slab of bread and jam, for less than a halfpenny, and in that expense is included £150 or £100 a year to the manager. We spend deliberately nearly a third of our money upon the manager's salary, and the whole of our success has depended upon that. I have had to defend that over and over again, and the defence is complete. If we can give that dinner for a halfpenny, and if we can give it merely because of the excellence of the management, then I say that is defence enough. Somebody may say, "If the manager will take £50 we could give £50 more on dinners." "Yes," I say, "but the dinners will cost you a penny instead of a halfpenny, and they will be bad at that." Then I have spoken about there being no pauperisation at all, and there is no increase of numbers except under those circumstances which I mentioned, stress of weather, or loss of employment, from any particular cause. Then there come the conditions upon which all this depends, and I have put them down in the *précis*. First of all you must have a condensed population of the sort you want to help; they must not be far from you.

13259. They must be all concentrated?—Yes. Then, secondly, you must have the goodwill and the help of the local authority, and, thirdly, you must have a kind of heaven-born manager. That we had the good luck to get. He was an officer in the Navy who had retired, and he came to us when we were in great difficulties as to how we were to go on, because things were pressing at one time. And he said, "I should like to try and manage this if you will allow me, for nothing."

13260. He was a born organiser?—Yes, and not merely that, but with his own hands he can do things. He is the ablest man I have ever met for such work, and with enthusiasm for it. He did it for nothing at all for two years, and at the end of that time we said: "We will give you £150 a year." When subscriptions fell off I put it to him that things were not very bright, that he was worth more than £150 a year to us, but that we should be glad if he would take £100; he said that he would, and he is now paid £100 a year. He is a man who not only can deal with actual work, and finance, but with the ladies, and that is a great point.

13261. You get a quantity of voluntary assistance in that form?—Yes. Of course all voluntary assistance is liable to interruptions. We have had policemen come; there is always a policeman in each place. They will do anything to help this work.

13262. You have not made any attempt to recover from the parents if you thought they could pay?—No, we have not thought about parents at all. On the subject of pauperisation may I say that people have said: "You will encourage this drunken parent to do so and so." I have said at once, "I have looked into the matter very carefully, of a drunken parent who neglects his children, and he will not drink a pint less or more for anything that we do for his child; it will not make the slightest difference." It is useless to begin with the parents. We begin with the children and stick to the children, and we have been rewarded, as I say, by the number falling off. We have not got so many who want help now in Birmingham; each year the number has diminished.

13263. Is that because the employment in Birmingham is better?—I think it is simply that.

13264. The pressure upon you might be more acute this year or next year?—Yes. We are very elastic. We are always prepared to double our numbers if necessary under stress.

13265. Is any difficulty found in distributing these dinners in the schools themselves?—It depends on the number. It is only a small number in any school, and they take it in the lavatory or somewhere where they will not make a mess.

13266. The system has not been on a scale which would enable you to attempt to associate the teaching of cookery in the schools with the distribution of these meals?—No.

13267. Do you think in any circumstances that it might be possible?—I do not think it is advisable to do the cooking in the schools. I think there would be the smell and a nuisance.

13268. I mean if proper arrangements were made ?—These were in the playgrounds of the schools.

13269. There are a certain number of the schools which have apparatus for teaching cookery ?—Yes, but they have not the apparatus we want. They have got stoves and ranges.

13270. Is it not possible that the apparatus which they provide at elementary schools for the teaching of cookery is really beyond what is required ? It would be more useful to the children if you could adapt the conditions of the teaching at the schools to such as prevail approximately in their own homes ?—I think you would be causing embarrassment to the cookery school without sufficient reward for it if you used them for our dinners.

13271. Is it not the case that a great deal of the teaching of cookery in schools is above the requirements of the class which you aim at benefiting ?—I am hardly prepared to say that. I think it may have been so in a good many cases, but I do not think it is so generally. No, I should say not, at any rate I do not think that touches this case.

13272. It is only incidental at any rate ?—Then with regard to the breakfasts, we have got a system of that sort, but it is nothing to do with us except that we help one another. There is a gentleman in Birmingham who gives breakfasts of cocoa and milk and bread, every morning, to all the necessitous children in about twenty schools in Birmingham.

13273. At one centre ?—No, at each centre. That was a great blessing. We could not do that because we live on voluntary subscriptions.

13274. And he is willing to meet any demand of that sort throughout Birmingham?—I do not say any demand but he is extending it by degrees. Every now and then I have gone and said to him, "There is another school in a very bad way; can you help it." He said, "Well, it is getting rather a big job, but still I will do it."

13275. Those meals cost less per head than the dinners, I suppose ?—No, I believe they cost more.

13276. That is perhaps due to lack of management ?—I think the milk is very expensive.

13277. Did he ever think of giving porridge ?—No, he has never given porridge.

13278. Is that meal made use of by the same class of children in Birmingham which take the mid-day meal ?—Yes.

13279. Is it given upon the same scrutiny of home conditions so as to justify it ?—I am not quite sure about that. But I think that it is practically the same.

13280. You think that a scheme of this kind is quite capable of general application ?—I cannot see why it should not be applied to London, if it were tried on our plan, that is dividing London into districts, and not being afraid of having a manager for each who would do the thing. We have a committee, of course, which meets pretty often, but the details all depend upon the manager.

13281. In London there is a larger quantity of children to supply, because their mothers are employed in factories or workshops ?—In those cases they should pay ½d. for their dinner. We allowed people to pay for their dinner but the result was this. I think we had about 300,000 dinners last year and there were on the whole only 2,300 halfpennies. It practically comes to that. But in a great many parts of London it would be a waste of money to do it. I was in a Board School in Southwark not long ago, and I said to the master, "You have got a kind of middle-class school here." "Oh, no," he said "they are poor." I said, "Poor! you do not know what it means." They were all well-booted boys and not one of them would want a dinner under any circumstances.

13282. (*Colonel Fox.*) What percentage of the children do you provide dinners for ?—We reckon there are about 2,400 or 2,500 that are in a normal state of wanting it; that is with a population of 400,000 or 500,000.

13283. (*Chairman.*) What proportion of child population does that represent—about 2½ per cent. ?—About 5 per cent.

13284. (*Colonel Fox.*) We heard that in London about 20 per cent. of the children require free food ?—The point is what you mean by requiring free food. I do not think there are 20 per cent. of the children who are starving. There are 20 per cent. of children who do not get an ample supply of food. We have not been able to consider them.

13285. You said there were 400,000 people ?—There were between 400,000 and 500,000 people in Birmingham then.

13286. What sort of rough percentage do you think you deal with ?—I do not know. I should have to think.

13287. (*Dr. Tatham.*) You say that you deal almost exclusively or quite exclusively with the Board Schools, do you not ?—Oh, no,

13288. Then I misunderstood you ?—The kitchens are situated in the playgrounds of the Board Schools, but children from all the schools come. That is how it comes about that I was Chairman from the very beginning, as being the Government Inspector. Mr. George Dixon, who was Chairman of the School Board, when he started this at the meeting, came to me and said, "We do not want to have any distinction between Board Schools and Voluntary Schools; will you be the Chairman, and then people will know there is no distinction." That is the only reason I took it.

13289. That is very important ?—Yes. There is not the slightest distinction. In fact at some of the kitchens the bulk of the children are from very poor Voluntary schools.

13290. (*Colonel Fox.*) This includes all elementary schools?—Yes

13291. (*Dr. Tatham.*) Amongst the witnesses who have appeared before this Committee there has been a general consensus of opinion that whatever you do you must feed starving children. The only difference of opinion seems to be as to how to do it without pauperising them ?—Yes.

13292. You seem to have got over that difficulty ?—I claim that we have solved it absolutely without any question. If you only feed starving children, and if you take care not to give too good a dinner, there is no pauperising effect whatever.

13293. You will understand that as a medical man I am very much interested in the composition of the food you give; do you object to tell me exactly what your food consists of ?—I would not object for a moment if I knew. I will find out in a couple of posts. I know it is chiefly lentil soup and a large piece of bread and jam.

13294. But as regards the composition of lentil soup ?—I will find that out and send it.

13295. It would be interesting if we could get that, because I think I may say that we are all very glad to hear of the fact you have brought before us that a dinner of this kind can be provided for less than ½d. ?—It is a most astonishing thing. I do not say that I should like to make my lunch on it every day, but I have lunched on it with satisfaction. The bread and jam is very much valued.

13296. (*Mr. Lindsell.*) You confine your attention entirely to what you consider starving children ?—Yes.

13297. Where do you draw the line between a starving child and a child who is imperfectly fed ?—It is almost impossible to say, but practically it comes to this, that these three people investigate very carefully the circumstances of the child—I admit in a somewhat rough way, but in an effectively correct way. They say "This child is a good recipient for this ticket."

13298. It is done by ticket ?—It is not exactly, but t comes to that. Each day one child from the school goes with a slip of paper telling the controller at the kitchen how many children he is bringing from that school and they are counted as they go in.

13299. How do you take care that an unworthy recipient does not get it—I mean one who has no claim ?—I think, as I said, there may be 5 per cent. of abuse.

13300. How do you know that the child who is selected for this meal free is the one who comes ?—Because we give no temptation to a child who can get a decent dinner to come. There is no temptation whatever for him to come; our dinner is not good enough. That is where we have been very careful.

13301. Do you see any reason why this should not be extended in such a way as to include not only the charitable free meal to the absolutely starving child but also

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a meal, better at any rate than he could get at home, to the child who is imperfectly or improperly fed?—Only the general objection that I do not like to have charity where it is not absolutely needed.

13302. Then you would not be in favour of the plan which has been placed before us by Sir John Gorst and Dr. Macnamara that this feeding should be carried on at schools to a much greater extent than it would be possible to do by a pure voluntary agency, and that, in fact, any child attending a school which was in a neighbourhood where the families generally were, if not in great poverty, at any rate in poor circumstances, should be entitled to have this meal on receiving a ticket from the school authorities, that ticket being purchased by the parent, and that if the parent in the opinion of the local authority failed to provide his child with a proper meal at home, the price of the meal should be recoverable by some penal process?—I should be very glad indeed to see a neglectful parent dropped upon, but the machinery would be very elaborate for such a thing as that.

13303. Dr. Macnamara in his evidence stated that there were three committees of the London School Board by whom this question of feeding was considered and the third committee, that of 1898, was the one which dealt most closely with the question and came to a definite opinion on the subject. As he admits there, the recommendations of the committee were not accepted by the School Board itself. The first proposition as you will see in answer to question 12377 was, "It should be deemed to be part of the duty of any authority by law responsible for the compulsory attendance of children at schoo to ascertain what children, if any, come to school in a state unfit to get normal profit by the school work whether by reason of underfeeding, physical disability, or otherwise, and that there should be the necessary inspection for that purpose?"—But how would that necessary inspection be carried out? It could only be carried out in the pupils' houses. That would be impossible, I take it.

13304. We want your criticism upon this?—I cannot imagine a system being tolerated by which any inspector could at any moment go into a house.

13305. But he could inspect a child at the school?—But how are they to tell whether a child is unfit by want of food unless they know what food the child has had.

13306. He was asked what he meant by necessary inspection, and he said: "I mean inspection both on the part of the board's officials, and I imagine, in regard to physical disability, a medical inspection. But with regard to underfeeding, the Board itself has, or could have had, machinery other than medical machinery for testing that question. I do not think that you require a medical examination. There are attendance officers and teachers, and so on, who could do that." That is very much what your people do?—That is only by inquiry. They cannot go to the house and see what is going on at the house.

13307. He says that there should be an examination of the condition of the child's home?—I think that would be very difficult.

13308. (*Chairman.*) The visiting officer comes in there?—He goes to see why a child has not come to school, but he does not go into the house to see what the child is having to eat.

13309. It was said that these visiting officers know a great deal about the condition of the child's home?—Yes, they cannot help doing that, by inquiring and one thing and another; but I do not see how you can ever find out whether the child had had food or not. It would be a most difficult thing, I imagine, and would lead to a great deal of trouble.

13310. (*Mr. Lindsell.*) Their second proposition was: "Where it is ascertained that children are sent to school underfed"—this would go beyond starvation—"it should be part of the duty of the authority to see that they are provided under proper conditions contained in Clause 6." That makes it the duty of the local authority, besides their duty of imparting instruction, to give food to those that are not sufficiently fed to profit by that instruction?—Is it not the case that they would come under the disabilities of the Poor Law?

13311. No. I think you will find afterwards that they object to Poor Law treatment at all. They would have a new power of providing food; it would be under the Education law?—I do not think my views are sufficiently matured to be of use to the Committee. I might say something unadvisedly. I really thought the only good I could be to the Committee would be to describe our machinery and what we have done.

13312. I will not ask you, if you cannot answer that?—I would answer gladly if I could.

13313. As an inspector, from your knowledge of the whole thing, we should like to know whether those things are really visionary or whether they are at all practical?—As far as I can think at present, I do not think that the inspection of the homes for the purpose of ascertaining whether a child has had a proper amount of food is practicable or practical.

13314. Then I will not trouble you with the question of how the parents are to be dealt with who could provide their children with proper food but do not. The general idea is that such a parent should be treated as culpably negligent, and by some machinery or other—under the Prevention of Cruelty to Children Act, or some other Act—made punishable and made to pay the money?—I do not know whether that would come under the terms of the Prevention of Cruelty to Children Act or not.

13315. (*Chairman.*) Neglect figures largely there?—I cannot remember the terms.

13316. (*Mr. Lindsell.*) It would require legislation to fit it in, but that would be one way of dealing with the parent?—Nobody would be more delighted than I should be, but with our limited outlook and means, and our difficulty of working altogether, we have purposely neglected the parents, and all questions concerning the parent.

13317. If your dinner practically only costs a halfpenny, do you see any objection to enlarging the scope of it, and not merely giving the starving children a meal free, but letting those who like pay for it?—We let them pay now, but none come—practically none.

13318. What Dr. Macnamara would like would be that they should be able to say, "This child has a parent who does not feed it properly, but can afford to pay; and, therefore, this child shall come and have our meal as well as the absolutely starving child."?—I think the child will come fast enough if he cannot get enough at home, whether the parent has £1,000 a year or 5s. a week, and we let the child come if we are satisfied that its parents, even if they are well-to-do, absolutely refuse to feed it.

13319. (*Chairman.*) You would not attempt to get anything from the parent?—No, not with our machinery. We do not care what child it is that is starving. The fact remains that the number never increases, but diminishes.

13320. Machinery of that kind is easily grafted on to your scheme?—Yes.

13321. (*Mr. Lindsell.*) What would be the advantage of this idea of virtually providing meals for nearly every child in the school?—I do not like it myself; I would rather not see it.

13322. And it might dangerously weaken the sense of parental responsibility?—I think so. Certainly, if you carried it to that extent, I think it would.

13323. (*Chairman.*) Does that sense of parental responsibility exist now? Because you cannot diminish a thing which does not exist?—I think the great bulk of the working classes have it and are very careful of their children.

13324. (*Chairman.*) We have had evidence here which tends to disprove that theory.

13325. (*Mr. Lindsell.*) You say you carried this thing on under the *ægis* of the school board?—Yes, under their goodwill.

13326. To a certain extent they give you the ground?—Yes, and the gas.

13327. Would you see any objection, assuming the meals themselves were found by voluntary charity, to the machinery being placed more in the hands of the school authority, so that it would not be a question of free meals out of the rates at all?—No.

13328. I mean if they found the gas, and a place in the playground, might not they find a room and more apparatus ?—It is not necessary to find a room. It probably means interference with something else, if they do find a room.

13329. If it is on a large scale they would require more apparatus than is required at present ?—No. It would only require more centres. My idea is that you might carry on precisely the same system in more places.

13330. If your local authority took up the question and provided machinery and distributed meals, and did the whole of the work, it might be left to some charitable organisation to supply money for the meals in those cases where they were not self-supporting ? The bulk of the children would pay a penny and the charity would make up any deficiency ?—Do you mean give a much better meal ?

13331. Give a rather better meal ?—I do not see any harm in that.

13332. Sir John Gorst instanced the case of life boats, in regard to the Government ; they provide all the facilities, but the life boats themselves are provided and supported by a private society ?—Yes.

13334. You might have all the machinery found by the school authority ?—Yes.

13335. But any deficiency caused by the provision of free meals to poor children might still be made up by some voluntary agency ?—Yes. I think as long as the machinery for getting poor and starving children was good that would be all right. I do not mind about the children who pay—I do not feel any interest in them in this respect.

13336. (*Chairman.*) It is a question of convenience for them rather than anything else ?—Yes, I do not feel any interest in them.

13337. (*Mr. Lindsell.*) Do you know there is an agitation on foot which seems to be growing in force in some quarters, that if you compel a man to send a child to school you should feed it ?—I am absolutely opposed to that in principle.

13338. (*Colonel Onslow.*) There is only one point I wish to ask you. You mentioned that the cooking of the meals is done by paid labour, the washing of the dishes and so on ?—Yes.

13339. You do not employ the children to do anything of that sort themselves ?—No

13343. And also I suppose the baskets are sent round by paid helpers?—No, the children are sent for the baskets. They come on a little trolley ; it is no labour ; and the children who bring them get some little reward for it. That is really paid service.

13341. But it is done by the children ?—Yes, the baskets are an enormous help.

13342. (*Mr. Struthers.*) You find normally about 2,500 children in Birmingham ?—It was a good many years ago that the census was taken.

13343. Do you think the numbers have greatly increased since ?—No, I do not think they have.

13344. Are these children selected, or do they simply report themselves, and say they want a dinner ?—The children are asked, "Who wants a dinner ?" In many schools nobody does. If a child says "I do," its circumstances are carefully investigated as far as can be done without intruding on the home itself by these three people. There are also other indications. I was interested in the matter by noticing that pink flush on the children's faces which means starvation and not health.

13345. Have you had any cases brought to your notice in which children who do not ask for a dinner were reported by the teacher, or other people connected with the school, to be obviously starving ?—Yes. Some of the children have a sort of reluctance, even when starving, to come and ask ; but that is not a large number. Still there have been such cases.

13346. Supposing you add on all the children of that type to that 2,500, do you think it would very greatly increase the number ?—No.

13347. So that you would be safe in saying something about 3,000 at the outside was the number of children in the normal state who were what you might call starving ?—Yes.

13348. In the sense that they have got nothing during the day, except possibly a piece of bread. Are there not a considerable number of children in addition to that who do not get anything like sufficient nourishment ?—I do not know what sufficient nourishment is. But it comes to this that if a child can produce a halfpenny it does not come to our dinners. That is almost an answer to what you are asking. They get a dinner which is sufficient for them at home.

13349. Of course there is this to be said, that a child who is underfed, but who has a halfpenny, may prefer to spend it in another way ; he is not aware of the necessity of food, except that he, perhaps, has an abnormal craving for sweets, or something of that sort ?—I do not mean those who have a halfpenny in their pockets, but those who can procure a dinner at home which corresponds to the halfpenny.

13350. Do you think that the meal which you give them, the bowl of lentil soup, and the bit of bread and jam, is sufficient to keep these children in fair condition ?—Yes.

13351. You find it so from experience ?—Yes ; I do not say in the condition which I should like a child to be in, but in a very different condition to what it used to be.

13352. The practical point is, can they do the ordinary school work—not excessive work, but the ordinary school work on that ?—Yes ; the teachers report that the difference is perfectly extraordinary. After all, he gets as much as he can eat very often.

13353. Do you think that these children get much food except this meal ?—I do not know how much they get. A great many of these children will pick up a penny by minding a horse, or something of that kind, or by doing some little trick in the town. What they spend that on I do not know. Sometimes it is cigarettes, and sometimes it is sweets.

13354. But your scheme aims at nothing more than securing that no child shall be compelled to starve—there are the means there of getting a certain amount of food ?—Yes.

13355. If the child itself wishes it, or if its attention is properly directed to the possibility of getting a meal ?—Yes.

13356. (*Chairman.*) Do you think that a medical inspection of schools, as a re-inforcement of the system which you have described, would be a useful thing to fall back upon in case of doubt ?—Of course medical inspections for certain purposes are carried out already, for the eyes, and so on.

13357. I mean in regard to the question of starving children. Or do you think that there are no cases of doubt where it would be necessary to submit the point to the arbitrament of a medical inspector ?—Unless the medical inspection was very thorough, would it be very much use ?

13358. Would not a medical man, *prima facie*, be a better judge as to whether a child is in a starving condition than any teacher?—I suppose he would. I do not claim perfection for our plan at all ; I think it is very rough, though I think it has been a very effective way of meeting the need. Of course a medical man would know more about it.

13359. On general grounds, do you think a medical inspection of schools would be a useful expedient with a view to determining, and possibly correcting, conditions unfavourable to the health of the rising generation ?—I have no doubt it would.

13360. (*Mr. Lindsell.*) May I assume that you think that your system practically meets the difficulty of starving children in Birmingham ?—It mitigates the evil enormously. I cannot say it meets the difficulty, because one meal in a day cannot meet a difficulty of that kind. But it takes all the keenness off the difficulty.

13361. (*Chairman.*) Then you say it is supplemented by these breakfasts ?—Yes, but that is incidental ; you would not get that done in London. That has only been going for one year in Birmingham.

13362. You think a mid-day meal is of more importance than a meal the first thing in the morning ?—I do

Dr. Airy.

not say that. All I say is that we started a dinner and stuck to it.

13363. We had a distinguished medical authority here—Dr. Hutchison—who said that as long as a child got a certain amount of nourishment during the twenty-four hours, it was a matter of minor importance what period of the day he received it?—I think that is quite possible. As I say, we started our plan, and found it useful, and found everybody wanted to keep it on; and we found that the teachers helped. The Birmingham Board School teachers alone raised something like £800 for various charities for the children in the schools, of which our dinner scheme is one.

13364. What is the total cost of this?—It costs between £300 and £400 a year, but we do not begin till the end of October, and we go on to the beginning of May.

13365. You do not think any such system is wanted in the summer time?—I will not say that, but it is not nearly so much wanted. It is quite curious how our members drop off when the warm weather begins.

13366. Automatically?—Yes. In the warm days they can pick up many more things.

The Hon. Maude STANLEY, called; and Examined.

Hon. Maude Stanley.

13367. *(Chairman.)* You have had considerable experience among the workpeople in Soho?—Yes, thirty-four years.

13368. Is that in connection with girls' clubs?—No, in connection with the parish. I went there when I lived in London altogether, because my brother was a curate there. Then it was a very well-worked parish. There was a vicar and four curates, and district visitors, and Sisters, but when the vicar died (he had been a Ritualist) they were very anxious to make a change, and they put in a clergyman who never did anything. He was there for twenty-nine years, and all the district visitors left the parish except myself. So that it came to my lot to do anything there was to be done in the parish. That is how I became so very well acquainted with them, more than I should have been in the ordinary way. There were 6,000 in the parish, all poor, and I think I knew every house.

13369. You did house-to-house visiting?—Yes, and I also undertook other work for them. First of all I began with boy's classes, night schools, and Sunday schools, and then I went on to girls,' and then had mothers' meetings, so that I knew the people thoroughly; I could not have known them better.

13370. It is on the physical condition of the girls that you especially wish to speak, I think?—Yes. I started a club for girls in 1880—that was ten years after I began to work in the parish, and it has been working ever since—twenty-four years.

13371. On what sort of basis was that club established?—It was established for any girls to come to who liked to do so, and their homes were visited to see if they were respectable. There was no difficulty in that way, but I wished to prevent the possibility of such a difficulty.

13372. It was open every evening, I suppose?—It was open five nights a week.

13373. What instruction was given?—They had classes of all sorts and kinds, and besides that they had dancing once a week. We had School Board teachers and voluntary teachers.

13374. Did you attempt to equip them for the conditions of domestic life by giving them lessons in hygiene, and the management of children, and so on?—They had clases of hygiene laundry and cookery, but they do not like going to service. It is very rare that I have been able to induce them to go to service.

13375. I meant with a view of being properly equipped for home duties?—They attended nurse classes, needlework and dressmaking, but I have not been able to induce them to go to service.

13376. I was putting the question from the point of view of equipping them to become useful mothers. That appears to be the great lack at the present day. A great deal of physical degeneration, of which we hear, is said to be due to the extraordinary ignorance and want of interest that a mother takes in the obligations of maternal life?—It has never been so in Soho, though Charles Booth marks it as one of the blackest spots on the map. There is more phthisis in part of Soho than in any other part of London, because it is so overcrowded.

13377. There is a great deal of overcrowding there?—Yes, tremendous. Before the Charing Cross Road and Shaftesbury Avenue were built it was very bad indeed.

13378. It is better now?—Yes. I have been very much struck by the submissiveness of the girls to their mothers; they bring home their wages and the mother gives what she likes to them as pocket money and keeps the rest to dress and feed them.

13379. Do you think the mother attempts to familiarise them with what their duties will be when they become mothers in turn?—No, I do not think the mothers are very much educated. I think the girls will do better towards their children.

13380. You think that with regard to that the conditions are improving?—Yes.

13381. Would you say that the physical conditions of the girls have improved?—Yes. I never saw any evidence given of such improvement in the newspapers, and therefore I was anxious to say what I could. I have not statistics, but the experience of those who really work among the poor is that they have improved. You can see that by the appearance of the girls coming into the club—some sixty or seventy girls every evening. They are very well grown.

13382. What are their ages?—They come in at fourteen and stay till they marry.

13383. What are they employed at during the day?—More than 50 per cent are occupied as tailoresses. That is the principal trade in Soho.

13384. Are they employed in their own homes or in workshops?—In workshops—by sweaters very often.

13385. Are the sanitary conditions in those workshops desirable?—I suppose they are—they are inspected.

13386. We are told that it very often happens that many of these slum workshops escape inspection?—I do not think they do now. I think the inspection is very good.

13387. You think in regard to ventilation every precaution is taken?—I cannot really answer that.

13388. You would assume it was so from the improved physique of the girls who come under your observation?—Yes. I attribute the improvement in the working class people to the enormous amount of work done by the School Board, and by thousands and thousands of volunteer people who have taken them for holidays in the country.

13389. What proportion of the girls at the age you mention, do you suppose, get a holiday in the country?—There are very few who only get the Bank Holidays, but there are a certain number.

13390. Are they taken out into the country by means of those organisations which are devoted to the purpose?—Yes.

13391. For ten days or a fortnight?—According as they can afford the time. I always ask my girls how long they can spend in the country—a week or a fortnight or three weeks.

13392. Are they eager to have the opportunity?—Yes. Then I ask them how much they have to spend towards it, and I deal with the matter accordingly. I have some invitations for which they would have nothing to pay.

13393. Some contribute the whole cost of their holiday?—Yes. Really the work has been done very thoroughly in every way by the School Board. There are many other things which the School Board do; they send round doctors and nurses to the schools and see if they are out of health in any way.

13394. Have you been acting as manager for the School Board of any schools?—I have been Manager of the Charing Cross Road School for the last thirty years.

13395. You have never been a member of the School Board?—No, I have enough to do without that. Really

I do not think you could say there was physical deterioration except that caused through overcrowding and drink. I have also to deal with feeble-minded children. I am a member of the Metropolitan Asylums Board, and we have homes for these feeble-minded children. They live in our homes and go to the special schools of the School Board. If you look into their histories you will find that almost all of them are children of drunkards and that is what brings them there. If you go into special a school where you have such children you will see them in classes of forty, and it is a most distressful state of things to see those poor children who are all impeded for life in some way or other, either by being feeble-minded or with some other physical defect.

13396. Are any of them susceptible to improvement?—Yes. We have had a home in Lloyds Square started for five years and it seemed to be working very discouragingly in one sense, but I thought that the work we did would prove to the Legislature that these children never could be really left to take care of themselves. We did everything we could for them; they were kept in a good home and were sent for four weeks to the sea-side, but that will never put brain power into them. I have a girl that I put to service at the Club in Soho. When she first went they did not think they would keep her, but I tried to induce them to do so, to bear with her, and after two years she is absolutely reformed and makes an excellent servant. I can now trust her to go to Camberwell to see her sister alone. She is absolutely a good servant but she will never be fit to take care of herself in the world.

13397. She is a proof of what can be done in meeting the conditions up to a certain point?—Yes, up to a certain point. I hope people in England will see that they must be kept for ever shut up, as they are in America.

13398. Do you think there should be a class of school which will take a child, not technically defective, but still one that comes from the worst and most neglected kind of home, so that it should be, at any rate for some years of school life, brought up under somewhat special conditions?—That is what we do with these feeble-minded children.

13399. But there is a class which can hardly be included among feeble-minded children but who are unfit for the ordinary school curriculum. What I wished to put was whether the system of special schools might not be to some extent extended, so as to meet that particular class?—I think it is very bad for the parents to know that they need not do their duty to their children because they will be taken care of by the State.

13400. But if you have a vast number of children suffering from neglect, do you not think that the children are of the first importance?—There are truant schools which are established.

13401. It is an extension of the system that I was referring to?—I saw a great change in the parents when the law first came into force that the children complained of could be sent to homes. I found the parents all telling me that their children were not able to be taken care of at home and so on, in order that they should be taken to homes, and they asked me how they could get them put into homes. I think it would very soon demoralise the parents.

13402. Supposing the parents were made responsible for a large portion of the cost?—You cannot get it from them.

13403. (*Dr. Tatham.*) I understood you to say that in consequence of the considerable alteration which has taken place in Soho the general condition of the place has improved?—Yes. Soho is built upon a very deep bed of gravel and it is very healthy, although crowded in some respects. When there was a case of fever, it never spread, although there was a houseful of families including children. It hardly ever spread from one room to another. I never found the sanitary condition affected the health of the children. I think the overcrowding did, and the quantity of people in one house breathing the same air.

13404. But did I not understand you to say that considerable improvements had taken place?—Improvements have taken place by not allowing so many to be in the same room or in the same house.

13405. Not by the demolition of houses?—Yes, there has been demolition of houses.

13406. But the general effect has been to improve the houses?—Yes, the houses have been improved. But I really base the improvement upon the work which has been done in the schools and for the older girls. There are at present about 400 clubs for working girls in London, and for boys about double that number. And during all that time the girls and boys have had every sort of advantage for health—athletics for the boys and physical exercises for the girls, and so on. There has been improvement in all those sorts of ways.

Hon. Maude Stanley.

13407. You spoke of a club with which you were connected?—Yes.

13408. You look upon that as an enormous advantage to the poor people?—It is quite an enormous advantage to them. Then the kindnesses which are shown to these girls get spread about among all the relations. It does them good and makes a better and kindlier feeling in that way. They take a great interest in what the girls learn. I started a club eighteen months ago in Walworth, because I heard of its being the very worst part in London, and the most neglected. I could not have imagined that the girls could have been so demoralised in their conversation, and in their actions as they were. When I went there they used to use very dreadful language, and say very terrible things; they used to run about in the forms, escaping from the lady who had charge. However, we went on, and now we have a place to ourselves in Walworth. There are eighteen acres of land belonging to the Ecclesiastical Commissioners which have fallen in, and they are going to remodel that estate altogether. I have an old beer-house for the club. These girls are so absolutely changed that I took twenty of them down on last Bank Holiday to Virginia Water. I took them to St. Anne's Hill and then to tea, and they behaved perfectly well. Many of these girls had passed the Seventh Standard at school, and could recite pieces of Shakespeare and Tennyson, and so on, but I felt it was an absolute waste, because after they had left school they went about the streets with no companionship but that of the costers, with whom they talked. Now I think there are more hopes of bringing them back to that which they know was decent and proper. These girls were certainly demoralised, but they were not physically deteriorated, though they were in this low condition. Very likely hawking about the streets has been good for them. But still they were not physically deteriorated although they were so demoralised. I have carefully observed the boys who sell newspapers, and I see they are not physically deteriorated; they are not weak little creatures, but are rather sturdy, and that is the lowest class of employment for a boy to take.

13409. With respect to the district you know best, you think there is no evidence of anything like physical deterioration increasing?—I say it is quite the contrary.

13410. It is the reverse?—Yes.

13411. You spoke just now of the prevalence of phthisis; do you think that it is less now than it was?—I have not the means of judging of that. I could not tell you. I know that Booth puts it as one of the worst places, but I could not tell you.

13412. From your own experience you have no reason to think that it has increased, at any rate?—No, it is certainly not increasing.

13413. It is rather the reverse?—Yes. Occasionally we get girls who have got it, but I have no statistics to bear out anything of that sort.

13414. Is it the practice to facilitate the removal of these girls to the various Sanitoria which are being established now for the treatment of consumption?—Yes. Mrs. Roberts, of Wardour Street, left £50,000 to send these people away. I belong to this committee. We have £1,500 a year to spend on sending people away who live in St. Anne's parish, or who work there. We are only allowed by the Charity Commissioners to send those who belong to this parish, and also we must send them to Convalescent Homes in Kent, because that is what Mrs. Roberts said in her will. If we have a surplus, which we have at the present time, we can send them to our open-air treatment hospitals. We can send anybody in that particular parish who applies, to places for open-air treatment, and we do so.

13415. Do you hope to do that to any considerable extent?—At the last census there were only 3,000 in St. Anne's parish who were English, all the rest were foreigners.

Hon. Maude Stanley.

13416. What kind of foreigners?—A great many were Jews. A large number of Jews are there working as tailors.

13417. Do you think there will be any objection on the part of Jews to leave home and go there?—No; they come before this Committee if they wish to go, and we send them.

13418. They do not object?—No. They are rather lax. At one time in Soho the parents would not let their children go to any Home unless there was a Jewish butcher there, but now they do not seem to mind.

13419. It is the religious question?—Yes. I say to them, "There will not be meat of your own sort there," and they say that they do not mind.

13420. We have had evidence here that the Jews take care of their children very much better than the Christians do?—I think the Christians take very good care of their children, except the drunkards.

13421. Is not drunkenness very uncommon amongst Jewish mothers?—Yes, there is none, so that you might say they all look after their children. I am sure that the Christian mothers take equal care of their children except those who drink. It is not a question of religion; it is a question of drink.

13422. Do you think that, as a matter of fact, drunkenness is increasing amongst the women in Soho?—I do not think it increases amongst the poorer classes. I think it has increased amongst the people of the better class of dressmakers and shop girls. I do not think so amongst the poor working classes. I do not think during all the years I have been in Soho, and amongst the thousands of girls I have known, that I have known more than four girls who have taken to drink.

13423. Is it married women who drink?—No; I think it is more the girls, because it is the custom with some when they leave their work to go off to places where they sell wine, and then the boys treat them. There are some girls able to manage five or six glasses, I do not say without bad results, but with bad results.

13424. Is there a tendency amongst the poor girls of a district to marry earlier now than they used to do?—That was my very great object in starting the club, to prevent early marriages. They used frequently to marry without a bit of furniture or even a bed. Now our girls rarely marry before they are twenty-six. That I consider is to the girl's advantage. I have known many instances of our girls being engaged and giving up the young man when they found that he drank; they looked upon that matter as so important.

13425. (*Mr. Lindsell.*) Did you say that you had a Home for defective children?—Yes; it is not mine. I am Chairman of it, but it is under the Metropolitan Asylums Board.

13426. It is connected with the Asylums Board?—Yes. It is a rate-paid Home.

13427. You know now there is an Act of Parliament by which these schools for defectives can be established under the Education Act?—No, I did not. I know we can keep these until they are twenty.

13428. There is an Act of Parliament enabling these schools to be established for defective children; it has been a dead letter till last year when, with great difficulty, a short Act was passed removing those parts of the Act which made it impossible to carry it out, and now the London County Council are largely availing themselves of this opportunity of starting these special schools; that will do a great deal of good, will it not?—Yes. I suppose they will take them from all the schools? We only have pauper children.

13429. They will be taken from the ordinary school class?—Yes.

13430. They will be sent to special schools instead of ordinary schools. Sometimes a class is attached to the ordinary school?—Yes. I know that a class is often attached to an ordinary school now, and the children live at home.

13431. Do you think that will cover the ground between the child or the young person who has to go to an asylum, and the person who is able to take care of himself?—There seems to be that difficulty, that as long as the defective person is so defective that there is no doubt about his being committed to an asylum or to a proper home, it is well looked after, but below that there is a certain stage where the person is able to take care of himself which is uncared for at present?—They come to these schools.

13432. You were mentioning a girl that was able to go to work, and quite unable to look after herself?—This girl is accustomed to obedience, and to do what she is told, and she goes to Camberwell and comes back, but I should not like her to go into another home, where there would not be the same looking after her. I do not know how she would take care of herself if anybody attempted to do anything wrong to her.

13433. Is there any further organisation in this place which you think desirable?—Nothing, except to keep them shut up for ever if they are not able to take care of themselves. They do that in Massachusetts. You can only keep them to a certain point at school. You can improve them somewhat; but in a general way those children who are feeble-minded do not become imbecile. There is a great difference between feeble-minded and imbecile children.

13434. (*Chairman.*) They very rarely become self-supporting?—What we hope to do is to have a laundry. We can keep them till they are twenty years of age now, and we hope to have the girls in that and make their work remunerative.

13435. (*Mr. Struthers.*) Your point is that they must always be under control?—Yes, or else they will go out and come back every year or so, as formerly, to have a child. You must make the place so pleasant that they will not feel it like a prison.

13436. (*Mr. Lindsell.*) Is there that control at present? Do they go out as a matter of fact?—I do not know, because we are going to keep them till they are twenty, till now we have only been able to keep them till they were sixteen. We think if we can keep them until they are twenty, and have a nice home they, perhaps, will not want to leave us. But there will not be any other control.

13437. (*Colonel Onslow.*) You mention the fact that in Soho a very large proportion of the population are foreigners. Are any of those girls concerning whom you have been speaking, foreigners?—A great number of them have got foreign names, but they never look upon themselves as foreigners if they are born in England. Some of them I have known who have got Swedish fathers who have never learnt to speak English, and can only speak indifferently to their children, but the girls do not call themselves foreigners.

13438. They are of foreign extraction, but English born?—Yes, they have foreign fathers.

13439. Did you notice any difference between the girls who are purely English and those with foreign parents, so far as physique, or stamina, or intelligence were concerned?—No. We have had Jews, and the Jews I think are much cleverer. We used to remark on that in our schools.

13440. You do not find a better physique in a girl who is the daughter of a Swede?—No, I do not think so.

13441. (*Mr. Struthers.*) Do you have girls in your club from all classes?—Yes.

13442. Foreigners and Jews as well as others?—No, not Jews; because they have a Jewish club in the next street—a club of 300 girls—and they all go there.

13443. Would there be different grades, such different grades as there are in the district?—Yes. We have errand girls, and we have experienced dressmakers or forewomen. We have never had any difficulty in mixing them.

13444. I think I heard you say that you make some inquiry to see whether their homes are respectable?—Yes.

13445. Do you expect only the well-behaved girls to join your club?—No; it was by way of seeing that nobody with a bad character should come in. But it was not necessary, because those poor things would not try to come in. I did it originally because I thought it might be convenient.

13446. Then the girls that you have are representatives of the population of Soho?—Yes.

13447. And excluding those who drink or who have

not any means of living for one reason or another, you think they are fairly well-fed and their homes are fairly well looked after if there is a reasonable income?—Yes. For the last ten years I have not visited much, because I I have had so much other work, but I used to visit them frequently. I have found that the French people always had a much nicer cuisine, and much nicer food for their children than we do, but I think the English are very much improved from the cookery lessons given to their children; the children go home and tell their mothers how to do the cooking; they have improved very much in that way.

13448. Do you believe that these cookery lessons in the board schools have had an effect on the homes in Soho? Yes, I think so.

13449. And you think that if there is really a sufficient income in the family, that the members of the family, especially the boys and girls, do get decently cooked food and sufficient of it?—Yes, I think so. Of course they are under the drawback that they often go to work at a distance and must take something with them for their dinner, and they cannot have a regular dinner. They none of them have supper. They only have real dinners on Sunday. They come to us at the club always straight from their work, and then they have refreshments which the girls manage themselves—they have coffee or cocoa, and light refreshment.

13450. We have been told that even when there is a fair income in the family, 30s. or 40s. a week, the mother is often so intensely ignorant, and so uninterested in her children that she cannot give them decent food before they go to school or when they come back?—I do not think that is so in Soho. I am perfectly sure that it is not so there. It may be so in other parts of London.

13451. That does not agree with your experience?—No, nor with what the girls tell me. I assure you that the mothers are very good there. I have a party once a year, where I ask the fathers and mothers of the girls to come and tell me what they think of the club. They all take the greatest and deepest interest in the girls and what they are doing.

13452. Your girls come from such a variety of classes that they must be said to be fairly representative of the population of Soho?—Yes.

13453. Excluding the absolutely degraded and unfortunate?—Yes.

13454. The working class population?—Yes. The rents are enormous now. I was at our Soho school last week where they told me they were losing a number of their children because so many are going away as the rents are becoming excessive. They are going to Hampstead and other parts because they cannot afford to pay the rents in Soho any more. I was rather glad for one reason, because Hampstead is very healthy.

13455. Do you think the Christian mothers are really less devoted to their homes than the Jewish mothers?—Most decidedly not.

13456. You think not?—Certainly not. I have always been struck with the goodness of the mothers, and I should not have started the Club to take them away from their homes except for the fact that when you find a family living in two or three rooms—children and father and mother — they cannot have any employment there in the evening, and therefore they will walk about the streets. Therefore, the Club is a good thing for them in that sense. I ask some of them why they have not been present on a certain occasion, and they say, "That is the day that mother wants me to help her in the washing." The Club does not take them away from helping their mothers.

13457. Do the mothers wash at home themselves?—Yes, or at the baths. There are baths where they can wash their clothes.

13458. Do you know from experience that a number of those girls, tailoresses and so on, who are occupied during the day, help their mothers in washing, and looking after things generally?—Yes. Many of them say: "I can only come to the Club three days a week because I help at home."

13459. That is to say they help generally?—Yes, there is really a very good feeling between the children and their parents. Another thing which struck me very much, having lived in the country previously, was that the girls in London are very much more moral than girls in the country. They live in Soho, which is of course the worst place in one sense in London, but the immorality there does not touch them in the very slightest degree; they know how to take care of themselves in the streets. I consider them indeed highly moral. Occasionally I find some of them have been going to the dancing places, where they can go for a shilling a dance. At one time I employed my superintendent to see what they were like, and she told me they were terrible places and quite unfit for any respectable girl. Now, if I find out that they go there, I speak to them about it. To one girl whom I knew very well I said:—"I hear you go to that dancing place and pay a shilling," and she said, "Yes, I have been." Then I explained to her that I did not think it was nice for her or for me to have the companionship of the women to be found there. She said: "I had never thought of that; you are quite right." After some conversation she said: "I thank you very much for speaking to me and I will never go there again," so that she was quite open to the reasoning that it was not a nice place. I tell them they must choose between the two. We give them dancing to keep them from these places.

Hon. Maude Stanley.

13460. (*Chairman.*) Do they have young men to dance with?—Yes. We have had them always at a Christmas party. We have asked them: "Whom would you like to ask?" and we have sent cards to the young men. We now have four in the year, as the girls asked us to give them four if we were quite satisfied with their behaviour, and we agreed.

13461. (*Mr. Struthers.*) Do these girls take an interest in their homes and help their mothers?—Yes, I think they do, very much.

13462. A considerable proportion of your girls have married, no doubt?—Yes. Of course they become quite a different sort of girl; they have been for so many years accustomed to see ladies and nice people who have been there to speak to them that their manners are very good. They are rather favoured in that way, and they make better marriages than they would otherwise have done.

13463. You know a great deal about them after they are married?—Yes.

13464. You still keep in touch with them to a certain extent?—Yes.

13465. And you find as a rule they are perfectly able to look after a home of their own?—Many of their husbands have told me that they advise all their friends to come to the Soho Club to get wives, because they get such good ones from our club.

13466. So far as a knowledge of cookery and laundry work and the management of a house generally are concerned, they are quite competent?—It is not very difficult to do that if they are intelligent.

13467. Do you think the instruction they get in the board schools has something to do with it?—I think it has; it gives them an idea of handling things. Of course it is not difficult. With a cookery book they can manage.

13468. You lay considerable stress upon the part the School Board has played in the work of the improvement in the condition of the population in this district?—Yes.

13469. In what other ways do you think the School Board has improved the condition of the people directly or indirectly except by cookery lessons in the schools?—I think by being more in the open air and the physical exercises. They often go out in playtime and have a play outside in the playground, and so on, and the physical exercises which they are always doing are very advantageous to them. Another thing which is very advantageous are the swimming lessons.

13470. It is not your idea that the children in these schools are kept indoors too long and kept too tight at their desks during school hours?—No, I do not think it is very long that they are at their desks.

13471. It is not a very long day at the most, is it?—No.

13472. And it is very much broken up as a rule?—Yes. I daresay that you know the School Board allows it to be considered as an attendance if they go out to visit the Museum or the Tower or anything of that sort.

13473. Up to a certain point, of course?—Yes; they must have the School Board members' leave for it. It is only a certain amount.

Hon. Maude Stanley.

13474. Have you been struck by any necessity of providing free meals for children attending schools in your district?—No; I had dinners for a long time and then I had misgivings as to whether they really wanted them or not, and I said instead of giving dinners I would give them breakfasts. I thought if they were really hungry they would come to the breakfasts. They came, for a little while but they did not seem to care for it and I thought they could not be very hungry if they did not come for breakfast.

13475. Would you say that there is a very large proportion of children in the schools in the district who are underfed, who do not get anything like sufficient nutriment?—I do not suppose they get as much as they ought to have.

13476. But I mean so much less as to materially injure their physique?—I have no doubt they would be very much better for more, some of them. Our extreme poor have gone away. The very, very poor lived in what was called the Newport Market, houses where the house door was never shut and people slept on the stairs—that class of house. Girls used to go about called the "Forty Thieves," and boys also—that is the name they give to that rough sort of people. That class have altogether gone from there.

13477. With regard to the proportion which remains, do you think there is any crying need to institute a system of feeding children attending the schools, finding out those that are underfed and feeding them?—No, certainly not in Soho.

13478. Do you think there is any necessity in the district of taking in the children who are underfed and feeding them and compelling the parents to pay?—Certainly not in that neighbourhood.

13479. I rather gather that your experience is that if the parents are able to feed them they do feed them?—Yes.

13480. (*Colonel Fox.*) On the question of physical training, have you anything to say in favour of the system that now goes on in the schools?—Yes, I think it is admirable. It does not over-fatigue them but it helps them very much. It does them a great deal of good and is not too severe.

13481. And you also find that there is marked improvement since it has been established in the schools?—Yes. I think the look of the children is altogether better.

13482. You think they are brighter?—Yes.

13483. You think they are brighter, in addition to being of improved physique?—Yes. I have that sort of experience of children that I have always kept this one school to myself to send the children to the country who wished to go, and I always examine every child. I used to examine their heads to see they were all right, before there was a nurse, and send them away in the country. So that I know the look of the children altogether, and the children are improved. Everybody who has really worked in the same way says the same thing—those who really have intimate acquaintance with the poor in this respect. There is another thing which I daresay you have had in evidence, and that is that the reason that some of these people are so defective is because hospitals and dispensaries have so much increased the number of children who are kept alive, who would otherwise have died, and who grow into very poor specimens.

13484. (*Chairman.*) I am afraid that plenty of them die as it is?—Perhaps it would be happier for them if more of them died.

13485. (*Colonel Fox.*) At all events, in addition to improving their general physique these exercises have put more life into the children and made them brighter?—Yes.

13486. You find that very marked?—Yes, very marked indeed. On Saturday I am going to a competition of physical exercises at the Northampton Institute, where there will be 350 girls competing, all work girls from different parts of London.

TWENTY-SIXTH DAY.

Monday, 20th June, 1904.

PRESENT.

Mr. Almeric W. Fitz Roy (*in the Chair*).

Colonel G. M. Fox.	Colonel George T. Onslow
Mr. J. G. Legge.	Mr. John Struthers.
Mr. H. M. Lindsell.	Dr. J. F. W. Tatham.

Mr. Ernest H. Pooley (*Secretary*).

Mr. John Lithiby, called; and Examined.

Mr. Lithiby.

13487. (*Chairman.*) What is your position in the Local Government Board?—I am an Assistant Secretary of the Local Government Board in charge of the Public Health Department.

13488. That does not include the housing of the poor, does it?—No.

13489. The appointment of medical officers of health falls within the cognisance of your Department?—Yes.

13490. Do all local authorities appoint medical officers of health?—The local authorities who appoint medical officers of health are the county councils.

13491. They may, or may not, as they like?—They may, or may not. Also the metropolitan borough councils, the urban district councils, the rural district councils, and the port sanitary authorities.

13492. Are some of those obliged to appoint them?—The urban and rural district councils are obliged to appoint them.

13493. The qualifications differ in different cases, or is there one general set of qualifications in force?—The county medical officer of health is required, if appointed since the 1st of January, 1892, to hold a diploma in sanitary science, public health or State medicine, or to have been during three consecutive years preceding the year 1892 a medical officer of a district, or a combination of districts with a population of not less than 20,000, or to have been, before the passing of the Act of 1888, for not less than three years a medical officer or inspector of the Local Government Board. In London the qualification is generally similar to that of the medical officer for a county. Medical officers of health for urban and rural districts are appointed under Section 190 of the Public Health Act 1875. They are not required to possess a special sanitary diploma, although in many cases candidates now possess such diplomas. The medical officers whose salaries are repaid are subject to the Order of the Local Government Board of the 23rd March, 1891. They hold office for such period as the sanitary authority may,

subject to the approval of the Local Government Board, determine at the time of their appointment, or until they die, or resign, or are removed by such authority with the assent of the Local Government Board, or are removed by the Local Government Board, or are proved to be insane. Medical officers of health whose salaries are not intended to be repaid out of county funds hold their offices subject to the agreement arrived at between them and the authority appointing them, and the Local Government Board have no voice in the matter.

13494. What proportion of them hold office under that tenure ?—I cannot tell you exactly.

13495. There is a considerable difference both in the conditions of the appointment and in the tenure ?—Yes.

13496. How does that work out in practice. Do you think it is better than a uniform system ?—Probably it is, because the conditions on which they hold their offices are so various. It is easy in respect of large urban districts to lay down the rule that a medical officer of health shall possess certain qualifications beyond those which he holds as a member of the medical profession. As regards some rural districts it is very difficult to say that a local medical practitioner of good standing shall not, if he wishes, hold this appointment. Local authorities are generally anxious to have local men, and on the whole I think they prefer to have a man they know living in the district and practising among them. Therefore, two points have to be considered: first, can they employ a man giving his whole time to the work ? If they can, must the appointment be limited to someone who possesses the qualifications in State medicine ?

13497. (*Dr. Tatham.*) Will you kindly say whether, in the opinion of the Local Government Board, at present it is held to be desirable to appoint medical officers of health over large areas in preference to appointing practitioners, such as you said, all over small areas ?—On the whole I think I may answer that question in the affirmative.

13498. That is the general policy of the Board ?—That is the general policy of the Board—I may qualify that just a little by saying that at the outset when the Public Health Act was being brought into operation the opinion was very decidedly held, and, as a consequence, large districts were given to medical officers of health—for instance, Dr. Thursfield held a large district in the Midlands, and in other parts of England there were several large combinations. I do not say that those did not work well, but at the same time they left something to be desired. In a large area it is quite impossible that the medical officer should move about with the celerity that some of the local authorities desire. A case of infectious disease breaks out in a district; the medical officer possibly lives thirty miles away. He cannot visit the case at once because he has other engagements, perhaps many miles on the other side of his home. So those old combinations are fewer now than they were, and when vacancies occur there is a tendency for the local authorities to try and get smaller districts.

13499. Even though, in the opinion of the Local Government Board at any rate, they do not think the work will be so well carried out ?—Of course, much depends on the personal equation; that is the difficulty.

13500. (*Chairman.*) Is it not desirable that the area should be large enough to employ a man for the whole of his time, rather than it should be combined with private practice ?—Certainly

13501. That is a good thing ?—Certainly.

13502. You deprecate the combination of the duty of a medical officer of health with a continuance of private practice where it can be avoided ?—Certainly. In the Local Government Board the preference is decidedly in favour of those men who devote their whole time to it, who have special qualifications, and who do not engage in private practice.

13503. I suppose in the cases of the employment of such it would be more easy to guarantee them a greater security of tenure ?—I think so.

13504. Where they are efficient officers ?—Yes. I would not say the others are not efficient according to their lights, but where the officer is giving his whole time to he work, and has a diploma in sanitary science, it is the practice of the Board now to invite local authorities to appoint him either permanently or for a longer period than the one year which is often proposed.

13505. I suppose in all the big towns a man does give his whole time to it, does he not ?—Not always. We press for his whole time. *Mr. Lithiby.*

13506. But you have no power to enforce ?—We have power to withhold approval and that carries with it the inability on the part of the local authority to get repayment from the county funds. That is a strong power to wield, and it is sometimes successful, but not always.

13507. (*Chairman.*) What proportion is paid out of the county funds ?

13508. (*Dr. Tatham.*) Half, I think, is it not ?—Yes.

13509. (*Chairman.*) Indirectly you have the power of insisting ?—Indirectly. But we also have to bear in mind that the system is a system of local government.

13510. It is local government tempered with judicious interference ?—Yes. Many of these men are very competent medical men. We had a case some time ago where a leading physician in the county was acting as medical officer of health for a small district. He had the confidence of the whole neighbourhood—I may say of the whole county. It is a difficult thing to say that such a man shall not act as a Medical Officer of Health in a small rural district about which he is always going.

13511. (*Dr. Tatham.*) The question seems to be that in the case of an energetic Medical Officer of Health who really wishes to do his duty, and to do it quite in conformity with the wishes of the Local Government Board, the fact that he does his duty is sufficient to lose him his office. I have in my mind now the case of a man who was quietly told by his Council, a Borough Council too, that if he continued to exercise his discretion and to try and improve the sanitary condition of his district, they would get rid of him. They told him that deliberately. I know that that was done. That seems to be the great objection to allowing local authorities absolute power of dismissal ?—As to that, of course, I can only say what has officially come before the Local Government Board. There have been a few cases of that kind. We have heard of others. We have seen newspaper reports of others, but very few cases have been specially brought to the notice of the Board in which that has occurred.

13512. I am speaking of a period now of some fifteen years ago. Perhaps it was more common then than it is now ?—There have been cases.

13513. (*Chairman.*) But if the Local Government Board have no effective power of interference they would not bring them to your notice, would they ?—The successor, or some friend of the retiring officer, usually writes and says: "So and so is happening, can you prevent it ?"

13514. I suppose you say that you cannot ?—As a rule we cannot. As a rule we can only make inquiries and give advice, and, if the new officer is appointed, the Board may decline to approve that appointment. The Committee will see that it is a serious step to take, because the new officer may be a perfectly competent officer, against whom nothing may be known, and it would be an arbitrary exercise of power if the Board were to say that they will not recognise the incoming good man because there is an outgoing good man whose services are no longer required by the local authority.

13515. And, in fact, you never do so, I suppose ?—I cannot say. We have prevented the dismissal of officers in some cases.

13516. Do you not think, with a view to placing your power of prevention upon a satisfactory basis, that it would be a very good thing to vest in the Local Government Board the right of veto; then there could be no question ?—Whether the time is ripe for such an exercise of the power of the Board I am not quite sure, but I think the time is approaching.

13517. And, granted that the time has arrived or is approaching, you think it would be a very good thing ?—There would be difficulty in many districts. Local authorities do not like to have their officers interfered with, and in cases where the Board have shown a certain amount of resistance to local authorities, in regard to the appointment of their officers, difficulties have arisen.

13518. (*Mr. Legge.*) In fact, you anticipate passive resistance ?—Yes. A local authority says this: "We cannot work with this officer," and if they cannot work

Mr Lithiby.

with that officer it would be, I think, unfortunate if a central department insisted on that officer being retained.

13519. (*Chairman.*) True, but do you not think the fact of your being vested with a veto would lead to local authorities being extremely careful how they dismissed a man without due cause? They would know that, if you were appealed to, you would make a searching investigation into the causes, and they would have to state very clearly and very fully the considerations which had led them to part with a deserving officer?—I do not think that would have much more effect than the remonstrances that we employ now.

13520. Except that the remonstrances which you employ now are made after the act has been committed, whereas the explanations that they would have to offer would be anterior to the dismissal being complete?—Yes.

13521. That surely makes a great deal of difference?—One's experience of them is that they would say "We cannot work with this officer." We might induce them to retain him for a year, but the difficulties they would make are considerable; I am speaking from actual cases. The names I cannot give, but we have had cases.

13522. (*Colonel Onslow.*) If you could call upon them to state their full reasons why they cannot work, would not that bring it out?—Yes: it does bring it out.

13523. (*Chairman.*) You put them on the defensive?—We do it now.

13524. Except that the thing is done when you do it?—Yes.

13525. It is *ex post facto*?—Yes. In that respect I think there might be an advantage in the course you suggest.

13526. (*Dr. Tatham.*) Does not the statement you have mentioned, and which I know has been made frequently, "We cannot work with this officer," really mean "This officer wants to do his duty, and we, his masters, will not let him?"—I think it is very often a question of personal tact.

13527. (*Chairman.*) In suggesting that the Local Government Board should exercise a veto, I must be understood to presuppose that the Local Government Board would exercise that veto discreetly and intelligently?—Provided you recognise the fact that it is the personal equation that is to be dealt with in many of these cases, I agree.

13528. Would you just state briefly what you hold to be the duties of the medical officer of health?—The duties of medical officers of health are set out as regards London in the Sanitary Officers (London) Order 1891, and as regards the urban and rural districts in orders made by the Board in March 1891. They are set out in Article 18 of the latter orders, and I will read them to the Committee:—"(1) He shall inform himself as far as practicable respecting all influences affecting or threatening to affect injuriously the public health within the district. (2). He shall inquire into and ascertain by such means as are at his disposal the causes, origin, and distribution of diseases within the district, and ascertain to what extent the same have depended on conditions capable of removal or mitigation. (3.) He shall by inspection of the district, both systematically at certain periods, and at intervals as occasion may require, keep himself informed of the conditions injurious to health existing therein. (4.) He shall be prepared to advise the Sanitary authority on all matters affecting the health of the district, and on all sanitary points involved in the action of the sanitary authority, and in cases requiring it, he shall certify for the guidance of the sanitary authority or of the justices, as to any matter in respect of which the certificate of a medical officer of health or a medical practitioner is required as the basis or in aid of sanitary action. (5.) He shall advise the sanitary authority on any question relating to health involved in the framing and subsequent working of such byelaws and regulations as they have power to make, and as to the adoption by the sanitary authority of infectious diseases (Prevention) Act, 1890, or of any section or sections of such Act. (6.) On receiving information of the outbreak of any contagious, infectious, or epidemic disease of a dangerous character within the district, he shall visit without delay the spot where the outbreak has occurred, and inquire into the causes and circumstances of such outbreaks, and in case he is not satisfied that all due precautions are being taken, he shall advise the persons competent to act as to the measures which may appear to him to be required to prevent the extension of the disease, and take such measures for the prevention of disease as he is legally authorised to take under any statute in force in the district, or by any resolution of the sanitary authority. (7.) Subject to the instructions of the sanitary authority, he shall direct or superintend the work of the inspector of nuisances in the way and to the extent that the sanitary authority shall approve, and on receiving information from the inspector of nuisances that his intervention is required in consequence of the existence of any nuisance injurious to health, or of any overcrowding in a house, he shall, as early as practicable, take such steps as he is legally authorised to take under any statute in force in the district, or by any resolution of the sanitary authority, as the circumstances of the case may justify and require. (8.) In any case in which it may appear to him to be necessary or advisable, or in which he shall be so directed by the sanitary authority, he shall himself inspect and examine any animal, carcase, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, or milk, and any other article to which the provisions of the Public Health Act, 1875, in this behalf shall apply, exposed for sale, or deposited for the purpose of sale, or of preparation for sale, and intended for the food of man, which is deemed to be diseased, or unsound, or unwholesome, or unfit for the food of man; and if he finds that such animal or article is diseased, or unsound, or unwholesome, or unfit for the food of man, he shall give such directions as may be necessary for causing the same to be dealt with by a justice, according to the provisions of the statutes applicable to the case. (9.) He shall perform all the duties imposed upon him by any bye-laws and regulations of the sanitary authority duly confirmed where confirmation is legally required, in respect of any matter affecting the public health, and touching which they are authorised to frame bye-laws and regulations. (10.) He shall inquire into any offensive process of trade carried on within the district, and report on the appropriate means for the prevention of any nuisance or injury to health therefrom. (11). He shall attend at the office of the sanitary authority, or some other appointed place, at such stated times as they may direct. (12.) He shall from time to time report in writing to the sanitary authority his proceedings, and the measures which he may require to be adopted for the improvement or protection of the public health in the district. He shall in like manner report with respect to the sickness and mortality within the district, so far as he has been enabled to ascertain the same. (13.) He shall keep a book or books, to be provided by the sanitary authority, in which he shall make an entry of his visits, and notes of his observations and instructions thereon, and also the date and nature of applications made to him, the date and result of the action taken thereon and of any action taken on previous reports, and shall produce such book or books, whenever required, to the sanitary authority. (14) He shall also make an annual report to the sanitary authority, up to the end of December in each year, comprising a summary of the action taken, or which he has advised the sanitary authority to take, during the year, for preventing the spread of disease and an account of the sanitary state of his district generally at the end of the year. The report shall also contain an account of the inquiries which he has made as to conditions injurious to health existing in the district, and of the proceedings in which he has taken part or advised under any Statute, so far as such proceedings relate to those conditions, and also an account of the supervision exercised by him, or on his advice, for sanitary purposes over places and houses that the sanitary authority have power to regulate, with the nature and results of any proceedings which may have been so required and taken in respect of the same during the year. The report shall also record the action taken by him, or on his advice, during the year, in regard to offensive trades, to dairies, cow-sheds, and milk shops, and to factories and workshops. The report shall also contain tabular statements (on forms to be supplied by Us, or to the like effect) of the sickness and mortality within the district, classified according to diseases, ages, and localities. Provided that, if the Medical Officer of Health shall cease to hold office before the thirty-first day of December in any year, he shall make the like report for so much of the year as shall have expired when he ceases to hold office. (15) He shall give immediate information to Us of any outbreak of dangerous epidemic disease within the district, and shall transmit to Us a copy of each

annual report and of any special report. He shall make a special report to Us of the grounds of any advice which he may give to the sanitary authority with a view to their requiring the closure of any school or schools, in pursuance of the Code of Regulations approved by the Education Department, and for the time being in force. (16) At the same time that he gives information to Us of an outbreak of infectious disease or transmits to Us a copy of his annual report or of any special report, he shall give the like information or transmit a copy of such report to the county council or county councils of the county or counties within which his district may be situated. (17) In matters not specifically provided for in this Order, he shall observe and execute any instructions issued by Us, and the lawful orders and directions of the sanitary authority applicable to his office. (18) Whenever We shall make regulations for all or any of the purposes specified in Section 134 of the Public Health Act, 1875, and shall declare the regulations so made to be in force within any area comprising the whole or any part of the district, he shall observe such regulations, so far as the same relate to or concern his office." Duties are also imposed upon Medical Officers of Health by the Factories Act of 1901. Under Section 132 of that Act, the Medical Officer of Health is required in his annual report to deal specially with the administration of the Act in factories and workshops, so far as the matters under the charge of the District Council are concerned. Those duties are stated, in a Memorandum issued by the Home Office in March, 1903, to be as follows:—"Under Section 132 of the Act, the Council's Medical Officer of Health is required for the future in his annual report to the Council to report specifically on the administration of the Act in workshops and workplaces, so far as the matters under the charge of the Council are concerned, and to send a copy of his report, or of so much of it as deals with this subject, to the Secretary of State. The matters which the report should specially deal with are indicated in the instructions issued by the Local Government Board to Medical Officers of Health in England and Wales. It is also the duty of the Medical Officer, if he finds any woman, young person, or child employed in a workshop *in which no abstract of the Act is posted up*, to inform the District Inspector of Factories in writing." The matters referred to Council by factory inspectors are as follows:—"The factory inspector will, on finding in a factory or workshop any act, neglect, or default in relation to a drain, water-closet, earth-closet, privy, ashpit, water supply, nuisance, or other matter which is punishable or remediable under the Public Health Acts, but not under the Factory Act, give notice to the Council of such act, etc.; and it will then be the duty of the Council to make inquiry into the matter, take such action as may seem proper, and inform the inspector of the proceedings taken. If proceedings are not taken by the Council within one month, the inspector is authorised to take the same proceedings as the Council might have taken, and to recover from the Council the expenses incurred by him which have not been recovered from any other person, and have not been incurred in any unsuccessful proceedings." Then the Local Government Board issue annually to medical officers of health a memorandum in which they advise as to the points which should be included in the report of the medical officer of health.

13529. That is the form in which information reaches you as to what has been done?—Yes.

13530. Does the medical officer of health provide you with that directly, or is the authority which employs him responsible?—It is the duty of the medical officer of health to make his report to the authority and to send a copy of it to the Local Government Board at the same time. He is also required to send to the Local Government Board a copy of any special reports which he may make from time to time to his authority.

13531. The local authority is not charged with the duty of providing you with any information as to the character or efficiency of its administration?—The authority itself is not.

13532. Would it not be a good thing, with a view to do bringing this responsibility home, to see that it should so?—I think we get as much information from the medical officer of health as we should be likely to get from anyone.

Mr. Lithiby.

13533. But with a view to emphasizing what the direct responsibility of the local sanitary authority is in matters of that sort, would it not be a good thing to require that it should provide you with information as to what it is doing?—I do not think there would be any practical advantage.

13534. What points does the annual report of the medical officer of health cover?—It covers all the sanitary work with which the local authority has to deal.

13535. Does it include such a thing as the infant death rate, the number of cellars or back-houses, or of one-roomed or two-roomed tenements with so many occupants in each, the minimum of cubic feet to each person, or the character of the water supply, and sewage arrangements?—The direction in the order is:—"He shall also make an annual report to the sanitary authority, up to the end of December in each year, comprising a summary of the action taken, or which he has advised the sanitary authority to take, during the year, for preventing the spread of disease, and an account of the sanitary state of his district generally at the end of the year. The report shall also contain an account of the inquiries which he has made as to conditions injurious to health existing in the district, and of the proceedings in which he has taken part or advised under any Statute, so far as such proceedings relate to those conditions; and also an account of the supervision exercised by him, or on his advice, for sanitary purposes over places and houses that the sanitary authority have power to regulate, with the nature and results of any proceedings which may have been so required and taken in respect of the same during the year. The report shall also record the action taken by him, or on his advice, during the year, in regard to offensive trades, to dairies, cow-sheds, and milk shops, and to factories and workshops. The report shall also contain tabular statements (on forms to be supplied by Us or to the like effect) of the sickness and mortality within the district, classified according to diseases, ages, and localities."

13536. You get full information about action, but no information about inaction?—If he does nothing, we write to him and inquire why.

13537. There may be many insanitary conditions in existence which, if they do not happen to be made the subject of action, you do not get informed upon?—In that case we should certainly communicate with the authority and probably require a Supplementary Report giving the information on the points omitted.

13538. (*Mr. Struthers.*) How are you to know how much is omitted?—The reports are always carefully analysed, abstracted and tabulated. Every report is examined carefully, and if it is found that no information is given with regard to the action of a rural authority in reference, say, to the Dairies and Cowsheds Order, or if no information is given by the medical officer of health that he has made systematic sanitary inspection during the year, we write and ask specially for the information.

13539. But suppose the report says that twenty insanitary houses have been closed in the district during the year, there may be, as a matter of fact, 200 of those houses, or there may be 400, and you have no means of finding out?—In that case, we should not have any means of checking the statement of the medical officer of health.

13540. (*Mr. Struthers.*) But it is desirable that you should have means, is it not?

13541. (*Mr. Legge.*) Suppose you had, through the Registrar General, mortality figures affecting the area of a serious nature, that would give you a basis for action, such as sending down a special inspector?—The practice now is to examine the Quarterly Returns of the Registrar General as they are made. In fact, we get a copy in advance, before publication. That report is examined in detail, and, if it appears that there is an undue prevalence of any particular infectious disease associated usually with insanitary conditions, inquiry is made and a report from the medical officer of health is asked for.

13542. (*Chairman.*) Have you ever made a high infant death rate the subject of any special examination?—A high infant death rate from preventable causes, certainly, that is to say, from preventable diseases, but I am not

Mr. Lithiby. aware that there has often been inquiry into a high infant death rate in any particular district.

13543. (*Mr. Struthers.*) On the ground alone of its being a high death rate?—That is so.

13544. (*Mr. Lindsell.*) Has every urban area a right to appoint its own medical officer of health?—Yes, every urban area.

13545. The county medical officer would not have jurisdiction in any urban district, however small?—No.

13546. Except by arrangement, I suppose?—Under the Act of 1888 the county medical officer of health can by agreement with the local authority exercise the powers of the district medical officer of health, but that is not often carried out in practice. The medical officer of health of a county acts as advisory officer, as a rule, and not as an executive officer. The reports of medical officers of health are sent to the County Council, and in some counties where medical officers of health have been appointed the reports are examined, and if there are any shortcomings apparent in those reports the matters are looked into by the county medical officers, and in some cases a representation is made to the Local Government Board under Section 19 of the Local Government Act, 1888.

13547. In cases, for instance, of closing schools in consequence of the outbreak of an epidemic, that is generally done by the order of the medical officer?—That is done on the recommendation of the local medical officer of health, not the county medical officer.

13548. Has each rural area, then, a medical officer of health as well as the county man?—Either by itself, or acting in combination with some other authority.

13549. (*Mr. Legge.*) Do you make any use of your annual Blue-book to gibbet local authorities?—We only publish in the Blue-book the results of correspondence, unless some legal action has been taken. If there has been any complaint of default of local authorities made to the Local Government Board we refer to that in the Report. For instance, on page 148 of the 32nd Annual Report of the Board, we refer to cases in which the Board's action was asked for under Section 299 of the Public Health Act, 1875. The result of the action taken is there stated. On the same page reference is made to the orders made by the Board under Section 42 of the Public Health Act, 1875, which is practically a tion taken against authorities who refused to undertake or contract for the removal of house refuse from the premises—scavenging, in fact.

13550. But if these local authorities were positively gibbetted in your Report, the names and addresses given as it were, would not that have a good effect? I do not mean descending to such minute particulars as you find in the "Truth" pillory. I mean something of the sort in a more dignified style?—In the cases in which the Board's officers have investigated the complaints, opinions are often freely expressed as to the action of local authorities.

13551. But that is in a letter to that local authority, is it not?—No, that is in the published Report, and many of those Reports, the more important ones, are included in an Appendix to the Board's Report, containing the report of the medical officer. I think it will be found in several of those cases that some very strong opinions are expressed. I do not know that they always have the effect desired. If an authority is going to do its work it does not want that, and if an authority is not going to do its work it will not do it by any pressure short of legal compulsion.

13552. (*Chairman.*) They have no sense of shame, I suppose?—Some of them have no sense of shame whatever.

13553. (*Colonel Onslow.*) Do I understand the local authority can get rid of its medical officers of health without the approval of the Local Government Board?—Yes, some of them can. They cannot in London, but they can in the urban and rural districts.

13554. Would the Local Government Board ask the reason why they are getting rid of him?—Sometimes, but not always.

13555. Not necessarily?—It depends on circumstances.

13556. That points to the fact that a man who may be a most excellent man, tactful, and so on, but who really conscientiously tried to do his duty in reporting, say, some very insanitary house, may be got rid of if that house happens to belong to an influential member of the local authority?—I do not know that I can add anything to what I said before with regard to that, except this—that I think we must recognise that the local authorities generally desire to do their duty. There are black sheep among them, no doubt, and, as I have said, we have heard of a few cases in which this has happened. We have also heard of a few cases—a very few—in which local authorities have objected to the reports made by medical officers of health as containing matter which, in the opinion of the authority, should not have been put there. When that has come to the knowledge of the Board, the Board have remonstrated with the local authority, and in a few cases the Board have insisted on the original Report being sent to them as it was prepared; and they have told the local authority that it is the duty of the officer to report to them and to send to the Board a copy of that Report. Further than that we have not gone at present.

13557. (*Mr. Struthers.*) You spoke of the distinction between medical officers who gave their whole time, and others who only gave part of their time; I suppose those who give their whole time are in the big municipalities, such as Manchester, Birmingham, and so on?—Yes.

13558. They only form a small proportion of the whole number you think?—Yes, but the proportion is increasing.

13559. Can you give us the figures of the proportion of medical officers who are whole-time men? Perhaps you could tell us roughly and supply the figures afterwards.—The following tables give the information desired. The second is from page clxxxv. of the Report of the Board for 1902-3:—

(1). *Districts in which Medical Officers of Health give whole time to their duties as such—or to Public Health work generally.*

	No. of Districts.	Total No. of Medical Officers of Health.	Medical Officer of Health giving whole time as Medical Officer of Health.	Medical Officer of Health not giving whole time, but not taking private medical practice	Whole time as Medical Officer of Health with other known public appointments.
URBAN DISTRICTS (Wholly Distinct).	23	23	5	6	12
RURAL DISTRICTS (Wholly Distinct).	6	6	1	4	1
* COMBINED AREAS	217	21	18	2	1
INFORMAL COMBINATIONS	35	8	3	4	1
METROPOLITAN (Including Port of London).	29	29	22	2	5
TOTAL	310	87	49	18	20

* In nine cases entered as Combined Areas, the Medical Officer of Health acts for one or more districts apart from the Combined Area, and included in the "Informal Combinations."

TOTAL NO. OF DISTRICTS		
	Urban	1,118
	Rural	656
	Ports	59
	Metropolitan	31
		1,864

(2) "*Annual Reports of Medical Officers of Health whose duties are prescribed by General Order—*

Districts Served by	Rural Districts.		Urban Districts	
	Number of Districts.	Number of Annual Reports Received.	Number of Districts.	Number of Annual Reports Received.
Medical officers of health—a portion of whose salary is repaid by county councils, and acting for the district of a single district council	287	287	639	639
Medical officers of health—a portion of whose salary is repaid by county councils, and acting for divisions of the district of a rural district council	22	47	—	—
Medical officers of health—a portion of whose salary is repaid by county councils, and acting for the districts of two or more district councils	317	317	344	344
Medical officers of health—no portion of whose salary is repaid by county councils, and acting for the district of a single district council	8	8	117	117
Medical officers of health—no portion of whose salary is repaid by county councils, and acting for divisions of the district of a rural district council	8	21	—	—
Medical officers of health—no portion of whose salary is repaid by county councils, and acting for the districts of two or more district councils	14	14	18	18
Totals	656	694	1,118	1,118

Mr. Lithiby.

"In addition annual reports were received from sixty medical officers of health acting for port sanitary districts, and from thirty-one medical officers of health acting for districts in London, as well as from four medical officers of health whose duties are not prescribed by the order."

"The total number of medical officers of health appointed under the Board's Order was 1,353, of whom 1,098 acted for a single district or for one division of a rural district and 255 for two or more districts."

13560. But, ordinarily, it is only the large municipalities who have whole-time men?—Yes, and districts acting in combination.

13561. And the ordinary medical officer of health is the officer who is in private practice otherwise?—In very many cases it is so.

13562. Is it not in the larger number of cases?—Probably it is.

13563. There is a medical officer for each urban and rural district?—Yes.

13564. And many of the urban and rural districts are sub-divided for such purposes?—No; a rural district may be, but not an urban district.

13565. In a rural district you may have more than one medical officer?—Yes, sometimes we have. The table I read to you shows that.

13566. (*Mr. Lindsell.*) The rural district being a union, I suppose, less urban councils?—Yes.

13567. What is the relation of the county man to the rural district?—He acts for the county. He has, ordinarily, no powers over the districts.

13568. (*Chairman.*) While on that point I will ask you this: Would it be a desirable thing to give the county councils a general power of interference where the local authority is in default—the local authority, of course other than a municipal borough?—Some powers exist now under Section 16 of the Local Government Act, 1894. The parish council are entitled to appeal to the county council if they complain that the rural district council has neglected its duty in regard to matters referred to in that section, water supply and drainage matters, which it is the duty of the council to deal with.

13569. (*Mr. Struthers.*) The parish council is not a body which is very likely to complain if the district council are slack in the matter; I should not think there is much remedy by having that appeal?—I am not at all sure about that. It was supposed by those who constructed the Act that the parish council would be a thorn in the side of an inactive district council. Possibly the parish councils have not been so active as was expected.

13570. Would not the county authority be a more vigorous thorn in their side than the parish authority?—I do not know whether you have any idea of the opposition that would be aroused to any such measure.

13571. I think I have, but I wish to discuss the question in a general way apart from that?—My answer would be that it could not be done without legislation, and probably there would be great opposition if legislation of the kind were proposed. A suggestion was made some years ago of giving county councils powers over non-county boroughs. The non-county boroughs opposed so strongly that the powers were not given.

13572. Do all county councils have a medical officer of their own?—No.

13573. Any large proportion of them?—Yes. A considerable proportion are without them.

13574. (*Mr. Lindsell.*) The county, you say, have a man, but he has no jurisdiction?—He has no definite jurisdiction; he is the adviser of the county council. The county council receive all the reports of the medical officers of health of the districts, and those are generally examined and form the basis of any action or advice that may be given to the county council by their medical officers of health.

13575. He is a sort of consultative adviser of the county council?—He is. At present he has no more powers.

13576. (*Mr. Struthers.*) But in the first place he does not always exist?—I should like to add in reference to what I was asked just now that the London County Council have under Section 100 of the Public Health (London) Act a power to prosecute in certain cases of default of the sanitary authority, and by Section 101 they may make complaint to the local Government Board of default of sanitary authorities in London. I think the London County Council have not exercised those powers except, perhaps, in one or two small cases. They have generally found it more desirable to exhort than to compel.

13577. But of course they are in a much better position to exhort if they have powers behind them?—They have powers, but they do not use them for the reasons I suggest to the Committee. There would be a difficulty in extending the powers of the county councils.

13578. But you agree it would make all the difference in the effect of their representation on the smaller body if they had the knowledge that they had those powers behind them. You, the Local Government Board, have certain definite powers, and although you do not always put them in force, but prefer to proceed by suasion, that suasion is all the more effective because you have certain definite powers behind you?—Do I understand the suggestion is that compulsory powers should be given to county councils?

13579. My suggestion is rather that the practice which prevails in certain counties should, somehow or other, be made universal—having a county medical officer of health who would give his whole time to that work, and who would exercise a certain amount of supervision over these smaller districts within the county?—So far as the desirability of having medical officers of health for every county is concerned there would be certainly no objection on the part of the Local Government Board—quite the reverse.

13580. At present, though, it is not the case that each county has a medical officer?—It is not.

13581. And it is admitted that it is desirable in the view of the Local Government Board that it should have such an officer?—I think I may say so.

13582. Has the Board taken any steps to put that view of the matter before the county councils?—As a matter of general policy I do not know that they have.

13583. Take the case where there is a county medical officer; he has no statutory powers of interference, or, rather, the county council on his advice has no statutory powers of interference with the district sanitary authority?—They have powers under Section 16 of the Local Government Act, 1894, of superseding the local authority in certain cases.

13584. (*Mr. Lindsell.*) They could insist on a system of drainage being introduced, could they not?—Section 16 says: "Where a parish council resolve that a rural district council ought to have provided the parish with sufficient sewers, or to have maintained existing sewers, or to have provided the parish with a supply of water in cases where danger arises to the health of the inhabitants from the insufficiency or unwholesomeness of the existing supply of water, and a proper supply can be got at a reasonable cost, or to have enforced with regard to the parish any provisions of the Public Health Acts which it is their duty to enforce, and have failed so to do, or that they have failed to maintain and repair any highway in a good and substantial manner, the parish council may complain to the county council and the county council, if satisfied after due enquiry that the district council have so failed as respects the subject matter of the complaint, may resolve that the duties and powers of the district council for the purpose of the matter complained of shall be transferred to the county council, and they shall be transferred accordingly." There you have the power on the part of the county council to supersede a district council after inquiry, an inquiry in which the medical officer of health would, no doubt, be extremely useful.

13585. (*Mr. Struthers.*) Do you know that these appeals are made frequently?—No. I do not think they are.

13586. (*Mr. Lindsell.*) Is there any similar power in the case of an Urban District Council?—Not of supercession by the County Council.

13587. Nor a power of complaint—there is no parish council there to complain?—Anyone can complain to the Local Government Board under Section 299 of the Public Health Act, 1875.

13588. (*Mr. Struthers.*) Do the County Councils make any representation to the Local Government Board at present on sanitary matters?—Yes, they do sometimes.

13589. Under the virtue of this Act which you referred to, or under any other Act?—Section 19 of the Local Government Act of 1888 says:—"(1) Every medical officer of health for a district in any county shall send to the County Council a copy of every periodical report of which a copy is for the time being required by the regulations of the Local Government Board to be sent to the Board, and if a medical officer fails to send such copy the County Council may refuse to pay any contribution, which otherwise the council would in pursuance of this Act pay towards the salary of such medical officer. (2.) If it appears to the County Council from any such report that the Public Health Act, 1875, has not been properly put in force, within the district to which the report relates, or that any other matter affecting the public health of the district requires to be remedied, the Council may cause a representation to be made to the Local Government Board on the matter.'

13590. And you do get such representations?—Yes we get representations under that section.

13591. Sometimes, I suppose, from counties which have no medical officer of their own?—Yes, in several instances.

13592. Their representations will be lessened in value, I suppose?—In that case we have asked them whether they have caused any separate inquiry by a medical officer appointed by them to be made into the circumstances.

13593. They have power to direct their medical officer not merely to examine the reports sent in by the district medical officer, but actually to conduct an inquiry on the spot?—They have no statutory power to do so with regard to ordinary matters. They have a statutory power under the Isolation Hospitals Act to do as you suggest, and they very commonly do it without any statutory powers, and I think I am right in saying that the assistance and advice of the county medical officer is generally welcomed.

13594. But as a matter of fact it seems to be the case that the County Council as a health authority, and the county medical officer, where he exists, are more or less extra statutory authorities. That is to say, they are not within the machinery for administering the Public Health Act, there are excrescences which are not fitted in?—Yes, that is so.

13595. (*Chairman.*) I will go on to the next question now. Can you tell us whether the attention of the Local Government Board is often called to the quality of milk sold to the consumers?—In the reports of the public analysts the examination of samples of milk bulks very large, and in many of the reports from the medical officers of health which we have recently received the matter is referred to.

13596. The Board of Agriculture now fixes the standard for milk?—Yes.

13597. Does not the public analyst report to them instead of to you?—No. It is the duty of the public analyst under the sale of Food and Drugs Act, 1875, to send to the Local Government Board a copy of the four quarterly reports made to his authority during the previous year. He has to do that every January, and until 1899 the Local Government Board had no other function than to receive the annual reports.

13598. What class of information do they cover?—The reports of public analysts are supposed to deal with all the samples which have been examined by the analyst in the previous year.

13599. Merely to see whether it has been diluted?—Adulterated. As a rule they only deal with adulteration.

13600. They do not deal with dirt or the presence of anything due to carelessness on the part of the dairyman or cowkeeper, or anything of that sort?—No; ordinarily they would not.

13601. Can you tell us with regard to this milk question whether local authorities do take steps to secure their districts from the sale of impure milk—it is more impure milk than adulterated milk that I am concerned with, milk which is in a filthy condition and tends to early decomposition?—The matter has not been dealt with so much by the Local Government Board, I think, as by the Board of Agriculture. The Board of Agriculture are very much interested in the milk supply, and powers are given to them as well as to the Local Government Board by the Sale of Food and Drugs Act of 1899. Sections 2 and 3 of that Act are important in this regard. Section 2 says: "The Local Government Board may, in relation to any matter appearing to that Board to affect the general interest of the consumer, and the Board of Agriculture may, in relation to any matter appearing to that Board to affect the general interests of agriculture in the United Kingdom, direct an officer of the Board to procure for analysis samples of any article of food, and thereupon the officer shall have all the powers of procuring samples conferred by the sale of Food and Drugs Acts (*a*), and these Acts shall apply as if the officer were an officer authorised to procure samples under the Sale of Food and Drugs Act, 1875." Then there are certain exceptions, and then Sub-section 2 says: "The Board shall communicate the result of the analysis of any such sample to the local authority, and thereupon there shall be the like duty and power on the port of the local authority to cause proceedings to be taken as if the local authority had caused the analysis to be made." Then Section 3 gives power under similar circumstances for the Local Government Board or the Board of Agriculture, as the case may so be, to act in default of the local authority. The Board of Agriculture have taken up this matter and have sent inspectors to the various local authorities, both in London and outside London, for the purpose of inducing them to the take action under the Sale of Food and Drugs Act. They have been successful, or someone has been successful; at any rate, the number of samples taken has materially increased since the Act was passed, and the number of samples reported as adulterated has diminished.

13602. All that points rather to remedial steps for evils which exist, and preventive steps, so that these evils should not come into existence. It seems to me that the whole crux of the question, as far as milk is concerned, lies in the powers which were conferred originally upon the Privy Council, but transferred to the Local Government Board under the Act of 1875, empowering them to make orders for the registration of dairy keepers, the regulating of lighting and ventilation, cleansing, drainage, and water supply of daries and cow-sheds in the occupation of persons following the trade of cow-keepers or dairymen, for securing the cleanliness of milk stores, milk shops and all milk vessels, and for prescribing the precautions to be taken by purveyors of milk and persons selling milk?—That, of course, is a matter outside the public Health Act.

13603. It is?—Yes.

13604. It has a very important bearing upon it?—It is public health, but outside the Act, and it is outside the Sale of Food and Drugs Act. These powers do exist, and since the work was transferred to the Local Government Board a good deal has been done in the matter.

13605. You have distinct bye-laws for urban and rural districts in these matters?—Yes.

13606. You do not compel local authorities?—We have no power. They must keep a register of cow-keepers, dairymen, &c., and they are empowered to make regulations. The Board cannot compel them to make regulations.

13607. You can only authorise. But you can make them yourself, can you not?—No, I do not think so.

13608. Cannot the Local Government Board, under the Contagious Diseases (Animals) Act, 1878, make orders for all these things?—We have no power to put the order in force in any district.

13609. Cannot you make these orders yourself?—No.

13610. Surely you can by the Act of 1878?—The Board have power, under the Public Health (London) Act, to make orders of the nature of the Dairies, Cowsheds and Milk Shops Order, 1885. They make the order laying down the rules just as the Privy Council Office used to do, but they cannot enforce anything. The regulations under the order are made by the local authorities themselves. They make regulations and the Board approve them.

13611. The regulations are the substantial thing?—Yes.

13612. (*Mr. Struthers.*) Must they make the regulations, or is it optional?—It is optional; but they often make them: there is no great difficulty there. The difficulty is in enforcing them.

Mr. Lithiby.

13613. (*Chairman.*) But if you make these orders then they are obliged to enforce them?—The order which the Privy Council Office made is still in force, and is supplemented by one which the Local Government Board have made.

13614. It merely lays down what the local authority *can* do?—Yes.

13615. And you have no power of compelling them to do that?—No.

13616. At least, you have no powers to compel them to enforce regulations under it?—We have no power. They can make regulations, and do.

13617. But you do not see that they make them?—No.

13618. And, therefore, they may disregard this order altogether?—In effect, yes.

13619. Do you not think it would be desirable that the Local Government Board, in the event of the local authority not making orders for these purposes, should do it themselves?—The regulation is as follows: "A local authority may from time to time make regulations for the following purposes or any of them."

13620. This is the Order?—This is the Order of 1885—the Council Office Order: "(*a*) For the inspection of cattle in dairies; (*b*) for prescribing and regulating the lighting, ventilation, cleansing, draining, and water supply of dairies and cow-sheds in the occupation of persons following the trade of cow-keepers or dairymen; (*c*) for securing the cleanliness of milk stores, milk shops, and of milk vessels used for containing milk for sale by such persons; (*d*) for prescribing precautions to be taken by purveyors of milk, and persons selling milk by retail, against infection or contamination."

13621. That is practically what I have read, but you say little is done?—They make regulations, and, so far as we are concerned, there the matter ends.

13622. But they do not always make regulations, I think I understand you to say?—I think most of them do.

13623. It is their duty to do so?—It is "may"; it is not incumbent upon them.

13624. Your order is merely an information to them what they may do?—That is so.

13625. And they very often do not do it, and ever if they do there is no power of enforcing their observance of their own regulations?—That is so.

13626. Do you not think it is desirable that the Local Government Board should have that power?—That is a matter of policy on which I would express no opinion.

13627. Do you not think it might be useful to bring indirect pressure to bear upon them extending the power now enjoyed by a local authority under the Infectious Diseases Act to prohibit supply from an infected dairy so as to exclude the supply from areas where the Contagious Diseases (Animals) Act is not in operation? That is a matter which, no doubt, will have to be considered by the Government, and by several of the Departments later on, when the Report of the Royal Commission on tuberculosis has been made. At present it is very difficult to initiate legislation. On the one hand we are met by the farmers—this has been a matter which has been considerably discussed for some years past—and we are told that there is no danger whatever, for instance, in the matter of tuberculosis.

13628. That has been upset?—That has been supported by Dr. Koch. A Royal Commission is now inquiring into the matter, and they report that they do not agree with Dr. Koch; Dr. Koch has rejoined that he does not agree with the Commission. There the matter rests at present. No doubt, when the Commission's final report is made, consideration will have to be given to the whole question. In many local Acts clauses have been inserted giving the local authorities certain powers in regard to tuberculosis. Those clauses were settled at a conference held between the Local Government Board, the Board of Agriculture, and the Central Chamber of Agriculture. They were settled after a great deal of discussion, and not without some difficulty. They have been very strongly opposed in Parliament in the agricultural interest, the dairy interest, and so on, and although they are still inserted it would be extremely difficult, I think, to go farther at present.

13629. Do you think the dairy interest should reserve as a privilege the right to poison the community?—I must not express any opinion upon that. That is a question for Parliament.

13630. Do you not think that it would be desirable to give the county councils, in this particular, the power to step in?—I think that is a point that might very well be considered when the whole question comes up, as it must do.

13631. You would not, so far as you are prepared to express an opinion, be opposed to such a suggestion?—Certainly not.

13632. In regard to any general powers, apart from milk, for the prevention of adulteration of food stuffs, you desire to put in these answers which you gave in examination before the Arsenical Commission?—Yes.

13633. As to the powers of the Local Government Board?—Yes.

13634. They are very limited, I understand?—The powers of the Local Government Board are practically limited to those given in the two sections of the Act of 1899, which I have read. In the evidence which I gave before the Royal Commission on Arsenical Poisoning, I went at considerable length into the Board's position under the Sale of Food and Drugs Act generally, and if I might refer the Committee to that I think it will save their time.

13635. Do you think it would be practicable for the Local Government Board, if it had the power, to fix a standard for all food stuffs, instead of leaving it to the rather happy-go-lucky result of prosecution upon the action of public analysts?—That I dealt with in my evidence before the Royal Commission on Arsenical Poisoning, and I would only repeat now that the suggestion made in various reports, first, I think, by the Select Committee on Food Adulteration in 1896; secondly, by the Departmental Committee on Food Preservatives in 1899, and again by the Royal Commission on Arsenical Poisoning in 1903, was that a Court of Reference or a Consultative Committee should be appointed to advise the Government Department concerned with regard to the standards that should be fixed for foods.

13636. A sort of advisory committee?—Yes.

13637. Its functions might be extended to cover some other matters very easily, might it not?—The President of the Local Government Board said in Parliament not long ago that this matter was under his consideration, that he had communicated with the Departments concerned, that the Departments concerned had not all agreed as to the policy of this matter, and that in the autumn he was hoping to arrange for a conference between those Departments. There the matter rests at present.

13638. The view of the Local Government Board is not in opposition to the idea of an advisory committee?—No, I think I may say that the view of the Local Government Board is decidedly not in opposition.

13639. It is rather in favour of it than otherwise. Would you go so far as to say that they would favour its dealing with other matters touching public health?—Not as regards public health generally. The idea was to constitute a court of reference of the kind indicated in the evidence taken before the Select Committee on Food Products Adulteration. They went into it very thoroughly, and their proposal was that the Government chemist, and some representatives of the Departments, and some representatives of the trade interests concerned, should meet and decide what standards should be selected for certain articles; of course, it is an exceedingly difficult thing for any Government Department to fix a standard. The Board of Agriculture fixes it with expert assistance, and it is alleged—I do not know with what truth—that the standard in the case of milk had necessarily to be so low, as not to interfere with the milk of the poor cow. The result of that has been, so some say, that, in fixing a standard sufficiently low to take the milk of the poor cow, the standard has enabled the skilful adulterator to water the milk down to that standard. Therefore, it is not altogether certain that to fix a standard for the various ingredients of food would be without its compensating disadvantages.

13640. Unless it was fairly high, and unless you ignore the poor cow?—Yes.

13641. (*Mr. Struthers.*) With regard to the supply of milk to towns, the big municipalities, as a rule, have regulations as to dairies and milkshops, and so on, which they enforce in their own district under the order which you have just read?—Yes.

13642. Do they make representations to you upon that subject at all?—No. We get references to it in the reports of medical officers of health, and it is one of the points to which special attention is given in considering the reports.

13643. When they have reason to complain of the milk supply which is outside their own district, which comes from, say, fifty miles off, there is a procedure they may take to stop the milk coming from that dairy or farm to their town, is there not?—Section 4 of the Infectious Diseases Act of 1890 contains a provision on the subject of inspection of dairies in certain cases and power to prohibit the supply of milk:—"In case the medical officer of health is in possession of evidence that any person in the district is suffering from infectious disease attributable to milk supplied within the district from any dairy situate within or without the district, or that the consumption of milk from such dairy is likely to cause infectious disease to any person residing in the district, such medical officer shall, if authorised in that behalf by an order of a justice having jurisdiction in the place where such dairy is situate, have power to inspect such dairy, and if accompanied by a veterinary inspector, or some other properly qualified veterinary surgeon, to inspect the animals therein, and if on such inspection the medical officer of health shall be of opinion that infectious disease is caused from consumption of the milk supplied therefrom, he shall report thereon to the local authority, &c."

13644. Would that milk supplied from that particular dairy or farm be prevented from coming into the towns?—It may have that result, and in addition there are clauses in many local Acts where tuberculous milk may be dealt with under a more drastic procedure.

13645. But at the very best it does not go the length of prohibiting that milk being supplied to anybody whatever?—No.

13646. It would be very desirable from the purely health point of view, putting aside all those considerations which you have properly taken account of, the feeling of opposition which is likely to be aroused and the feeling between local authorities, it would be very desirable that the county authority should have the power to inspect farms in its district and to prevent the supply and the distribution of milk from that farm or dairy if the sanitary condition of the place was not satisfactory, or if there was danger to public health?—Personally, I should have no objection to any such suggestion.

13647. Is not that a reasonable thing in the interests of public health, putting aside the other considerations which I think you very properly take account of—the possible opposition?—I see no objection to it. I may draw the attention of the Committee to Sections 116 and 117 of the Public Health Act, 1875, which are useful, I think, in the direction in which you are looking for a remedy. The medical officer of health, or inspector of nuisances, "may at all reasonable times inspect and examine any animal carcase, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, or milk exposed for sale, or deposited in any place for the purpose of sale, or of preparation for sale, and intended for the food of man, the proof that the same was not exposed or deposited for any such purpose, or was not intended for the food of man, resting with the party charged; and if any such animal carcase, meat, poultry, game, flesh, fish, fruit, vegetables, corn, bread, flour, or milk appears to such medical officer or inspector to be diseased or unsound or unwholesome or unfit for the food of man, he may seize and carry away the same himself or by an assistant, in order to have the same dealt with by a justice." Then by Section 117 the justice has power to order the destruction of any of those articles.

13648. But in the case of milk he does not have power to prevent a further supply till the condition is improved?—No. He has only power to take that milk, and if he found it dirty, for instance, in the way suggested just now, he might take that to a justice and cause it to be destroyed.

13649. (*Chairman.*) How often is that done?—We do not know. *Mr. Lithiby.*

13650. (*Mr. Struthers.*) My question is rather this, that the present district authorities, which in many cases are small and not very active, would not be likely to take a satisfactory action as regards a matter of widespread importance like this of milk supply, and that the county authority would be likely to do the thing much more efficiently?—That is a matter of opinion. There are various considerations to be weighed in connection with it. In the first place, you have in a local authority, no doubt, farmers and others who are interested in the sale of milk, men who would be unwilling to damage the trade of their neighbours. Then, on the other hand, you have in the county a great number of people who are also interested in their own agriculture and their own affairs, and they say: "Well, the milk is not used in our district; why should we bother?" That is an argument which I have heard used.

13651. Do you think that that argument is likely to hold in the case of a large county, as against a small district?—Probably it would be held less than it would in a small district, but the municipalities say that power should vest in them, because they are the consumers of milk themselves, rather than it should be in the hands of anybody else.

13652. The power of the municipality to exercise control as regards its own supply need not interfere with the power of the county to exercise control as regards the general supply from the district?—I should see no objection to the country having those powers, but whether they would be sufficient without concurrent powers being given to the municipality is another matter.

13653. And there is the important difference between the smaller district and the larger county, that in the latter case you almost necessarily have a man, or very frequently have a man, whose business it is to look after public health, a whole-time medical officer, whereas in the other case you have a man who only gives such time as may be necessary?—The medical officer of health could not possibly do it in any large county; he could not possibly do all the work himself. He would have to have a large staff, and the suggestion which you are putting is one of many suggestions which have been made for giving larger powers to the county councils and superseding the local authorities altogether.

13654. My suggestion is not to supersede them, but to have concurrent powers. Let the local authority have its medical officer only employed part time, but have the county with a proper medical officer full time, and have certain powers of supervision, and, in the last resort, of supercession of the smaller authority?—It is a very difficult question to determine. It is a great question of policy as to what extent county councils shall have given to them over-riding powers.

13655. (*Chairman.*) I suppose the municipality of Manchester, for instance, might be armed with powers to prohibit the introduction into Manchester of milk coming from any farm in an area where due precautions are not taken by the local authority?—Many Corporations have that power now, under their local Acts, as regards tuberculosis.

13656. But should it not be made general, so as to enable them to exclude any supply from a source where the ordinary precautions to prevent contamination are not taken?—It might be extended by Parliament, but no such power has been given yet.

13657. Turning to the question of general health administration, you have told us that the Local Government Board receive reports from the medical officers of health from time to time. Can you explain what further action is taken if there appears to be a defective administration in any area?—The practice is to examine all the reports, and to bring forward those that indicate laxity of administration on the part of a local authority. Those reports are considered and very often letters are written to the local authorities.

13658. Is it always easy to detect indications of laxity?—The medical staff of the office know pretty well what are the conditions of many places in England. The Public Health Act was passed nearly thirty years ago, and the reports have been examined systematically ever since that time. At one time or another the

Mr. Lithiby.

medical inspectors have made reports on a considerable number of the districts of England. Those reports are always available, and it is with a knowledge of these reports and the conditions disclosed by them, and the conditions reported in past annual reports, that the examination of the report for any given year is made.

13659. Should you be inclined to say that much of the improvement which has taken place in the last thirty years has been due to this system?—I think there can be no doubt that sanitary progress in England during the last thirty years has been enormous.

13660. Should you attribute it to this machinery very largely?—To a large extent. Also social causes have been operating, and changes in the habits of the population have been made. But I think that improved sanitary administration must take a share of the credit for improved conditions that have been noticed in the last century. I would draw the attention of the Committee, if they are interested in that part of the subject, to a report, which I have here, made by Dr. Franklin Parsons, the assistant medical officer of the Board, on "Half a Century of Sanitary Progress and its Results."* The report is a continuation, practically, of another report which was made by the late medical officer of the Board, Sir Richard Thorne, on the same subject, "Progress during the Victorian Era." The effect of this is to show that a great deal of improvement has been made, and that some, a not inconsiderable amount, of the lowering of the death rate has been due to sanitary improvements.

13661. I presume you would admit that it has had a very unequal local distribution?—Sanitary improvement began, I suppose, in 1848 with the Public Health Act of that year. That was practically the time of the great advance. Since that time there has been a considerable movement of the population from the country into the towns. Nevertheless, the death-rate has materially lowered during that time, and unless sanitary improvements in towns had been very great the movement of the population would have produced a higher death-rate, I suggest to you, than it has done.

13662. Where there has been no diminution of the infant death rate, which is perhaps a more crucial test?—I do not know that I follow you in saying that it is a more crucial test of sanitary progress.

13663. Because they are more susceptible to insanitary conditions?—The conditions, as I say, are very different. I should not like to express any opinion upon that without having the figures before me.

13664. But you would not claim universality for this improved local administration?—Yes, decidedly. I do not say that it has advanced to the same extent in every place.

13665. We were told in evidence here that the local authority in the Potteries, for instance, was as inefficient as you could find anywhere?—I agree with that.

13666. Most of the bad houses are owned by members of the local body, and the sanitary inspectors are too much in awe of their employers to carry out their duty. The lady who gave that evidence was in a good position to know. She said: "The only hope of a change, short of a drastic interference from headquarters, lay in a registration of the owners of slum property, and the rendering of a medical officer of health independent of the local authority?—There is no doubt that in the Potteries the sanitary progress has not been so rapid as one would wish; indeed, the condition of some of the Pottery towns has been shown by reports made by inspectors of the Local Government Board to be extremely bad. The Local Government Board have, to my own knowledge, drawn the attention of the local authorities to that condition of things.

13667. Have they done anything which would merit the description of: "Drastic interference from headquarters?—I think they have done all they could with the powers they have.

13668. But there is Section 299 of the Public Health Act. Have you brought that into operation?—I cannot say.

13669. By which you can set a time limit to the enforcement by the local authority of any duties they are called upon to perform?—Practically, Section 299 is limited to matters of drainage and water supply.

13670. Limited in practice, but not in intention?—In theory it is not, but in practice it is. So far as the experience of the Local Government Board is concerned it does not enable them to go beyond that. The conditions in the Potteries are, of course, many of them trade conditions. In the Pottery districts and the nail-making districts in the Midlands, the conditions are very bad. But even there they are vastly better than they were sixty years ago.

13671. We were told by one witness that in Sheffield an insanitary area, for which a Provisional Order was obtained fifteen years ago, is not cleared yet. That is not a proof of any great vigilance either locally or from headquarters. That was a statement by a lady employed as one of the sanitary inspectors of Sheffield. You are not directly concerned with the Housing Acts, but you are familiar with Section 31 of the second part of the Housing Act?—Yes, the medical officers of health are empowered by Section 31 and 32 to make reports, and some of them do so.

13672. Has the Local Government Board ever issued an order under Section 31:—"(1) If within three months after receiving the said complaint and opinion or representation of the medical officer, the local authority not being in the administrative county of London, or not being a rural sanitary authority in any other county, declines or neglects to take any proceedings to put this part of this Act in force, the householders who signed such complaint may petition the Local Government Board for an inquiry, and the said Board after causing an inquiry to be held may order the local authority to proceed under this part of this Act, and such order shall be binding on the local authority." That is dealing with insanitary dwellings and so on?—I cannot say to what extent action has been taken under that Act. It has not come to my notice.

13673. You have given us the limitations of the Local Government Board, what should you say are their powers?—Their compulsory powers are practically limited to those under Section 299 of the Public Health Act, 1875.

13674. That you limit to sewage and water?—Practically. Section 101 of the Public Health Act (London), 1891, also enables the Board to act on a complaint of default on the part of a local authority. The powers of the Board, though not very extensive, often succeed in getting work done.

13675. By diplomacy?—Yes, that is what it comes to.

13676. You have very little direct power?—Very little direct power.

13677. Do you think direct power, if you had it, could be usefully employed?—No doubt, in some cases it could, but what I should point out is that if local authorities in this country will not go you cannot drive them. I can give you an instance now where direct powers are possessed by the Board, that is, under the Vaccination Act. We have the greatest difficulty in administering the Vaccination Acts. Cases go to the Law Courts, and the Law Courts decide that the orders of the Board have the force of law, but yet the law is not enforced.

13678. (*Mr. Struthers.*) There is a strong public prejudice on the question of vaccination, which scarcely applies to the general administration of the Health Act?—There is a strong public prejudice against an increase of rates in many cases, and that is the difficulty that has to be met.

13679. (*Chairman.*) I should have thought that the improvement of the public health would have diminished the rates rather than raised them?—The rates have risen considerably during the last few years. A large amount of the increase in the expenditure has been due to matters such as drainage, water supply, and other matters bearing on public health. I do not say by any means that the local authorities are doing all they ought to do, but I do say they are doing a very great deal; and that to compel them to spend more money is to put their backs up. Here is a return on page 127 of the Report of the Local Government Board for 1902-03 showing sanctions which have been granted from 1871 onwards for the borrowing of money in urban and rural districts. In 1871 the amount sanctioned for borrowing was £267,562; in 1872 it was £602,000, and so on in

* Printed in the Transactions of the Epidemiological Society: Vol. 18—1898-9.

increasing proportions down to 1902, when the amount borrowed was £11,466,647.

13680. (*Mr. Struthers.*) Do you mean in the year ?—Yes. The borrowing sanctioned by local authorities in those years, 1871 to 1902, amounted to £137,750,000. In the following pages are shown the purposes for which the money was borrowed In 1883 for sanitary and other purposes in urban districts the amount borrowed was £2,162,000, For sanitary and other purposes in the rural districts the amount borrowed was £95,704. In the year 1902 the amount borrowed for sanitary and other purposes in urban districts was £10,414,000, nearly five times as much as in 1883, and for sanitary and other purposes in rural districts it was £713,186, or over seven times the amount borrowed in 1883.

13681. (*Chairman.*) How much of that do you think was misappropriated owing to carelessness or stupidity ?—I am not in a position to say.

13682. Is it not consistent with the expenditure of these huge sums that a great deal may have been wasted ?—Before any sanction is given, a local inspection is made by an inspector with competent knowledge, and so far as plans are concerned, and so far as the information we have goes, the money is employed in necessary purposes, useful purposes and permanent purposes.

13683. (*Mr. Struthers.*) You said "sanitary and other purposes" ?—Yes.

13684. What are the other purposes ?—Allied purposes. We show the purposes: for instance, the construction of a mortuary, or a fever hospital, or a small-pox hospital, would be a sanitary purpose—any purpose which may be connected with the Public Health Act. Market purposes would be a purpose introduced there, and, of course, a great many others. Sea defences would be included there, and land for sanitary depôt purposes.

13686. (*Mr. Struthers.*) With regard to Section 299 of the Public Health Act of 1875, I understand you to say that cases are only considered of complaints against insufficient sewers or supply of water, and that the complaints do not refer to other breaches of the Public Health Act ?—What I meant to convey was that practically the only powers which the Board can exercise under this section are those which relate to drainage and water supply. Other complaints do come to us.

13687. How is it you can only exercise your powers in regard to these two matters, because others are mentioned in the same way—"or that a local authority has made default in enforcing any provisions of this Act which it is their duty to enforce"—several are specified where it is the duty of the local authority to do certain things ?—We can make an order, and the ultimate procedure is a mandamus.

13688. Or supersession ?—I think it will be fairly obvious that the Local Government Board cannot supersede the local authority. There is power, but it practically cannot be carried out.

13689. (*Chairman.*) The Board of Education used to do it surely with School Boards ?—It is a very different thing. The difficulty of getting the Court to grant a mandamus is practically the measure of our power in giving the order. The Local Government Board cannot make an order unless they are perfectly sure that they can get the Court to enforce it.

13690. (*Mr. Struthers.*) But you are speaking of procedure by mandamus ?—Yes.

13691. I want to come back to this other alternative, supersession. I quite understand what you said just now, but why may not the county council supersede a defaulting district ?—That would be a way. I said just now I saw no objection myself to the powers being given.

13692. That might be a useful way of exercising this power of supersession ?—They have a power now under Section 16 of the Act of 1894 on the complaint of the Parish Council. They have power now in London under Section 100 of the Public Health (London) Act, 1891. The London County Council have not utilised that power to any great extent; indeed they have scarcely utilised it at all. They gave reasons for that conduct I believe before a Select Committee of the House of Commons which was sitting the other day; they said it did not do; they worked persuasively as far as they could.

13693. They followed your policy of diplomacy ?— Yes. I would not say they followed us in anything. But that is practically the line they take, as I understand. It is difficult to drive a local authority which will not go. *Mr. Lithiby.*

13694. What I am proposing is not to give the county council power to supersede the local authority at its pleasure. The case I am putting is quite different. Suppose a complaint is made to you that some local authority is not putting into effect the present Act, you say you must go by mandamus, but you might replace it by a county council for that specific case ?—I make no remark upon that suggestion at all, except this, that we have not the power at present. Whether it would be desirable to take such power is, I think, a matter which might be fairly considered when any amendments of the Public Health Act are made.

13695. The county council cannot be accepted a "person" for this clause, I suppose ?—No, I think not.

13696. But a small amendment of that clause would enable the county council to be brought in, and it would be desirable in your view if it could be done ?—I should not like to express any opinion upon it. I know that there would be very strong opposition to it.

13697. I am arguing on the merits of the case. In the interests of effective administration of the Public Health Acts, would it not be desirable that the Board should have power to replace a recalcitrant or supine local authority by the county council in specified cases ?—I have not sufficient experience to be able to answer that question in the affirmative. It is a matter, I think, that might clearly be considered. I can suggest a great many difficulties in the way of carrying it out.

13698. (*Chairman.*) I suppose we may assume that the immense congestion of business in the Local Government Board to a considerable extent hampers its power of decisive action, or would not you say so ?—I do not think so.

13699. You do not think it does ?—No.

13700. You do not think you have more to do than you can do ?—If a thing went perfectly smoothly there would be no difficulty, but supposing the Board were to attempt to bring into operation Section 299 in any individual case, what happens ? There is a lawsuit at once, and a very troublesome and difficult lawsuit. The court requires to be satisfied very fully as to the necessity before they grant a mandamus. Take the matter of drainage. I will give you an instance which comes to my mind, namely, the drainage of the large urban areas in the Lee Valley. What are you going to do with them ? These towns have grown. Walthamstow has grown from a village thirty years ago to a population of, I dare say, 100,000 to-day. Walthamstow's drainage arrangements have not maintained the same rate of growth as its population, perhaps. The sewerage in the place itself may be all right, but the arrangements for disposal of sewage of a population of 100,000 must be very different to the arrangements for the disposal of the sewage of a village. Next to Walthamstow comes Leyton. Leyton has similarly grown in the same period. The West Ham sewerage is now taken into the metropolitan system, but other districts higher up in the Lee Valley have the same difficulty. The Local Government Board may make an order, but it could not enforce that order within a very long period, and the Court cannot do much to assist. Leyton obtained an order from the High Court against Walthamstow, but the Court were obliged to allow applications to be made from time to time to postpone the execution of that order. It is impossible to proceed except by very slow means.

13701. Should you say that the Local Government Board has leisure enough to give due consideration to large questions of public policy in matters of health, amendments of Public Health Acts and so on ?—I think the Local Government Board have quite as much leisure as Parliament has.

15702. That is not saying much ?—We have some measures ready for Parliament. Mr. Long said the other day that he was ready to introduce a Public Health Bill when he saw any opportunity of making any progress with it in Parliament.

Mr. Lithiby.

13703. (*Dr. Tatham.*) As a result of the Board's examination of the annual reports of the medical officers of health, I suppose the Board frequently finds it necessary to hold a local inquiry?—Yes.

13704. Is it not a fact that the staff of the Board is so limited that it is quite impossible to conduct as many local inquiries as the Board would wish to do?—It would be impossible to carry ou by the present staff, I think, all the local inquiries which the medical officer would like to have directed by the present staff.

13705. That is what I understood was the case:—That is so. Of course there is not quite the same necessity for local inquiries now that there was thirty years ago, because there is a considerable number of very competent medical officers of health in various parts of the country, and several of the county councils have very competent medical officers. Therefore, there is not quite the same necessity for directing local inquiries by medical officers of the Local Government Board as there was before the Act of 1888 was passed.

ADJOURNED SINE DIE.

INTER-DEPARTMENTAL COMMITTEE ON PHYSICAL DETERIORATION.

APPENDIX

TO THE REPORT OF THE

INTER-DEPARTMENTAL COMMITTEE

ON

PHYSICAL DETERIORATION.

VOL. III.—APPENDIX AND GENERAL INDEX.

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WOOLWICH, NEWCASTLE-ON-TYNE, MANCHESTER, LIVERPOOL, BIRMINGHAM, LIC

1901.

CAUSES OF REJECTION.	1. Labourers, Husbandmen and Servants.			2. Trades, such as Cloth-Workers, Weavers, Lace-Makers, Working Tailors, Shoemakers, &c.			3. Mechanics employed in occupations favourable to physical development (as Carpenters, Smiths, Masons, &c.)			Shopmen and Clerks.			5. Professional Occupations, Students.			6. Boys under 17 years.		
	Number Rejected.	Ratio per 1000.	Order of Prevalence.	Number Rejected.	Ratio per 1000.	Order of Prevalence.	Number Rejected.	Ratio per 1000.	Order of Prevalence.	Number Rejected.	Ratio per 1000.	Order of Prevalence.	Number Rejected.	Ratio per 1000.	Order of Prevalence.	Number Rejected.	Ratio per 1000.	Order of Prevalence.
1. Syphilis	63	9		9	8		12	8		5	6		1	12				
2. Tubercle	12	2		7	6		7	4		2	3							
3. Impaired Constitution and Debility	81	11		27	23	9	15	9		9	12					5	67	5
4. Other General Diseases	205	29		18	15		40	25		13	17		4	47	5	2	27	
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6. Weakness of Intellect	34	5		3	3		3	2										
7. Defective Vision	1029	143	1	73	62	5	178	111	3	83	108	3	12	141	2	14	187	1
8. Diseases of Eyes and Eyelids	40	6		22	19		11	7		3	4					1	13	
9. Diseases of Nose and Mouth	48	7		3	3		3	2								2	27	
10. Disease of Ears	67	9		6	5		4	3		2	3					5	67	5
11. Deafness	153	21		4	3		4	3										
12. Impediment of Speech	44	6		5	4		8	5		5	6		2	24				
13. Disease of Heart	446	62	6	60	51	6	95	59	6	46	60	5	4	47	5	8	107	2
14. Disease of Arteries (Aneurism)				1	1													
15. Disease of Veins (Varix)	498	69	5	26	22	10	59	37	9	28	36	7	3	35	9	1	13	
16. Disease of Lungs (except Tubercle)	36	5		6	5		5	3		2	3							
17. Loss or decay of many teeth	792	110	3	85	72	4	162	101	4	74	96	4	4	47	5			
18. Hernia	252	35		26	22	10	55	34	10	18	23	10	3	35	9	6	80	3
19. Laxity of Abdominal Rings	16	2		3	3		5	3		1	1							
20. Hæmorrhoids	13	2					3	2		1	1		1	12				
21. Diseases of the Urinary Organs	6	1		2	2		1	1		1	1							
22. Varicocele	332	46	7	48	41	7	98	61	5	33	43	6	5	59	4	4	53	10
23. Other Diseases of the Genital Organs (not Syphilitic)	43	6		6	5		11	7		2	3							
24. Defects of Upper Extremities from Fracture, Contraction, Luxation, &c.	109	15		15	13		23	14		6	8		1	12		5	67	5
25. Defects of Lower Extremities from Fracture, Contraction, Luxation, &c.	311	43	8	44	37	8	73	46	8	17	22		1	12		6	80	3
26. Flat Feet	287	40	10	19	16		75	47	7	22	29	8	1	12		5	67	5
27. Diseases of Joints	52	7		8	7		12	8		2	3							
28. Other Affections of Bones and Muscles	22	3					8	5		3	4							
29. Ulcers, Wounds, and Cicatrices	35	5		3	3		11	7		8	10							
30. Other Affections of the Cutaneous System	71	10		10	8		18	11		5	6		3	35	9	3	40	
31. Malformation of Ears	1																	
32. Malformation of Nose and Mouth	3																	
33. Malformation of Chest and Spine	117	16		13	11		22	14		19	25	9	3	35	9	1	13	
34. Malformation of Urinary or Genital Organs	13	2		1	1		2	1										
35. Under Height	295	41	9	136	115	3	31	19		8	10		4	47	5			
36. Under Chest Measurement	964	138	2	189	160	2	327	205	1	246	320	1	22	259	1	5	67	5
37. Under Weight	503	70	4	288	244	1	206	129	2	90	117	2	6	71	3			
38. Apparent Age not in accordance with Regulations	87	12		7	6		7	4		6	8		3	35	9			
39. Not likely to become an Efficient Soldier	71	10		4	3		3	2		9	12		2	24		2	27	
40. Over Height	5	1																
TOTALS	7193	1000		1179	1000		1599	1000		769	1000		85	1000		75	1000	

...DICES.

...DIX VI.

..., RELATING TO THE PHYSICAL CONDITION OF CANDIDATES FOR ENLISTMENT IN THE ARMY—A. AT
...AIN RURAL RECRUITING CENTRES (*and see Appendix I.*).

...N, ACCORDING TO PREVIOUS OCCUPATIONS, AT ST. GEORGE'S BARRACKS, LONDON, HOUNSLOW,
...), EDINBURGH, GLASGOW, DUBLIN, AND BELFAST (Collectively), DURING 1901 AND 1902.

1902.

CAUSES OF REJECTION.	1. Labourers, Husbandmen, and Servants.			2. Trades, such as Cloth-Workers, Weavers, Lace-Makers, Working Tailors, Shoemakers, &c.			3. Mechanics employed in occupations favourable to physical development (as Carpenters, Smiths, Masons, &c.)			4. Shopmen and Clerks.			5. Professional Occupations, Students.			6. Boys under 17 years		
	Number Rejected.	Ratio per 1000.	Order of Prevalence.	Number Rejected.	Ratio per 1000.	Order of Prevalence.	Number Rejected.	Ratio per 1000.	Order of Prevalence.	Number Rejected.	Ratio per 1,000.	Order of Prevalence.	Number Rejected.	Ratio per 1,000.	Order of Prevalence.	Number Rejected.	Ratio per 1,000.	Order of Prevalence.
1. Syphilis	85	10		12	8		16	9		6	6		2	15				
2. Tubercle	14	2		8	5		5	3		4	4		1	8		2	8	
3. Impaired Constitution and Debility	87	11		16	10		20	12		12	13		2	15		5	33	
4. Other General Diseases	149	18		43	27	8	42	25		27	29	9	6	46	7	3	20	
5. Diseases of Nervous System	7	1		4	3		1	1		3	3		1	8				
6. Weakness of Intellect	9	1		4	3		3	2										
7. Defective Vision	1071	132	3	215	134	3	209	123	3	126	135	3	18	137	2	37	291	1
8. Diseases of Eyes and Eyelids	44	5		2	1		5	3		12	13		3	23		3	19	
9. Diseases of Nose and Mouth	11	1		3	2					1	1					4	26	
10. Disease of Ears	49	6		5	3		6	3		6	6		1	8		4	26	
11. Deafness	55	7		4	3		4	2		3	3					4	26	
12. Impediment of Speech	37	5		6	4		14	8		5	5		1	8		1	7	
13. Disease of Heart	459	56	5	55	35	5	101	59	5	63	68	4	16	122	3	14	96	2
14. Disease of Arteries (Aneurism)	4						1	1										
15. Disease of Veins (Varix)	311	38	9	34	22		75	44	7	40	43	7	10	76	5	1	7	
16. Disease of Lungs (except Tubercle)	19	2		5	3		8	5		11	12		2	15		1	7	
17. Loss or decay of many teeth	1311	161	1	268	170	2	341	200	1	156	168	2	23	176	1	8	74	
18. Hernia	242	30		24	15		42	25		26	28	10				3	19	
19. Laxity of Abdominal Rings	23	3		5	3		10	6										
20. Hæmorrhoids	8	1		1	1		1	1		3	3					3	19	
21. Diseases of the Urinary Organs	28	4		1	1		5	3		1	1					1	7	
22. Varicocele	322	40	8	43	27	8	71	42	8	41	44	6	6	46	7	3	19	
23. Other Diseases of the Genital Organs (not Syphilitic)	67	8		8	5		18	11		2	2							
24. Defects of Upper Extremities from Fracture, Contraction, Luxation, &c.	101	12		18	11		44	26	10	14	15		4	31	9	7	90	5
25. Defects of Lower Extremities from Fracture, Contraction, Luxation, &c.	348	43	6	53	34	6	67	39	9	28	30	8	7	53	6	9	48	3
26. Flat Feet	299	37	10	36	23	10	96	56	6	16	17		4	31	9	5	58	7
27. Diseases of Joints	105	13		2	1		9	5		4	4					1	7	
28. Other Affections of Bones and Muscles	30	4					6	3		1	1							
29. Ulcers, Wounds, and Cicatrices	68	8		11	7		17	10		9	10							
30. Other Affections of the Cutaneous System	106	13		19	12		16	9		12	13		1	8		1	7	
31. Malformation of Ears	2																	
32. Malformation of Nose and Mouth	2						1	1										
33. Malformation of Chest and Spine	138	17		8	5		26	15		7	8		2	15		6	43	
34. Malformation of Urinary or Genital Organs	14	2		1	1		5	3		2	2					2	14	
35. Under Height	327	40	7	49	31	7	40	23		11	12					3	21	
36. Under Chest Measurement	1307	161	2	424	270	1	238	151	2	206	221	1	16	122	3	4	29	
37. Under Weight	702	86	4	166	106	4	109	64	4	63	68	4	3	23		1	7	
38. Apparent Age not in accordance with Regulations	109	13		7	5		8	5		5	5		1	8		1	7	
39. Not likely to become an Efficient Soldier	59	7		13	8		3	2		5	5		1	8		5	36	
40. Over Height	10	1					1	1										
TOTALS	8139	1000		1573	1000		1704	1000		931	1000		131	1000		142	1000	

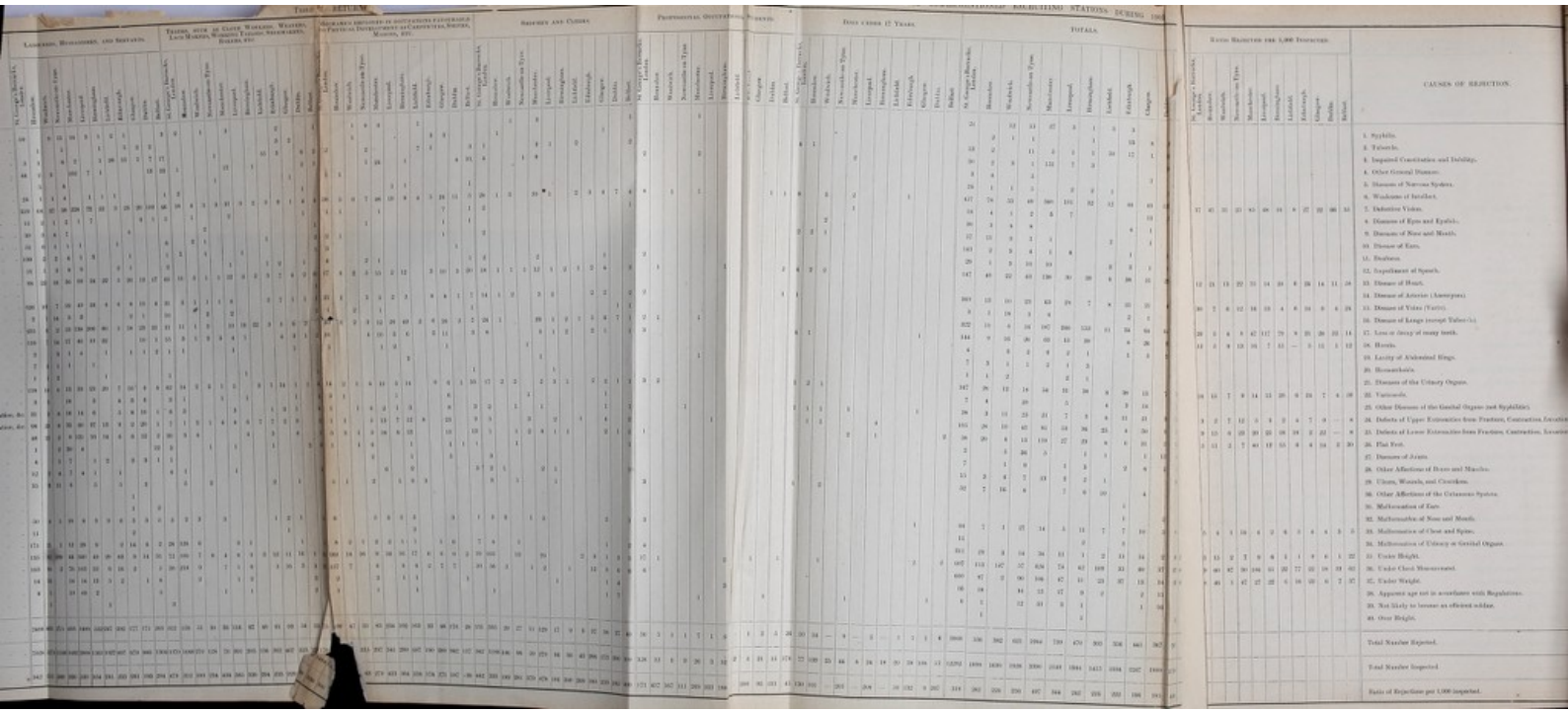

TABLE III—RETURN OF RECRUITS REJECTED ON INSPECTION, SHEWING CAUSE OF REJECTION, ACCORDING TO PREVIOUS

| CAUSES OF REJECTION. | LABOURERS, HUSBANDMEN, AND SERVANTS. | | | | | | | | | | | | | TRADES, SUCH AS CLOTH-WORKERS, WEAVERS, LACE MAKERS, WORKING TAILORS, SHOEMAKERS, BAKERS, ETC. | | | | | | | | | | | | | MECHANICS EMPLOYED IN OCCUPATIONS FAVOURABLE TO PHYSICAL DEVELOPMENT (AS CARPENTERS, SMITHS, MASONS, ETC.). | | | | | | | | | | | | | SHOPMEN AND CLERKS. | | | | | | | | | | | | | PROFESSIONAL OCCUPATIONS, ST | | | | | | | | | | | | |
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SE OF REJECTION, ACCORDING TO PREVIOUS OCCUPATIONS, AT THE UNDERMENTIONED RECRUITING STATIONS DURING 1902.

CAUSES OF REJECTION.	AND CLERKS.								PROFESSIONAL OCCUPATIONS, STUDENTS.									BOYS UNDER 17 YEARS.									TOTAL.									RATIO REJECTED PER 1,000 INSPECTED.								
	Liverpool.	Birmingham.	Lichfield.	Edinburgh.	Glasgow.	Dublin.	Belfast.	St. George's Barracks, London.	Hounslow.	Woolwich	Newcastle-on-Tyne.	Manchester.	Liverpool.	Birmingham.	Lichfield.	Edinburgh.	Glasgow.	Dublin.	Belfast.	St. George's Barracks, London.	Hounslow.	Woolwich.	Newcastle-on-Tyne.	Manchester.	Liverpool.	Birmingham.	Lichfield.	Edinburgh.	Glasgow.	Dublin.	Belfast.	St. George's Barracks, London.	Hounslow.	Woolwich.	Newcastle-on-Tyne.	Manchester.	Liverpool.	Birmingham.	Lichfield.	Edinburgh.	Glasgow.	Dublin.	Belfast.
1. Syphilis.					1	1	1					1																														
2. Tubercle.						1						1									1									1												
3. Impaired Constitution and Debility.			5	1		12					1							1		1	3								1												
4. Other General Diseases.						3	2	1				2	1						2																							
5. Diseases of Nervous System.																														1												
6. Weakness of Intellect.																																										
7. Defective Vision.					6	27	3	9	1	2		3			3				1	22	1	7	1	5						1	541	66	57	66	451	81	75	36	23	74	124	82	42	41	32	33	101	37
8. Diseases of Eyes and Eyelids.					12	1																2		1							18	3	6	10	6	13	1	1		6	5					
9. Diseases of Nose and Mouth.	1																			2		12									4	4	7	1		1	1		1						
10. Disease of Ears.	2																				1	3									27	4	7	2	2	1	21		1	2		4				
11. Deafness.																				1	1	2									47	2	8	1	3	2		1	1	3	1	1				
12. Impediment of Speech.	1							1														1									28		6	6	11	2	2		5	4					
13. Disease of Heart.	1		3		5	11	2	8	1	1					6				1	7		4	1		1				1	235	33	31	91	56	25	30	43	4	38	42	80	18	20	17	45	13	12
14. Disease of Arteries (Aneurism).																																					1	2	1							
15. Disease of Veins (Varix).	1	2	2		1	3	1	8					2										1								195	7	20	21	83	36	59	6	6	5	17	25	15	4	11	19	19	17
16. Disease of Lungs (except Tubercle).					1		1							1																	3	2	7	2	15	2	2	1		8	3	1							
17. Loss or decay of many teeth.	11	3	12		8	17	4	5					1	3	13			1		1					5			1	1	474	65	98	164	480	326	149	14	81	114	103	39	37	40	54	82	107	155
18. Hernia.	1				2	2	1													3										180	11	16	20	35	8	14	9	2	16	9	17	14	7	9	10	8	4
19. Laxity of Abdominal Rings.																															4	4		5	10	5	1			3	3	3						
20. Hæmorrhoids.								3																							7		4		2	2			1							
21. Diseases of the Urinary Organs.								1																							16	4	1			3	1	1		10						
22. Varicocele.				1	1	4	2	1						2					1	1											290	13	36	15	29	7	7	7	22	7	22	31	22	8	20	7	6	3
23. Other Diseases of the Genital Organs (not Syphilitic).																															36	2	3	10	12	15	1	1	3	12							
24. Defects of Upper Extremities from Fracture, Contraction, Loss					4	1	1	3					1							4		1	1	1							50	8	8	6	53	12	4	7	2	21	2	14	4	5	4	3	12
25. Defects of Lower Extremities from Fracture, Contraction, Loss	2																			3	3	2		1							172	37	36	12	74	74	37	29	1	34	1	6	13	23	20	6	17
26. Flat Feet.					4		1	3								1	3				1			3	1						117	11	4	16	99	26	28	25	9	79	26	16	9	7	2	8	22
27. Diseases of Joints.	3				3	2		1							3								1								34	2	1	62							22					
28. Other Affections of Bones and Muscles.						3																1									25	2	1				7	4								
29. Ulcers, Wounds, and Cicatrices.	1																														36	1	2	5	19	1	11			5		5						
30. Other Affections of the Cutaneous System.	12				1		1																								109	18	12			3	3	9	1	1								
31. Malformation of Ears.								1																															4		1					
32. Malformation of Nose and Mouth.				1																		1									2							1							
33. Malformation of Chest and Spine.					1															2	2			2							82	18	2	23	10	15	6	16	4	5	4	1	6	11	1	10	2
34. Malformation of Urinary or Genital Organs.								1					1								2			2							14	3						1		4		1					
35. Under Height.					1	2	1																	1							232	39	2	35	32	12	8	8	19	22	13	17	18	24	1	17	7
36. Under Chest Measurement.			2		4	4	5	6					1	1	1									1							1090	202	95	44	389	64	10	108	36	23	58	99	84	124	53	22	87
37. Under Weight.			12		2			3					1																		623	55	26	79	83	32	4	32	18	32	27	23	48	34	14	35	19
38. Apparent age not in accordance with Regulations.													1																		4	6		31	15	32	3	1	2	3	7	27						
39. Not likely to become an efficient soldier.				1	1			1										2		1										32	3	1	1	36			2		2	9						
40. Over Height					2		1	3																							–	1		2	1	2		5							
Total Number Rejected.	30	17	19	46	89	25		55	2	3	1	23	6	32	—	1	—	8	—	51	21	30	6	14	7	—	—	1	5	4	3	4841	642	538	766	2190	839	496	428	244	554	549	542						
Total Number Inspected.	127	69	165	132	392	165		200	10	7	7	43	16	117	2	5	2	24	—	526	84	164	59	42	19	26	25	11	26	89	18	12931	1625	1804	3012	4470	2164	2577	1402	1426	2975	2047	1443						
Ratio of Rejections per 1,000 inspected.	236	283	95	349	246	238		275	200	429	143	535	375	274	—	200	—	333	—	97	328	183	120	333	368	—	—	91	192	45	167	374	395	298	381	490	388	192	305	173	267	264	376						

TABLE I.—RETURN OF RECRUITS REJECTED ON INSPECTION, SHEWING CAUSE OF REJECTION, ACCORDING TO PREVIOUS OCCUPATIONS, AT CARLISLE, SHREWSBURY, WREXHAM, NORWICH, BURY ST. EDMUNDS LINCOLN, STIRLING, AYE, ABERDEEN, PERTH, READING, EXETER, TAUNTON, CHICHESTER, ARMAGH, OMAGH, AND CLONMEL (Collectively), DURING 1901 AND 1902.

CAUSES OF REJECTION.	1901.																		1902.																	
	1. Labourers, Husbandmen and Servants.			2. Trades such as Cloth Workers, Weavers, Lace Makers, Weeking Tailors, Shoemakers, etc.			3. Mechanics employed in occupations favourable to physical development (as Carpenters, Smiths Masons, etc.)			4. Shopmen and Clerks.			5. Professional Occupations, Students.			6. Boys under 17 years.			1. Labourers, Husbandmen and Servants.			2. Trades such as Clothworkers, Weavers, Lace Makers, Weeking Tailors, Shoemakers, etc.			3. Mechanics employed in occupations favourable to physical development (as Carpenters, Smiths Masons, etc.			4. Shopmen and Clerks.			5. Professional Occupations, Students.			6. Boys under 17 years.		
	Number Rejected.	Ratio per 1000.	Order of Prevalence.	Number Rejected.	Ratio per 1000.	Order of Prevalence.	Number Rejected.	Ratio per 1000.	Order of Prevalence.	Number Rejected.	Ratio per 1000.	Order of Prevalence.	Number Rejected.	Ratio per 1000.	Order of Prevalence.	Number Rejected.	Ratio per 1000.	Order of Prevalence.	Number rejected.	Ratio per 1000.	Order of Prevalence.	Number rejected.	Ratio per 1000.	Order of Prevalence.	Number rejected.	Ratio per 1000.	Order of Prevalence.	Number rejected.	Ratio per 1000.	Order of Prevalence.	Number rejected.	Ratio per 1000.	Order of Prevalence.	Number rejected.	Ratio per 1000.	Order of Prevalence.
1. Syphilis	2	3					3	14					1	62					5	4		3	12		1	6										
2. Tubercle	2	3		1	6														3	2		1	4												
3. Impaired Constitution and Debility	12	15		3	17		3	14											17	14		7	28		5	32						1	53	
4. Other General Diseases	18	23		6	34	9	1	5								1	91		16	13		2	8		3	19		1	12			2	105	3
5. Diseases of the Nervous System	4	5		1	6														4	3														
6. Weakness of Intellect	11	14											1	62					22	17		3	12					1	12					
7. Defective Vision	90	113	2	20	114	3	13	61	5	13	163	2				2	182	2	132	105	3	27	108	3	16	101	3	19	121	3	2	143	2	4	210	1
8. Diseases of Eyes and Eyelids	8	10		3	17		5	23											5	4														
9. Diseases of Nose and Mouth	1	1																	4	3														
10. Disease of Ears	4	5					1	5											5	4														
11. Deafness	6	8					1	5											4	3		2	8		1	6		2	24				1	53	
12. Impediment of Speech	3	4		3	17		2	9											5	4														
13. Disease of Heart	70	88	5	7	40	8	24	113	2	7	88	4	1	62		1	91		104	83	4	15	60	5	11	70	5	10	121	3	1	71		1	53	
14. Disease of Arteries (Aneurysm)																																				
15. Disease of Veins (Varix)	37	46	6	8	46	6	12	56	6	6	75	6							79	63	6	5	20		13	82	4	4	48	7				1	53	
16. Disease of Lungs (except Tubercle)	5	6		2	11											1	91		1	1		2	8		1	6		1	12					
17. Loss or decay of many teeth	75	94	3	24	137	2	23	108	3	12	150	3							105	153	2	53	213	1	29	183	1	14	160	2	2	143	2	3	158	2
18. Hernia	20	25		8	46	6	7	31		2	25								30	24		11	44	7	6	38		5	60	6						
19. Laxity of Abdominal Rings	9	11		1	6		1	5											5	3								1	12						
20. Hæmorrhoids							1	5											1	1																
21. Diseases of the Urinary Organs	1	1		1	6					1	12								3	2					1	6									
22. Varicocele	32	40	8	11	63	5	11	52	8	4	50		2	125	3				51	41		7	28		8	51	7	3	36	8						
23. Other Diseases of the Genital Organs (not Syphilitic)	1	1					2	9											3	2					2	13									
24. Defects of Upper Extremities from Fracture, Contraction, Luxation, etc.	14	18		5	29		3	14											16	13		3	12		2	13		1	12						
25. Defects of Lower Extremities from Fracture, Contraction, Luxation, etc.	28	35		3	17		5	23											61	48	8	7	28		3	19		2	24		1	71		1	53	
26. Flat Foot	31	39	9	4	23		12	56	6	3	38								82	49	7	10	40	8	8	51	7	1	12		1	71		1	53	
27. Diseases of Joints	10	13		2	11		4	19											10	8		1	4		1	6									
28. Other Affections of Bones and Muscles	4	5		1	6		4	19		1	12								4	3					3	19					1	71		1	53	
29. Ulcers, Wounds, and Cicatrices	9	11		1	6					1	12								5	4		2	8		2	13									
30. Other Affections of the Cutaneous System	5	6		1	6					1	12								27	21		4	16		2	13					1	71		1	53	
31. Malformation of Ears																																				
32. Malformation of Nose and Mouth																																				
33. Malformation of Chest and Spine	11	14		2	11		2	9		1	12		1	62					16	13		3	12		2	13									
34. Malformation of Urinary or Genital Organs																																				
35. Under Height	37	46	6	6	34	9	9	42	10							2	182	2	58	46	9	13	52	6	7	44	9	3	36	8				2	105	3
36. Under Chest Measurement	135	170	1	26	148	1	36	169	1	20	250	1	5	313	1				195	155	1	42	169	2	22	139	2	16	193	1	3	214	1			
37. Under Weight	73	92	4	20	114	3	14	66	4	7	88	4	3	188	2	3	373	1	94	75	5	23	92	4	9	57	6	7	84	5	2	143	2			
38. Apparent Age not in accordance with Regulations	10	13					3	14											15	12		3	12					1	12							
39. Not likely to become an efficient Soldier	18	23		5	29		11	51	8	1	12		2	125	3	1	91		4	3															
40. Over Height																																				
TOTALS	796	1000		175	1000		213	1000		80	1000		16	1000		11	1000		1259	1000		249	1000		158	1000		83	1000		14	1000		19	1000	

TABLE 4.

LABOURERS, HUSBANDMEN, &c.

1901.

	Ratio per 1000.
Want of physical development	270
Defective vision	143
Loss or decay of many teeth	110
Disease of heart	62

1902.

	Ratio per 1000.
Want of physical development	305
Loss or decay of many teeth	161
Defective vision	132
Disease of heart	56

TRADES, SUCH AS CLOTH WORKERS, WEAVERS, &c.

1901.

	Ratio per 1000.
Want of physical development	545
Loss or decay of many teeth	72
Defective vision	62
Disease of heart	51

1902.

	Ratio per 1000.
Want of physical development	425
Loss or decay of many teeth	170
Defective vision	134
Disease of heart	35

MECHANICS, &c.

1901

	Ratio per 1000.
Want of physical development	364
Defective vision	111
Loss or decay of many teeth	101
Disease of heart	59

1902.

	Ratio per 1000.
Want of physical development	252
Loss or decay of many teeth	200
Defective vision	123
Disease of heart	59

SHOPMEN AND CLERKS.

1901.

	Ratio per 1000.
Want of physical development	471
Defective vision	108
Loss or decay of many teeth	96
Disease of heart	60

1902.

	Ratio per 1000.
Want of physical development	319
Loss or decay of many teeth	168
Defective vision	135
Disease of heart	68

PROFESSIONAL OCCUPATIONS, STUDENTS.

1901.

	Ratio per 1000.
Want of physical development	401
Defective vision	141
Loss or decay of many teeth	47
Disease of heart	47

1902.

	Ratio per 1000.
Loss or decay of many teeth	176
Want of physical development	168
Defective vision	137
Disease of heart	122

BOYS UNDER 17.

1901.

	Ratio per 1000.
Defective vision	187
Want of physical development	161
Disease of heart	107
Loss or decay of many teeth	—

1902.

	Ratio per 1000.
Defective vision	261
Want of physical development	126
Disease of heart	99
Loss or decay of many teeth	57

TABLE III.—RETURN OF RECRUITS REJECTED ON INSPECTION, SHEWING CAUSE OF REJECT

| CAUSES OF REJECTION. | LABOURERS, HUSBANDMEN, AND SERVANTS. | | |

TABLE II.—RETURN OF RECRUITS REJECTED ON INSPECTION, SHOWING CAUSE OF REJECTION, ACCORDING TO PREVIOUS OCCUPATION, AT THE UNDERMENTIONED RECRUITING

| CAUSES OF REJECTION. | Labourers, Handymen and Servants | | |

TABLE II.—RETURN OF RECRUITS REJECTED ON INSPECTION, SHOWING CAUSE OF REJECTION, ACCORDING TO PREVIOUS OCCUPATION, AT THE UNDERMENTIONED RECRUITING STATIONS, DURING 1901.



INSPECTION, SHEWING CAUSE OF REJECTION, ACCORDING TO PREVIOUS OCCUPATION, AT THE UNDERMENTIONED RECRUITING STATIONS DURING 1902.

| Previously to Physical Exam., Making, etc. | | | | | | | | Shipmen and Clerks. | | | | | | | | | | | | | | | | | | | | Professional Occupations, Students. | | | | | | | | | | | | | | | | | | | | Boys Under 17 Years. | | | | | | | | | | | | | | | | | | | | Totals. | | | | | | | | | | | | | | | | | | | | Causes of Rejection. |
|---|---|---

TABLE 4.

LABOURERS, HUSBANDMEN, &c.

1901.

	Ratio per 1000.
Want of physical development	346
Defective vision	113
Loss or decay of many teeth	94
Disease of heart	88

1902.

	Ratio per 1000.
Want of physical development	293
Loss or decay of many teeth	153
Defective vision	105
Disease of heart	83

TRADES, SUCH AS CLOTH WORKERS, WEAVERS, &c.

1901.

	Ratio per 1000.
Want of physical development	342
Loss or decay of many teeth	137
Defective vision	114
Disease of heart	40

1902.

	Ratio per 1000.
Want of physical development	341
Loss or decay of many teeth	213
Defective vision	108
Disease of heart	60

MECHANICS, &c.

1901.

	Ratio per 1000.
Want of physical development	342
Disease of heart	113
Loss or decay of many teeth	108
Defective vision	61

1902.

	Ratio per 1000.
Want of physical development	272
Loss or decay of many teeth	183
Defective vision	101
Disease of heart	70

SHOPMEN AND CLERKS.

1901.

	Ratio per 1000.
Want of physical development	350
Defective vision	163
Loss or decay of many teeth	150
Disease of heart	88

1902.

	Ratio per 1000.
Want of physical development	313
Loss or decay of many teeth	169
Defective vision	121
Disease of heart	121

PROFESSIONAL OCCUPATIONS, STUDENTS.

1901.

	Ratio per 1000.
Want of physical development	626
Disease of heart	62
Defective vision	—
Loss or decay of many teeth	—

1902.

	Ratio per 1000.
Want of physical development	357
Defective vision	143
Loss or decay of many teeth	143
Disease of heart	71

BOYS UNDER 17.

1901.

	Ratio per 1000.
Want of physical development	546
Defective vision	182
Disease of heart	91
Loss or decay of many teeth	—

1902.

	Ratio per 1000.
Defective vision	210
Want of physical development	158
Loss or decay of many teeth	158
Disease of heart	53

APPENDIX VII.

MEMORANDUM AND TABLES RELATING TO THE PHYSICAL CONDITION OF CANDIDATES FOR ENLISTMENT IN THE NAVY AND MARINES, PREPARED BY COLONEL G. T. ONSLOW, C.B., INSPECTOR OF MARINE RECRUITING, A MEMBER OF THE COMMITTEE.

Admiralty Recruiting Department,
7, Whitehall Place, S.W.
7th December, 1903.

Sir,—

I have the honour to submit, for the information of the Committee appointed to inquire into the alleged Physical Deterioration of certain classes of the population, statistics compiled from Recruiting Returns of the Royal Marine Recruiting Officers raising recruits for the Naval Service.

It would be difficult to obtain perfect information from other Naval Recruiting Agencies, the R.N. Depôts at the Home Ports, Coast Guard, etc., owing to the fact that there would be danger of the same men being counted twice.

I have, therefore, not attempted this, and the Returns submitted refer only to Naval Recruiting in the Royal Marine Recruiting Districts, which cover the inland parts of the Kingdom and large Sea Port Towns, not Naval Ports, the number of recruits raised being 77 per cent. of the total R.N. and R.M. entries for the year 1902–3.

The remaining 23 per cent. raised by Naval Recruiters would come mainly from the Sea Coast and Naval Ports, and are generally of a class superior in physique to those nland.

All recruiters are put through a course of instruction, attending the medical officer at his examination on first appointment, prior to being posted to an out-station. They are, consequently, capable of conducting a very close examination of recruits, and only pass on for medical examination men and boys who have a reasonable chance of passing.

The bulk of medical rejections are of candidates presenting themselves at the headquarter stations, who go direct to the medical officer without previous examination, xcept for height and chest measurements.

The number rejected by recruiters is very large; unfortunately, complete records have not been kept prior to August, 1903, but at a rough estimate it is between 30 and 40 per cent. of the total applicants. The rejections include defective vision, defective teeth, varicose veins, flat feet, deafness, general poor physique, deficiency in height and chest measurement, and any other defects observable by other than a medical expert.

In the attached tables the nomenclature of causes of rejection used in the Returns of the Director-General, Army Medical Service, are followed. Nos. 35 to 40 are omitted, complete records not being available.

The following tables are attached:—

Table "A." A return for the year 1st April, 1902, to 31st March, 1903, of candidates for the Naval Service examined by medical officers attached to the Admiralty Recruiting Stations Royal Marine Recruiting Districts, found fit and unfit respectively, for the Royal Navy and Royal Marines, showing District in which raised and previous employment, so far as can be ascertained.

Table "B." List of principal towns in which Admiralty Recruiters are stationed, as a key to the Districts enumerated in "A."

Table "C." A similar return to Table "A," showing numbers rejected as unfit, with causes of rejection classified by previous callings, and ratings in the Royal Navy and Royal Marines for which the candidate volunteered.

Table "D." A return showing number of candidates rejected at the Admiralty Recruiting Station in London only, during the three years 1st April, 1900, to 31st March, 1903, with causes of rejection, classified approximately according to ages of candidates.

I have the honour to be,
Sir,
Your Obedient Servant,
G. T. Onslow,
Colonel, R.M.L.I.,
Inspector of Marine Recruiting

The Chairman,
Physical Deterioration Committee.

TABLE A.—RETURN FOR THE YEAR 1ST APRIL 1902 TO 31ST MARCH 1903 OF NUMBER OF RECRUITS FOR R.N. AND R.M., EXAMINED FOUND FIT AND UNFIT ON MEDICAL EXAMINATION IN THE RECRUITING DISTRICTS, ROYAL MARINE RECRUITING SERVICE, SHOWING PREVIOUS EMPLOYMENT.

	London.		Bristol.		Birmingham.		Exeter.		Glasgow.		Liverpool.		Manchester.		Nottingham.		Southampton.		York.		TOTAL.			
	Fit.	Unfit.	Fit.	Unfit.	Fit.	Unfit.	Fit.	Unfit.	Fit.	Unfit.	Fit.	Unfit.	Fit.	Unfit.	Fit.	Unfit.	Fit.	Unfit.	Fit.	Unfit.	Fit.	Unfit.	Examined.	Per Centage Rejected.
Labourers, Agricultural Grooms, etc	383	186	93	19	77	8	112	26	61	26	262	49	52	8	65	3	124	9	83	9	1312	343	1655	20·
Labourers and Improvers, Carpenters, Bricklayers, and others	338	174	122	22	130	34	44	13	116	19	183	50	94	18	199	27	62	8	70	14	1358	379	1737	21·8
Labourers, Dock and General Town (no fixed employment)	1760	1021	156	50	60	14	15	9	84	27	521	94	351	82	161	13	117	31	99	28	3324	1369	4693	29·1
Mill and Factory Workers, and Miners (not Skilled Mechanics)	576	332	100	22	160	32	21	15	98	28	200	52	358	54	166	32	8	2	28	5	1715	574	2289	25·
Skilled Mechanics, etc., engaged in employments favourable to development of physique	448	237	40	12	10	1	6	7	113	32	108	18	133	10	11	4	20	2	66	18	955	341	1296	26·3
Employees in Shops, Offices—and Servants	889	483	113	38	89	15	45	23	117	26	367	43	266	50	71	16	152	37	61	14	2170	745	2915	25·5
No definite employment—Students, etc.	140	58	—	—	6	4	2	—	2	3	28	3	—	—	1	3	4	—	6	3	189	74	263	28·1
Total Fit	4534		624		532		245		591		1669		1254		674		487		413		11023			
Total Unfit		2491		163		108		93		161		309		222		98		89		91		3825		
Total Examined	7025		787		640		338		752		1978		1476		772		576		504				14848	
Percentage rejected to Examined	35·4		20·7		16·8		27·5		21·4		15·6		15		12·6		15·4		18·					25·7

TABLE B.—ROYAL MARINE RECRUITING DISTRICTS.

Showing Towns in which Recruiters are stationed explanatory of areas covered by Districts given in Table A.

DISTRICT.	TOWNS IN WHICH RECRUITERS ARE STATIONED.
LONDON	Head Quarters: 7, Whitehall Place, S.W. Kingston-on-Thames, Cambridge, Norwich, Ipswich.
LIVERPOOL	Head Quarters: 97, Paradise Street, Liverpool. Carlisle, Barrow-in-Furness, Preston, Warrington, Everton, Wigan, Blackpool.
BELFAST	Head Quarters: 44, Clifton Street, Belfast. Londonderry, Ballymena, Newry, Ballymacarrett, Lisburn.
BRISTOL	Head Quarters: 17, Bath Street, Bristol. Cardiff, Frome, Gloucester, Hereford, Bath, Swindon, Swansea, Cheltenham, Newport, Pembroke Dock.
BIRMINGHAM	Head Quarters: 26, Broad Street, Birmingham. Kidderminster, Worcester, Wolverhampton, Northampton, Coventry, Hanley, Burton-on-Trent, Dudley.
SOUTHAMPTON	Head Quarters: 48, Bridge Street, Southampton. Jersey, Farnborough, Salisbury, Reading, Dorchester, Bournemouth, Eastleigh, Winchester, Devizes.
MANCHESTER	Head Quarters: 289, Deansgate, Manchester. Bury, Halifax, Blackburn, Burnley, Stockport, Oldham, Ashton-under-Lyne.
NOTTINGHAM	Head Quarters: 27, Derby Road, Nottingham. Leicester, Derby, Ilkeston, Chesterfield, Lincoln, Sheffield, Rotherham, Heeley, Sherwood.
EXETER	Head Quarters: 104, South Street, Exeter. Tiverton, Taunton, Yeovil, Newton Abbot, Barnstaple, Bridgewater, Honiton.
YORK	Head Quarters: 43, Tanner Row, York. Hull, Leeds, Wakefield, Middlesborough, Newcastle, Harrogate.
GLASGOW	Head Quarters: 168, London Street, Glasgow. Edinburgh, Aberdeen, Greenock, Hamilton, Paisley, Perth, Kilmarnock, Dundee.

TABLE C.—RETURN OF RECRUITS FOR ROYAL NAVY AND ROYAL MARINES MEDICALLY EXAMINED AT ADMIRALTY RECRUITING STATIONS ROYAL MARINE DISTRICTS FOR THE YEAR 1st APRIL, 1902, TO 31st MARCH, 1903, SHOWING NUMBERS REJECTED, WITH CAUSES OF REJECTION, CLASSIFED BY PREVIOUS OCCUPATION OF THE CANDIDATES.

	Syphilis. 1.	Tubercle. 2.	Impaired Constitution and Debility. 3.	Other General Diseases. 4.	Disease of Nervous System. 5.	Weakness of Intellect. 6.	Defective Vision. 7.	Diseases of Eyes & Eyelids. 8.	Diseases of Nose & Mouth. 9.	Disease of Ear. 10.	Deafness. 11.	Impediment of Speech. 12.	Disease of Heart and Aborta (syphilis). 13 & 14.	Disease of Veins (Varix). 15.	Disease of Lungs (except Tubercle). 16.	Loss or Decay of Many Teeth. 17.	Hernia. 18.	Laxity of Abdominal Rings. 19.	Hæmorrhoids. 20.	Disease of the Urinary Organs and other Diseases of the Genital Organs (not Syphilitic). 21 & 23.	Varicocele. 22.	Defects of Upper Extremities from Fracture, Contraction, Luxation, etc. 24.	Defects of Lower Extremities from Fracture, Contraction, Luxation, etc. 25.	Flat Feet. 26.	Disease of Joints. 27.	Other Affections of Bones and Muscles. 28.	Ulcers, Wounds and Cicatrices. 29.	Other Affections of the Cutaneous System. 30.	Malformation of Ear. 31.	Malformation of Nose and Mouth. 32.	Malformation of Chest and Spine. 33.	Malformation of Genital Organs. 34.	Total. Units.	Total. Fit.	Total. Examined.	Percentage Unfit to Total Examined.	Order of Prevalence.	
BOYS, AVERAGE AGE 16 YEARS.																																							
1. Labourers, Agricultural, Grooms, etc.	—	1	5	1	—	—	42	1	2	5	5	—	2	2	1	11	6	—	1	2	14	8	10	4	—	2	1	3	—	—	3	—	132	437	569	23·19	7	1.
2. ,, Artisans, Carpenters, etc.	—	—	5	—	—	—	23	—	2	4	3	1	3	2	—	13	3	—	—	2	9	5	5	3	—	—	—	3	—	—	1	1	88	202	350	25·14	5	2.
3. ,, Dock and General Town	—	2	28	2	—	—	211	3	10	10	10	2	18	6	1	23	36	—	—	6	47	7	39	10	2	1	5	6	—	—	10	1	406	1,094	1,500	33·19	1	3.
4. Mill and Factory Workers and Miners not Skilled Mechanics	1	4	32	1	1	—	77	2	12	7	3	1	8	3	3	24	10	—	—	5	15	2	21	2	3	1	3	3	—	—	7	—	251	774	1,025	24·48	6	4.
5. Skilled Mechanics in employments favourable to development of physique	—	1	2	1	—	—	14	—	2	2	1	3	2	1	—	3	3	—	—	2	4	1	5	1	—	—	2	1	—	—	1	1	53	134	187	28·34	2	5.
6. Employees in Shops, Offices, and Servants	—	2	29	2	1	—	108	4	12	14	6	3	20	5	2	33	10	—	1	5	39	6	24	5	3	2	3	6	—	1	5	5	356	993	1,349	26·38	4	6.
7. No definite employment, Students, etc.	—	—	4	—	—	—	13	—	3	3	—	—	1	2	1	3	1	—	—	2	2	2	—	—	—	1	—	1	—	—	6	—	45	124	169	26·62	3	7.
Total	1	10	105	7	2	—	488 9·31	9	43	45	28	10	54	23	8	110 2·09	69	—	2	24	130	31	104	25	8	7	14	23	—	1	33	8	1,421	3,818	5,239	27·12		
STOKERS, MARINES, ETC., AVERAGE AGE 20.																																							
1. Labourers, Agricultural, Grooms, etc.	1	2	10	2	2	1	39	1	3	5	6	1	12	14	1	17	9	—	2	3	28	7	10	2	1	3	3	10	—	—	7	1	203	857	1,060	19·15	6	1.
2. ,, Artisans, Carpenters, etc.	1	1	11	2	1	—	43	3	4	6	2	2	16	10	—	25	9	—	—	3	15	4	20	2	—	—	4	4	—	—	3	1	192	816	1,008	19·04	7	2.
3. ,, Dock and General Town	5	3	45	5	—	—	227	5	15	20	15	12	48	43	5	105	43	—	2	12	84	23	54	25	7	5	17	19	—	1	20	6	871	2,210	3,081	28·27	2	3.
4. Mill and Factory Workers and Miners not Skilled Mechanics	1	4	48	1	—	—	57	4	7	4	5	3	12	10	5	31	14	—	1	3	29	8	18	8	2	1	10	7	—	1	6	5	305	905	1,210	25·20	4	4.
5. Skilled Mechanics in employments favourable to development of physique	—	2	5	1	1	1	15	1	—	—	—	2	7	5	1	13	3	—	3	3	9	3	4	—	—	1	—	2	—	—	3	—	85	234	319	26·64	3	5.
6. Employees in Shops, Offices, and Servants	1	4	24	6	—	—	75	1	5	14	6	2	25	18	1	36	23	—	2	9	46	7	18	8	1	2	7	6	—	—	7	3	357	1,097	1,454	24·55	5	6.
7. No definite employment, Students, etc.	—	—	5	1	—	—	10	1	—	1	—	1	3	1	—	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	25	59	84	29·76	1	7.
Total	9	16	148	18	4	2	466 5·67	14	34	50	34	23	123	101	13	227 2·76	102	—	10	33	212	52	124	45	11	12	41	48	—	2	46	16	2,038	6,178	8,216	24·8		
ARTIFICERS AND SUPERIOR RATINGS, AVERAGE AGE 22.																																							
1. Labourers, Agricultural, Grooms, etc.	1	—	—	—	—	—	1	—	—	—	—	—	—	2	—	1	—	—	—	—	1	—	2	—	—	—	—	—	—	—	—	—	8	18	26	23·07	6	1.
2. ,, Artisans, Carpenters, etc.	1	2	7	—	2	—	22	1	2	2	—	—	6	7	—	22	4	—	2	4	6	—	3	1	—	—	1	2	—	—	1	1	99	280	379	26·12	4	2.
3. ,, Dock and General Town	—	—	—	—	—	—	—	—	—	—	—	—	1	—	—	—	1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2	20	22	9·09	7	3.
4. Mill and Factory Workers and Miners not Skilled Mechanics	—	—	4	—	—	—	6	—	1	—	—	1	—	2	—	—	2	—	—	—	1	—	1	—	—	—	—	—	—	—	—	—	18	36	54	33·33	2	4.
5. Skilled Mechanics in employments favourable to development of physique	—	1	4	2	—	7	53	—	2	3	4	2	10	11	2	45	9	—	—	4	17	4	8	2	—	—	4	1	—	1	5	2	203	587	790	25·69	5	5.
6. Employees in Shops, Offices, and Servants	1	2	5	2	—	—	8	—	—	—	—	—	3	1	—	3	—	—	—	1	1	1	2	—	—	—	1	1	—	—	—	—	32	80	112	28·57	3	6.
7. No definite employment, Students, etc.	—	—	—	—	—	—	1	—	—	—	—	1	—	—	1	—	—	—	—	—	—	—	—	—	—	1	—	—	—	—	—	—	4	6	10	40·00	1	7.
Total	3	5	20	4	2	7	91 6·53	1	5	5	4	4	20	23	3	71 5·09	16	—	2	9	26	5	16	3	—	1	6	4	—	1	6	3	366	1,027	1,393	26·27		
Total rejected	13	31	273	29	8	9	1,045 7·	27	82	100	66	37	197	145	24	408 2·74	187	—	14	66	398	88	244	73	19	20	61	75	—	4	85	27	3,825	11,023	14,848	25·76		

TABLE D.—RETURN OF RECRUITS FOR ROYAL NAVY AND ROYAL MARINES EXAMINED BY MEDICAL OFFICERS AT THE LONDON (ADMIRALTY) RECRUITING DEPOT DURING THREE YEARS, FROM 1ST APRIL 1900 TO 31ST MARCH 1903, SHOWING NUMBERS REJECTED WITH CAUSES OF REJECTION CLASSIFIED BY THE RATINGS FOR WHICH THEY WERE CANDIDATES.

	1. Syphilis.	2. Tubercle.	3. Impaired Constitution and Debility.	4. Other General Diseases.	5. Diseases of Nervous System.	6. Weakness of Intellect.	7. Defective Vision.	8. Disease of Eyes and Eyelids.	9. Disease of Nose and Mouth.	10. Disease of Ear.	11. Deafness.	12. Impediment of Speech.	13 & 14 Disease or Heart and Arteries.	15. Disease of Veins (Varix).	16. Disease of Lungs, except Tubercle.	17. Defective Teeth.	18. Hernia.	19. Weakness of Abdominal Rings.	20. Hemorrhoids.	21 & 23. Diseases of Urinary and Genital Organs (not Syphilitic).	22. Varicocele.	24. Defects of Upper Extremities from Fracture, Contraction, Luxation, etc.	25. Defects of Lower Extremities from Fracture, Contraction, Luxation, etc.	26. Flat Feet.	27. Diseases of Joints.	28. Other Affections of Bones and Muscles.	29. Ulcers, Wounds, and Cicatrices.	30. Other Affections of Cutaneous System.	31. Malformation of Ear.	32. Malformation of Nose and Mouth.	33. Malformation of Chest and Spine.	34. Malformation of Urinary or Genital Organs.	Total Rejected.	Total found Fit.	Total Examined.	Percentage of Rejections.
Boys from 15½ to 16½ years (Average age, about 15½ years.)	—	9	135	131	3	—	1,200 P. c. 14·11	5	5	114	47	14	90	33	9	209	105	3	45	274	26	276	39	31	6	65	50	—	—	67	1	2,992	5,509	8,501	35·19
Youths from 16½ to 18 years (Average age, about 17½ years.)	—	2	42	35	2	—	377 P. c. 18·70	3	1	16	9	6	22	22	4	61	41	2	12	61	4	60	9	7	1	29	16	—	—	27	—	871	1,145	2,016	43·20
Stokers from 18 to 28 years (Average age, about 20 years.)	1	1	13	15	—	—	215 P. c. 14·42	—	—	10	7	4	24	8	3	103	14	3	9	38	3	21	7	3	—	21	12	—	—	12	—	547	943	1,490	36·71
Marines from 17 to 23 years (Average age, about 19 years.)	1	3	23	23	4	—	325 P. c. 8·86	—	—	21	17	11	42	21	4	96	43	4	20	71	9	50	14	16	—	57	26	—	—	20	—	921	2,745	3,666	25·12
Artificers and Artisans, i.e., skilled mechanics, &c., and Sick Berth Staff, a superior class to the majority of other Recruits, from 18 to 28 years (Average age, about 22 years.)	3	6	188	43	3	—	402 P. c. 6·44	7	—	77	17	16	95	68	5	105	76	4	15	175	13	190	54	5	22	43	36	—	1	—	36	1,705	4,538	6,243	27·31
TOTAL	5	21	398	246	12	—	2,519	15	6	238	97	52	273	152	25	574	279	16	111	619	55	597	123	62	29	215	140	—	1	126	37	7,036	14,880	21,916	
Percentage of whole	·02	·09	1·81	1·12	·05	—	11·49	·06	·02	1·08	·44	·23	1·24	·69	·11	2·57	1·27	·07	·50	2·82	·25	2·72	·56	28	·13	·98	·63	—	·00	·57	·17	32·10			

APPENDIX VIII.

MEMORANDUM AND TABLES FURNISHED TO THE COMMITTEE BY THE METROPOLITAN POLICE COMMISSIONERS.

There are no figures available which admit of direct comparison with those given by the War Office in the Memorandum of the Medical Director-General forwarded by the Home Office. The only information we have which is of any practical utility, and which is readily obtainable, is contained in Table No. 1 annexed. This shows the number of men who have applied to join since 1893, the number selected for medical examination, and the numbers actually accepted, also the numbers of men who have left the Force each year, on medical grounds, with less than three years' service, and the total strength in each year. It will be observed that the retirements through ill-health of men of less than three years' service amounted to twenty-six only in 1902, and that in none of the years under review was there any very marked deviation from the average, except in 1894 and 1895, when the figures were well below the average; and in 1899 and 1900, when they exceeded it. These years, however, were the first two years of the South African War, and the figures are affected by some of the Army Reservists who were called up to rejoin the Colours, and were ultimately found unfit to rejoin or to continue Police duties owing to illness or wounds resulting from active service in the field.

Table No. 2, taken from the Commissioner's Annual Report for 1902, shows the number of men who joined from the years 1860 onwards who are still serving; and Table No. 3, also taken from the Report, shows the length of service of the men now serving who joined from the years 1880 onwards.

There is no satisfactory basis of comparison between Army and Police recruiting, simply because the governing conditions of these two fields of employment are essentially different. In the first place, military service is usually regarded either as an opening for young men in which the early years of manhood can be passed, and which may probably lead the way to more or less permanent employment at its termination, or as the last refuge of a number of young men who, from lack of ability or other causes, are unable to find anything better. Police service, on the other hand, is, speaking generally, sought after as a permanent means of livelihood, and is one of the best paid and promising fields for the employment of unskilled labour. A further reason which militates against any useful comparisons being drawn lies in the difference in the physical tests applied to the recruits for the two services. The military tests for physical fitness are *qualifying* ones only. Under normal conditions the Army can utilise practically all the material which offers itself, providing it comes within a minimum physical standard, which is not an unduly exacting one. Our tests, on the other hand, are *selective* ones, applied for the purpose of securing that the limited numbers of men we are able to take shall be the best of the material available, as more men present themselves than we are able to take. The result is that our requirements in the matter of physical fitness are more severe than those of any other organised service. But, bearing in mind that Police employment is permanent and well paid, and that its arduous and wearing character is compensated for by a very liberal pension scale, and a comparatively limited period of qualifying service, these tests are not too severe. Approximately about 50 per cent. of the recruits who present themselves for medical examination are accepted. These represent the best of those who offer to join, and it must not be assumed that the remaining 50 per cent. are physical degenerates unfitted for ordinary avocations, as is understood to be the case with Army rejections. A large proportion of them—say from 35 per cent. to 40 per cent.—would be physically fit for military service according to existing standards, and for most of the ordinary callings of civil life. We reject a large number of men for no specific defect whatever, but merely because they do not come up to our standard of height, five feet nine inches, weight, ten stone, and chest measurement, thirty-four to thirty-five inches. Under a normal condition of the labour market these high standards have been maintained without difficulty. Under abnormal conditions (during the South African War, for instance, when the labour market was considerably disturbed) it has been found that a reduction of the standard of height by half an inch is sufficient to secure all the men wanted without sacrificing any of the real essentials of physical fitness.

In the lowest stratum of the population there always has been, and as far as can be foreseen there always will be, a large proportion of weaklings and incapables. But there is no data available to determine whether that proportion is increasing or not. The experience of Police recruiting affords no help in that direction, and the Medical Director-General's figures do not conclusively bear out the view that there is any such marked increase as is suggested. The only thing they appear to indicate at all clearly is that a large proportion of Army recruits is drawn from a lower social class than was formerly the case; and it is obvious that the lower the class the greater will be the proportion of weaklings and degenerates in that class. The Table in the Memorandum showing the occupations of recruits is too indefinite to be of any great value. But taking it as it stands, it may fairly be assumed that craftsmen belonging to the callings enumerated are, in the majority of cases, at any rate, failures as such, or at least that they are not up to the average of capability. Otherwise they would not forsake well-paid and permanent callings for a less remunerative career in the Army. The disadvantages of such a career in most cases are that it is irksome in its restraints and but poorly paid. Marriage is practically precluded, and, moreover, there are no means of providing for the bringing up of a family. Further, it, in the great majority of cases, ceases and leaves a man without paying occupation at an awkward age in life, when he is too old to learn a trade in which he must compete with younger men, and, as a consequence, the only occupations left open for him are those open for the casual employment of unskilled labour. The spread of education and the growth of facilities for communication, and of the Press, are all factors which, in combination, have had the effect of enabling most men of the class which formerly gravitated towards the Army as a natural course to aspire to less irksome callings in civil life, for which they would not have been eligible a few generations ago, and in which they not only escape the restrictions of military life, but earn better wages, enjoy greater freedom, and are free to marry when they choose.

The Police are not in a position to say that the figures given by the Medical Director-General do not indicate a condition of degeneration so widespread as he suggests; but it does appear in the light of the experience gained in Police recruiting, as well as from the fairly general knowledge obtained by the Police of the life and habits of the lower classes in London, that the figures equally suggest that the calling of a soldier has ceased to attract the class of men who formly enlisted, and that, as a consequence, a larger proportion of the residuum of the population come under the notice of the Army Recruiting Authorities.

GEO. H. GARDNER.

TABLE No. 1.

Year.	No. of Applications received.	No. of men medically examined.	No. of men actually appointed.	No. of men leaving the Force with less than 3 years' service through ill-health.	Total Strength.
1893	8,574	2,213	1,040	22	15,126
1894	8,811	2,140	920	18	15,216
1895	7,796	1,800	756	13	15,271
1896	7,248	2,064	908	27	15,326
1897	6,618	1,936	852	22	15,452
1898	6,143	2,706	1,245	24	15,694
1899	6,745	2,509	1,154	32	15,765
1900	5,483	2,321	1,091	34	15,847
1901	5,435	2,402	1,164	27	15,977
1902	7,667	2,807	1,272	26	16,374

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TABLE No. 2.

RETURN of the NUMBER of MEN actually serving at the end of the Year 1902 who joined in the undermentioned Years.

Year.	Superintendents.	Inspectors and Sub-Inspectors.	Police Sergeants.	Police Constables.	Total.
1860	—	1	—	—	1
1863	1	—	—	—	1
1865	7	—	—	—	7
1866	1	—	—	—	1
1867	1	—	—	1	2
1868	2	2	—	—	4
1869	2	—	—	1	3
1870	3	3	1	—	7
1871	3	2	—	1	6
1872	2	5	1	1	9
1873	1	5	1	1	8
1874	2	6	3	2	13
1875	—	8	1	2	11
1876	2	9	3	7	21
1877	—	22	23	65	110
1878	2	32	68	228	330
1879	1	39	92	251	383
1880	—	62	86	273	421
1881	—	62	95	265	422
1882	—	54	119	372	545
1883	—	44	148	520	712
1884	—	42	124	409	575
1885	—	38	121	414	573
1886	—	34	142	460	636
1887	—	22	149	363	534
1888	—	18	148	424	590
1889	—	11	155	419	585
1890	—	4	202	653	859
1891	—	4	109	419	532
1892	—	2	82	482	566
1893	—	5	84	617	706
1894	—	9	29	589	627
1895	—	4	10	527	541
1896	—	1	8	624	633
1897	—	—	5	602	607
1898	—	1	5	849	855
1899	—	—	—	835	835
1900	—	—	—	896	896
1901	—	—	—	1,002	1,002
1902	—	—	—	1,235	1,235
Totals	30	551	2,014	13,809	16,404

Year.	Authorised Strength.	Numbers serving.															
		Under 1 Year.	1 Year and under 2.	2 Years and under 3.	3 Years and under 4.	4 Years and under 5.	5 Years and under 6.	6 Years and under 7.	7 Years and under 8.	8 Years and under 9.	9 Years and under 10.	10 Years and under 11.	11 Years and under 12.	12 Years and under 13.	13 Years and under 14.	14 Years and under 15.	15 Years and over.
1879	10,711	907	760	662	649	620	526	509	625	622	485	387	806	428	327	399	1,954
1880	10,943	905	773	693	614	631	591	494	505	598	611	463	383	782	416	316	2,128
1881	11,234	919	814	728	653	575	599	551	471	483	589	588	456	361	753	405	2,242
1882	11,699	1,109	792	734	665	618	558	564	534	460	478	601	567	441	361	730	2,457
1883	12,622	1,377	1,011	729	693	649	586	523	554	523	449	466	565	577	430	352	2,923
1884	12,880	1,071	1,234	936	710	654	612	567	516	538	508	444	455	554	566	420	3,078
1885	13,319	1,019	976	1,192	887	687	625	586	540	498	518	486	435	439	538	548	3,320
1886	13,804	1,104	939	934	1,130	857	658	617	570	526	487	513	483	417	434	523	3,636
1887	14,081	874	1,014	899	894	1,080	810	637	600	552	504	466	500	473	404	423	3,821
1888	14,261	948	828	951	865	843	1,034	771	622	583	541	501	458	483	460	393	3,959
1889	14,725	852	871	769	906	809	812	1,026	759	590	572	518	497	454	463	452	4,019
1890	15,264	1,335	780	796	717	888	768	767	969	736	572	557	511	473	445	446	4,211
1891	15,038	798	1,214	745	764	681	847	738	748	939	722	549	550	503	466	433	4,153
1892	15,000	818	739	1,144	722	740	660	815	716	720	913	697	533	533	493	457	4,205
1893	15,126	992	753	691	1,107	688	711	647	789	695	707	896	691	523	522	483	4,128
1894	15,216	874	929	721	671	1,060	672	689	627	774	671	693	885	675	515	513	4,150
1895	15,271	728	823	884	689	657	1,024	658	676	625	763	654	683	876	655	507	4,236
1896	15,326	867	672	787	860	675	639	1,007	646	659	609	744	649	669	559	643	4,256
1897	15,452	813	816	655	756	821	655	627	985	629	643	594	726	639	635	834	4,431
1898	15,694	1,162	754	771	629	710	799	637	603	952	618	634	579	715	615	636	4,733
1899	15,765	1,074	1,022	702	733	598	677	770	624	582	924	611	609	564	686	602	4,860
1900	15,847	1,010	925	922	648	680	573	655	744	596	559	896	603	598	553	667	5,022
1901	15,977	1,116	921	875	878	640	660	544	634	724	576	550	884	595	590	549	5,238
1902	16,374	1,235	1,003	896	833	855	609	633	540	626	705	569	529	859	585	588	5,339

In excess of the authorised strength, 30.

APPENDIX IX.

The following is a list of the principal groups of anthropometric statistics, other than those mentioned in the Report, which have been collected in the British Isles since 1883.

1885. *Galton.* At the Health Exhibition Galton measured 9,337 of both sexes and various ages, including 4,726 adult males, and 1,657 adult females. (*Jour. Anthropological Institute*, Vol 14, pp. 205, 275.)

1886–1891. *Galton.* At the Anthropometric Laboratory, South Kensington, 3,678 persons, including 350 adult males, were measured. In this and in the previous case the persons measured were drawn from all classes and all parts of the country. (*Jour. Anth. Inst.*, Vol. 21, p. 32. *Proc. Roy. Soc.*, Vol. 45, p. 135.)

1888. *Venn.* Venn published an analysis of the measurements of Cambridge students made up to that date. The number of persons measured was 1,450. (*Jour. Anth. Inst.*, Vol. 18, p. 140.)

1901. *Macdonnell and Garson.* Macdonnell published an elaborate analysis of 3,000 criminals measured by Dr. Garson and his assistants. (*Biometrika*, Vol. I., p. 175.)

1902. *Hay and Mackenzie.* Six hundred children in Aberdeen and 600 in Edinburgh were measured by Drs. Hay and Mackenzie. ("Report of the Royal Commission on Physical Training (Scotland).")

APPENDIX IX.A.

TABLE SHOWING AGES, HEIGHT, WEIGHT, CHEST CIRCUMFERENCE, AND STRENGTH OF ACCEPTED AND REJECTED CANDIDATES FOR EMPLOYMENT IN THE SERVICE OF THE POST OFFICE, LONDON, IN THE YEARS 1876, 1881, 1886, 1891, 1896, 1901, 1903.

Years.	Examined. Ages.							Average Weight in Pounds. Ages.							Average Chest Circumference. Ages.														Average Strength in Pounds (Lifting). Ages.							Average Height in Inches. Ages.						
															14		15		16		17		18		19		20														
															a	b	a	b	a	b	a	b	a	b	a	b	a	b													
1876	67	91	155	66	20	13	—	86	98	102	115	120	122	—	26·57	28·44	27·4	29·71	28·37	30·63	29·64	32·25	30·28	32·63	30·3	32·54	—	—	190	223	249	286	317	323	—	58·6	61·2	61·8	63·7	65·1	65·3	—
1881	67	104	127	46	18	10	6	88	101	103	114	126	128	124	26·49	28·46	28·02	29·9	28·65	30·59	29·24	31·2	30·66	32·13	30·62	33·52	30·7	32·87	211	240	251	277	312	308	317	58·1	61·2	61·8	64·9	66·3	65·6	65·7
1886	260	84	140	76	232	59	16	91	103	113	120	126	126	127	26·86	28·84	27·99	30	29·33	31·36	30·01	32·12	31·07	32·85	30·6	32·65	30·96	33·14	205	232	265	279	318	310	308	59·3	61·8	63·7	65·6	65·5	65·6	65·5
1891	33	49	99	64	228	98	19	93	103	112	122	127	133	121	26·92	29·09	27·18	30·3	29·11	31·32	29·88	32·16	31·1	32·89	31·78	33·56	31·31	33·23	226	266	300	328	320	336	330	59·9	62·4	64·1	65·5	66·1	66·5	65·9
1896	6	5	35	16	224	64	36	114	111	113	128	127	131	125	29·25	31·41	29	30·9	28·88	31·12	31·93	33·08	30·84	33·1	31·17	33·42	30·41	32·84	274	268	325	367	397	400	381	62·8	64·2	64·3	67	66·5	66·8	66
1901	1	71	104	72	172	64	55	96	108	117	127	129	135	131	28·5	30·5	29·35	31·27	29·96	31·96	31·02	33·21	31·13	32·88	31·85	34·14	31·16	33·35	210	278	323	364	390	407	390	58	63·2	65·3	66·3	66·4	66·9	66·5
1903	13	36	42	33	137	19	14	90	110	116	128	127	141	139	27·28	29·05	29·13	31·06	29·76	31·83	30·87	33·07	30·88	33·2	32·44	34·81	32·64	34·3	229	280	313	372	376	408	415	57·7	63·3	64·4	66·2	66·4	67·3	67·3

a At rest. b After deep inspiration.

SUMMARY SHOWING AVERAGE HEIGHT, WEIGHT, CHEST CIRCUMFERENCE, AND STRENGTH OF ACCEPTED AND REJECTED CANDIDATES FOR EMPLOYMENT IN THE SERVICE OF THE POST OFFICE, LONDON, IN THE YEARS 1874-76.

Examined. Ages.							Average Height in Inches. Ages.							Average Weight in Pounds. Ages.							Average Chest Circumference in Inches. Ages.							Average Strength in Pounds. (Lifting). Ages.						
14	15	16	17	18	19	20	14	15	16	17	18	19	20	14	15	16	17	18	19	20	14	15	16	17	18	19	20	14	15	16	17	18	19	20
946	695	895	449	153	97	—	57·6	60·4	62·17	63·9	64·8	65·5	—	86	97	106	116	123	128	—	25·69	27·14	28·35	29·39	29·93	30·3	—	203	231	272	300	312	328	—

SUMMARY SHOWING AVERAGE HEIGHT, WEIGHT, CHEST CIRCUMFERENCE, AND STRENGTH OF ACCEPTED AND REJECTED CANDIDATES FOR EMPLOYMENT IN THE SERVICE OF THE POST OFFICE, LONDON, IN THE YEARS 1876, 1881, 1886, 1891, 1896, 1901, 1903.

Examined. Ages.							Average Height in Inches. Ages.							Average Weight in Pounds. Ages.							Average Chest Circumference in Inches. Ages.							Average Strength in Pounds. (Lifting.) Ages.						
14	15	16	17	18	19	20	14	15	16	17	18	19	20	14	15	16	17	18	19	20	14	15	16	17	18	19	20	14	15	16	17	18	19	20
456	440	702	373	1,031	318	146	59·06	62·04	63·1	65·5	66·1	66·4	66·4	90	102	109	121	127	131	129	a 26·81 b 28·78	a 28·2 b 30·25	a 29·06 b 31·12	a 30·18 b 32·36	a 30·94 b 32·84	a 31·42 b 33·5	a 31·09 b 33·26	207	247	278	316	355	302	373

a At rest. b After deep inspiration.

APPENDIX IX.B.

MEMORANDUM BY Mr. EDWARD W. HANCE UPON A RETURN AS TO THE WEIGHTS (AND HEIGHTS) OF BOYS ADMITTED TO THE TRUANTS' INDUSTRIAL SCHOOL AT HIGHTOWN IN THE CITY OF LIVERPOOL DURING THE YEARS 1893 AND 1903.

[*Note.—This Memorandum and the Returns referred to therein did not reach the Committee in time to be noticed in their Report; the Summary Table is here printed together with the Memorandum.*]

The accompanying returns relate to children admitted to the Truants' School at Hightown, established by the late School Board for Liverpool. That institution contains two distinct sections—for Protestant and Roman Catholic children respectively; and in addition to children from Liverpool itself, receives, so far as there is room, children from other districts—a preference being given (i.) to those from the adjoining districts, and (ii.) to those from other parts of Lancashire and Cheshire. For the purpose of comparison, the particulars have been taken for the last complete year (1903), and for the corresponding period ten years earlier. The particulars recorded with regard to each child comprise in both sections :—

(*a*) Its exect age on admission,
(*b*) Its weight on admission,
(*c*) The period of its detention,
(*d*) Its weight on leaving;

and, in the Protestant section

(*e*) Its height on admission.

These particulars have been tabulated in the present returns (i.) for each section, as well as (ii.) for each year, separately, and under headings relating to the main localities from which the children were drawn. The number of children admitted were—

Protestant section	166 in 1893 (from Liverpool	88)
,, ,,	100 in 1903 (,, ,,	74)
Roman Catholic section	98 in 1893 (,, ,,	61)
,, ,,	83 in 1903 (,, ,,	58)

The particulars of all these are shown in the returns themselves; but for the sake of comparison the summary is restricted to the ages (nine and a half to twelve and a half) common to both sections in both years; and it embraces, therefore, only the following numbers—

Protestant section	145 for 1893 (from Liverpool	81)
,, ,,	74 for 1903 (,, ,,	54)
Roman Catholic section	90 for 1893 (,, ,,	56)
,, ,,	62 for 1903 (,, ,,	42)

The total admission show a considerable falling off (sixty-six in the Protestant and fifteen in the Roman Catholic sections) between 1893 and 1903—mainly among the children from outside educational districts, a circumstance due, no doubt, to the opening of a new Truants' School in the midland counties. The numbers included in the summary show a still further reduction between the two dates, largely among the Liverpool children themselves; this is due to a relaxation (consequent upon the school age being raised from thirteen to fourteen) of the former rule which restricted the admission of children over twelve and a half years of age—with the result that seventeen Protestant and fifteen Roman Catholic boys over thirteen years of age were admitted in 1903 as compared with one Protestant boy in 1893.

In the returns and summary alike the children are grouped according to their last completed half year of age; as, however, scarcely a single child is ever admitted exactly on the day he completes such a half year, the particulars for each group show, in months, the total excess of the children in that group over the half year under which they are arranged. For example, the three Liverpool boys between nine and a half and ten years of age admitted to the Protestant section in 1893 had between them exceeded nine and a half years of age by five months or by an average of 1·6 months per child. In the returns these extra months do not in any way affect the calculations which give the actual figures for each group without any allowance for such excess. The same remark applies also to the summary until the "normal yearly increase" in weight (or height) shown by these particulars is calculated, but in this calculation, and in that (resulting therefrom) of the "normal weight" (or height) for each half year of age (as well as in the application of these last particulars to the actual ages of the boys) due allowance needed to be, and has been, made for the excesses in question.

For the purposes of comparison with statistics of more general application, there have been inserted in the summary under the heading "Theoretical weight (or height) for the given age" particulars derived from statistics supplied from medical sources through Dr. Eichholz.

The most striking features shown by these returns appear to me to be—

1. The almost universal (absolute among the Protestants and with only two exceptions among the Roman Catholics) and, in most cases, serious, falling off of the actual as compared with the "theoretical" weight.

2. The striking and increasing inferiority in this respect of the Protestant children as compared with the Roman Catholic.

3. The extraordinary, and in the case of the Protestant children, almost phenomenal, improvement in the rate of increase in weight among the children while in the institution, compared with that among the same children before admission.

On each of these points it may be well for me to make a few observations.

1. If we take one child at each of the ages ten, eleven, and twelve, their combined "theoretical" weights would be 214·25 lbs. The "normal" weights of an equal number of children of these particular *ages* committed to the Truants' School, would be.

Protestants 186·03 lbs. in 1893 and 185·73 in 1903.
Roman Catholics 193·74 in 1893 and 197·04 in 1903.

These figures show that while the Roman Catholics at Hightown exceeded the Protestants by 7·71 lbs. (or by 4·15 per cent.) in 1893 and by as much as 11·31 lbs. (or 6·09 per cent.) in 1903, they fell short, even in the latter year, of the theoretical figures by no less than 17·21 lbs. (or 8·03 per cent.)

2. The difference between Protestants and Roman Catholics shown in the preceding paragraph results from a comparison of only three out of the seven age periods included in the summary; but it is confirmed by a similar comparison for the whole of the periods, which gives the following totals for what, for the sake of convenience, I may call a "complete group"—

Protestants 434·07 lbs. in 1893, and 433·41 in 1903.
Roman Catholics 452·06 in 1893, and 459·76 in 1903.

The difference here in favour of the Roman Catholics is 17·99 lbs (or 4·14 per cent.) in 1893 and 26·35 lbs. (or 6·08 per cent.) in 1903. It will be observed that while the Roman Catholics show an improvement of 7·7 lbs. in the ten years the Protestants show a slight falling off (·66 lb.).

The corresponding figures for Liverpool alone would be.

Protestants 430·03 lbs in 1893 and 437·5 in 1903.
Roman Catholics 442·13 lbs in 1893 and 456·45 in 1903.

Where the percentage in favour of the latter would be 2·81 in 1893 and 4·33 in 1903.

In 1893 the children from Liverpool—Protestants and Roman Catholics alike, were in physique below the average of the admissions to Hightown—the former to the extent of 4·04 lbs. and the latter of 9·93 lbs. for each "complete group;" but in 1903 the former showed an excess of 4·09 lbs. and the latter a deficiency of only 3·31 lbs. In other words, the Protestants of Liverpool showed an improvement during the ten years of 7·47 lbs. per complete group against a deterioration of ·66 lb. in the general average, and the Roman Catholics an improvement of 14·32 lbs. against one of 7·7 lbs. in the general average.

3. On the other hand the improvement during residence which was among the Roman Catholics at the satisfactory rate of 14·88 lbs. per annum in 1893, and at that of 13·73 in 1903, was among the Protestants at the extraordinary rate of 21·72 lbs. in the former and of 24·19 in the latter year. These figures bear eloquent testimony to the effect of judicious feeding! It is possible that the effect of improved diet and healthier surroundings is greatest during the first few months succeeding the change and that it would not continue indefinitely at the same rate; but so far as the Roman Catholics are concerned the results obtained here closely tally *pro rata* with those secured for a much longer period of residence and with regard to boys considerably older, at the Anerley School for the Deaf and Dumb. The difference between the Protestants and Roman Catholics is probably due to a considerable extent to the greater "leeway" which the former had to make up; but it appears to indicate that their physical inferiority to the others as shown by these particulars does not arise so much from any inherent cause as, in some way not at present clear, from greater antecedent defects in nourishment. One explanation which has been hazarded, that the difference is due to the less general habit among Protestants than among Roman Catholics of mothers nursing their own infants, seems hardly sufficient, or to be quite consistent with the greater susceptibility to improved conditions displayed by the Protestant children. The same remark would seem also to apply to another explanation which would account for the difference by a difference of race, the Roman Catholics being mainly of Irish and the Protestants of English origin and the former having been town dwellers for fewer generations than the latter. The figures tend however, to confirm the accuracy of the "theoretical" weights; for they show that if the children of ten and eleven years of age were retained for twelve months in the institution, they would probably attain to or exceed the theoretical weight for their advanced age.

Protestant Children.

1893.

Normal Weight at	*Annual Increase*	*Weight at*	*Theoretical Weight*
10—56·25		11—77·97	72
	21·72		
11—62·01		12—83·73	76·75

Roman Catholic Children.

Normal Weight at	*Annual Increase*	*Weight at*	*Theoretical Weight*
10—60·02		11—74·9	72
	14·88		
11—64·58		12—79·46	76·75

In conclusion I may remark that the contrast between the figures derived from Liverpool and those relating to the general average is certainly not due to any large importation of fresh blood into this city, and it can hardly be attributed to any other cause than to an improvement in the local conditions affecting the classes from which the children mostly come. This improvement is probably due not to any one circumstance but to the combined effect of a variety of causes; amongst which the most obvious appear to be (*a*) the extensive demolition of insanitary property which has been effected in Liverpool during recent years by the Corporation, (*b*) a considerable growth in the operations of the Liverpool Food and Betterment Association and similar agencies, and possibly (*c*) to some extent the efforts of the schools to disseminate elementary notions of hygiene and of the proper preparation of food. This latter cause is, however, probably more largely operative amongst classes from which this particular institution does *not* draw its inmates.

The general results would appear to me to point to the following conclusions:—

1. That any inferiority in the children in this neighbourhood to the theoretical standard is due to imperfect nutrition and to defects in environment.

2. That it tends to diminish with an improvement in general local conditions, and

3. That it rapidly disappears under healthy surroundings and adequate nourishment;

and to afford some indications as to the forces which can be called into play not merely to check deterioration where it actually exists but to promote a general improvement in the physical conditions of the child population.

EDWARD W. HANCE.

Education Office, Liverpool,
22nd July, 1904.

[*Here follows the Summary Table.*]

APPENDIX I.

LIVERPOOL EDUCATION COMMITTEE.

HIGHTOWN DIOCESAN INDUSTRIAL SCHOOL.

| Ages. | Liverpool. | | | | | | Liverpool District. | | | | | | Lancashire and Cheshire. | | | | | | | | | | | | The Potteries. | | | | | | Yorkshire Towns. | | | | | | Other Towns. | | | | | | Total. | | | | | | | | | | | |

LIVERPOOL EDUCATION COMMITTEE.
HIGHTOWN TRUANTS INDUSTRIAL SCHOOL.

Ages.	Liverpool.				Liverpool District.				Lancashire and Cheshire.								Other Towns.				Total.							
									Manufacturing Towns.				Various other Districts.														Excess or Deficiency of Normal over Actual Weights.	
	Excess Months.	No. of Boys.	Total Weights. lbs.	Average Weight. lbs.	Excess Months.	No. of Boys.	Total Weights. lbs.	Average Weight. lbs.	Excess Months.	No. of Boys.	Total Weights. lbs.	Average Weight. lbs.	Excess Months.	No. of Boys.	Total Weights. lbs.	Average Weight. lbs.	Excess months.	No. of Boys.	Total Weights. lbs.	Average Weight. lbs.	Excess Months.	No. of Boys.	Total Weights. lbs.	Average Weight. lbs.	Theoretical Weight for the given age. lbs.	Normal Weight for the given half year of age. lbs.	Total Normal Weights for the actual Age of the Boys. lbs.	Excess. lbs.	Deficiency. lbs.
																	Roman Catholic Section, 1893.												
9½	4	1	58·0	58	—	—	—	—	6	2	119	59·5	—	—	—	—	—	—	—	—	10	3	177·0	59	—	57·74	177·02	·02	—
10	12	5	304·7	60·94	6	2	128	64	—	—	—	—	—	—	—	—	—	—	—	—	18	7	432·70	61·8	65·5	60·02	426·98	—	5·72
10½	23	7	482·0	68·85	13	6	394	65·6	7	2	139·5	69·75	—	—	—	—	—	—	—	—	43	15	1015·50	67·7	—	62·30	950·84	—	64·66
11	24	9	559·4	62·15	8	2	128·5	62·65	5	2	121·7	60·85	1	1	68·7	68·7	—	—	—	—	38	14	878·30	62·3	72·0	64·58	918·56	40·26	—
11½	30	12	766·9	63·9	8	4	269	67·25	11	3	199·2	66·4	—	—	—	—	—	—	—	—	49	19	1235·10	65·0	—	66·86	1288·96	53·86	—
12	30	11	770·8	70·7	8	5	357·2	71·24	9	2	152·7	76·35	—	—	—	—	5	1	99·7	99·7	52	19	1380·4	78·1	76·75	69·14	1333·42	—	46·98
12½	26	11	778·9	70·8	4	2	137·7	68·85	—	—	—	—	—	—	—	—	—	—	—	—	30	13	916·60	70·5	—	71·42	939·86	23·26	—
	149	56	3720·7		47	21	1414·4		38	11	732·1		1	1	68·7		5	1	99·7		240	90	6035·6	—	—	—	6035·6	117·4	117·36
Normal yearly increase -			4·67		—	—	—	2·89	—	—	—	4·73	—	—	—	—	—	—	—	—	—	—	—	4·56	—	—	—	—	—
Leaving weight - -			3879·5		—	—	—	1489·9	—	—	—	760	—	—	—	—	—	—	—	—	—	—	—	607·7	—	—	—	—	—
Gain in weight - - -			158·6		—	—	—	75·5	—	—	—	27·9	—	—	—	—	—	—	—	—	—	—	—	72·1	—	—	—	—	—
Total months' detention -			128 ms.		—	—	—	57 ms.	—	—	—	28	—	—	—	—	—	—	—	—	—	—	—	29 ms.	—	—	—	—	—
Increase per month - -			1·24		—	—	—	132	—	—	—	·99	—	—	—	—	—	—	—	—	—	—	—	1·24	—	—	—	—	—
Equal per year - - -			14·88 lbs.		—	—	—	15·84	—	—	—	11·88	—	—	—	—	—	—	—	—	—	—	—	4·88	—	—	—	—	—
																	Roman Catholic Section, 1903.												
9½	5	1	58·5	58·5	4	1	50	50	5	2	129	64·5	4	1	61	61	—	—	—	—	18	5	298·5	59·7	—	58·21	298·5	—	—
10	10	2	117·5	58·7	4	1	61	61	—	1	52	52	—	—	—	—	—	—	—	—	14	4	230·5	57·6	65·5	60·70	248·6	18·1	—
10½	4	3	202	67·3	—	—	—	—	5	2	138·25	69·12	—	—	—	—	—	—	—	—	9	5	340·25	68·0	—	63·19	319·62	—	20·63
11	21	5	351	70·2	5	3	195	65	—	—	—	—	—	—	—	—	4	1	61·5	61·5	30	9	607·5	67·5	72·0	65·68	603·5	—	4·0
11½	15	6	414·75	69·12	5	1	67·75	67·75	—	—	—	—	—	—	—	—	—	—	—	—	20	7	482·5	68·9	—	68·17	485·43	2·93	—
12	22	8	558·75	69·84	10	4	262·25	65·56	—	—	—	—	—	—	—	—	—	—	—	—	32	12	821·0	68·4	76·75	70·66	861·2	40·2	—
12½	40	17	1291·25	76·0	8	3	228·25	76·08	—	—	—	—	—	—	—	—	—	—	—	—	48	20	1519·5	75·9	—	73·15	1482·9	—	36·6
	117	42	2993·75		36	13	864·25		10	5	319·25		4	1	61		4	1	61·5		171	62	4299·75				4299·75	61·23	61·23
Normal yearly increase -			6·19		—	—	—	8·68	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5·66	—	—	—	—	—	—
Leaving weight - -			3140·75		—	—	—	911·3	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4516·05	—	—	—	—	—	—
Gain in weight - - -			147		—	—	—	47·05	—	—	—	—	—	—	—	—	—	—	—	—	—	—	216·3	—	—	—	—	—	—
Total months' detention -			126 ms.		—	—	—	40 ms.	—	—	—	—	—	—	—	—	—	—	—	—	—	—	189 ms.	—	—	—	—	—	—
Increase per month - -			1·16		—	—	—	1·18	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1·14	—	—	—	—	—	—
Equal per year - - -			14		—	—	—	14·16	—	—	—	—	—	—	—	—	—	—	—	—	—	—	13·73	—	—	—	—	—	—

APPENDIX X.

FUNCTIONS AND COMPOSITION OF THE "COMITÉ CONSULTATIF D'HYGIÈNE PUBLIQUE DE FRANCE."

Loi du 15 Fevrier, 1902, Art 25.—Le Comité consultatif d'hygiène publique de France délibère sur toutes les questions intéressant l'hygiène publique, l'exercice de la médecine et de la pharmacie, les conditions d'exploitation ou de vente des eaux minérales, sur lesquelles il est consulté par le gouvernement.

Il est nécessairement consulté sur les travaux publics d'assainissement ou d'amenée de l'eau d'alimentation des villes de plus de 5,000 habitants et sur le classement des établissements insalubres, dangereux ou incommodes.

Il est spécialement chargé du contrôle de la surveillance des eaux captées en dehors des limites de leur département respectif, pour l'alimentation des villes.

Le Comité consultatif d'hygiène publique de France est composé de quarante-cinq membres :

Sont membres de droit : le directeur de l'assistance et de l'hygiène publiques au ministère de l'Intérieur ; l'inspecteur général des services sanitaires ; l'inspecteur général adjoint des services sanitaires ; l'architecte inspecteur des services sanitaires ; le directeur de l'administration départementale et communale au ministère des Affaires étrangères ; le directeur général des douanes ; le directeur des chemins de fer au ministère du Commerce, des Postes et des Télégraphes ; le directeur de l'enseignement primaire au ministère de l'Instruction publique ; le président du Comité technique de santé de l'armée ; le directeur du service de santé de la marine ; le président du Conseil supérieur de santé au ministère des Colonies ; le directeur des domaines au ministère des Finances ; le doyen de la Faculté de médicine de Paris ; le directeur de l'École de pharmacie de Paris ; le président de la Chambre de commerce de Paris ; le directeur de l'administration générale de l'assistance publique à Paris ; le vice-président du conseil d'hygiène et de salubrité du département de la Seine ; l'inspecteur général du service d'assainissement de l'habitation de la préfecture de la Seine ; le vice-président du conseil de surveillance de l'assistance publique de Paris ; l'inspecteur général des écoles vétérinaires ; le directeur de la carte géologique de France.

Six membres seront nommés par le ministre sur une liste triple de présentation dressée par l'Académie des sciences, l'Académie de médecine, le Conseil d'État, la Cour de Cassation, le Conseil supérieur du travail, le Conseil supérieur de l'assistance publique de France.

Quinze membres seront désignés par le ministre parmi les médecins, hygiénistes, ingénieurs, chimistes, légistes, etc.

Un décret d'administration publique réglementera le fonctionnement du Comité consultatif d'hygiène publique de France, la nomination des auditeurs et la constitution d'une section permanente.

APPENDIX XI.

Appendix to evidence of Dr. Chalmers.

TABLE A.

EXPECTATION OF LIFE AT CERTAIN AGES IN GLASGOW IN 1821-27, 1832-41, AND 1881-90.

(p. 39 of Life Table).

Age.	MALES.				FEMALES.			
	(1) 1821-27.	(2) 1832-41.	(3) 1881-90.	Difference between (2) and (3).	(1) 1821-27.	(2) 1832-41.	(3) 1881-90.	Difference between (2) and (3).
0	34·12	—	35·18	—	36·64	—	37·70	—
10	42·27	37·40	44·32	6·92	45·24	39·94	45·44	5·50
20	35·13	30·96	36·90	5·94	38·07	33·57	38·00	4·43
30	29·40	24·90	29·68	4·78	31·23	26·90	31·31	4·41
40	23·16	19·45	22·67	3·22	24·71	21·07	24·82	3·75
50	16·86	14·53	16·65	2·12	18·31	15·86	18·50	2·64
60	11·29	9·89	11·56	1·67	12·79	11·10	12·99	1·89
70	6·75	5·95	7·51	1·56	7·93	6·88	8·69	1·81

TABLE B.

AVERAGE ANNUAL MORTALITY PER 1,000 LIVING AT CERTAIN AGE-GROUPS IN GLASGOW.

Age.	MALES.				FEMALES.			
	1832–41. (1)	1881–90. (2)	1892–1900. (3)	Difference between (2) and (3).	1832–41. (1)	1881–90. (2)	1892–1900. (3)	Difference between (2) and (3).
Under 5	106·6	86·2	77·5	8·7	99·2	75·5	67·2	8·3
„ 10	16·7	10·6	7·0	3·6	15·4	10·1	7·0	3·1
„ 15	7·7	5·5	3·8	1·7	7·6	5·3	3·9	1·4
„ 20	10·8	7·2	5·6	1·6	7·7	7·1	4·9	2·2
„ 25	—	7·9	6·4	1·5	—	8·9	6·0	2·9
„ 35	—	9·3	8·2	1·1	—	10·9	8·5	2·4
„ 45	—	15·2	14·2	1·0	—	14·2	12·4	1·8
„ 55	—	26·5	24·8	1·7	—	21·5	20·3	1·2
„ 65	—	45·8	45·5	0·3	—	38·4	37·7	0·7
„ 75	—	84·3	80·0	4·3	—	70·2	68·7	1·5
„ 85	—	149·0	144·5	4·5	—	123·7	129·8	—

TABLE C.

GLASGOW, 1901.—DEATHS AND DEATH-RATES FROM "ALL" AND "CERTAIN" CAUSES IN HOUSES OF SEVERAL SIZES.

SIZE OF HOUSES.	Census Population.	All Causes.		Zymotics.		Phthisis.		Respiratory Disease (including Croup).	
		Deaths.	Death-rate per 1000.	Deaths.	Death-rate per 1000.	Deaths.	Death-rate per 1000.	Deaths.	Death-rate per 1000.
1 Apartment - - -	104,123	3,405	32·7	771	7·4	247	2·4	792	7·6
2 Apartments - - -	348,731	7,418	21·3	1,576	4·5	620	1·8	1,600	4·6
3 Apartments - - -	151,754	2,081	13·7	290	1·9	178	1·2	3 2	2·4
4 Apartments and upwards -	136,511	1,533	11·2	139	1·0	99	0·7	272	2·0
Institutions and Harbour -	20,588	1,072	—	88	—	152	—	235	—
Not traced - - - -	—	207	—	10	—	48	—	41	—
CITY (including Institutions and Deaths not traced) -	761,712	15,716	20·6	2,874	3·8	1,344	1·8	3,302	4 3

TABLE D.

GLASGOW.—PERCENTAGE OF ILLEGITIMATE BIRTHS in four Districts where it is highest, and in four where it is lowest; also for the City as a whole, for the years 1898 to 1902.

SANITARY DISTRICTS.	1898.	1899.	1900.	1901.	1902.
Highest.					
3. High Street and Closes W. - -	12·6	13·9	14·4	13·5	10·9
6. High Street and Closes E. - -	15·0	15·3	16·4	10·9	12·4
12. St. Enoch Square - - - -	18·0	14·0	13·5	22·5	13·6
14. Bridgegate and Wynds - - -	18·7	13·0	15·8	8·3	5·9
Lowest.					
27. Pollokshields W. and Bellahouston -	1·4	7·0	1·7	2·5	2·8
25. Langside and M. Florida - -	2·0	2·8	1·8	2·0	1·9
23. Govanhill - - - - - -	2·3	3·4	3·5	2·7	3·2
24. Possilpark and Barnhill - - -	2·9	2·2	3·6	3·7	3·7
CITY - - - - - - -	6·1	6·4	6·2	6·1	6·1
Deaths of Legitimate Infants per 1,000 Legitimate Births - - - -	147	143	145	141	126
Deaths of Illegitimate Infants per 1,000 Illegitimate Births - - -	302	286	286	260	244

TABLE E

GLASGOW.—DEATH-RATE FROM PHTHISIS IN THE SEVERAL QUINQUENNIA SINCE THE BEGINNING OF REGISTRATION AND FOR THE THREE YEARS 1900-1902.

Years.	Death-rate per million.	Year	Death-rate per million.
1855—1859	3,742	1880—1884	3,140
1860—1864	4,094	1885—1889	2,601
1865—1869	3,972	1890—1894	2,315
1870—1874	3,908	1895—1899	2,014
1875—1879	3,644	1900—1902	1,761

APPENDIX XII.

Appendix to Evidence of Dr. Niven.

I.—ANALYSIS OF AN INQUIRY INTO THE CIRCUMSTANCES OF 46 FAMILIES LIVING IN A VERY POOR DISTRICT OFF DEANSGATE.

TABLE I.

Occupations, at Different Ages.

Male.						Female.					
Ages—14.	15.	25.	35.	45.	65	14.	15.	25.	35.	45.	65.
Errand Boy. Nipper (Railway). Errand Boy.	Carter. Carter. Hooker. Warehouseman. Hooker. Porter. Hooker. Porter. Nipper (Railway). Hawker. Labourer.	Butcher. Slipper Maker. Umbrella Maker. Porter. Porter. Dock Labourer. Glass Blower. Navvy. Dock Labourer.	Carter. Porter. Navvy. Nightsoil Labourer. Labourer. Labourer. Nightsoil Labourer. Warehouse Printer ? Warehouse Boatman. Fitter. Iron-dresser. Casual Labourer. Brick-setter's Labourer.	Joiner. Labourer. Labourer. Umbrella Maker. Hawker. Chip-Chopper. Lurryman. Hawker. Ticket Writer (C.L.H.). Hawker. Bricklayer. Hawker. Plasterer. Labourer.	Labourer. Porter (Market).		Reeler. Servant. Spinner. Spinner. Servant.	Servant. Laundress. Finisher.	Charwoman. Maker-up. Hawker. Charwoman. Deputy (Lodging house).	Hawker. Hawker. Hawker. Hawker.	Charwoman. Hawker. Hawker. Charwoman.
3	11	9	15	14	2	0	5	3	5	4	4

Males - - - - - 54
Females - - - - - 21
75

TABLE II.

No. OF ROOMS, WITH PROPORTION OVERCROWDED OCCUPIED BY 46 FAMILIES.

Class of House.	1 Room.		2 Rooms.		3 Rooms.		4 Rooms.		5 Rooms.		6 Rooms.	
		Over-crowded.		Over-crowded.		Over-crowded.		Over-crowded.		Over-crowded.		Over-crowded.
Private Houses	—	—	14	3	1	1	14	—	2	—	1	—
Common Lodging Houses	—	—	—	—	—	—	—	—	—	—	—	—
Houses let in Lodgings.	13	8	1	1	—	—	—	—	—	—	—	—
Total - -	13	8	15	4	1	1	14	—	2	—	1	—

13 overcrowded out of a total of 46, all houses with not more than three rooms.

TABLE III.

INSANITARY CONDITIONS NOTED.

Private Dwellings Insanitary.	Rooms.
Back to Back, damp - - - -	2
Disrepair, defective drains - - - -	4
ditto ditto - - - -	4
ditto ditto - - - -	4
Drains defective, closet defective - -	4
Disrepair, defective drains - - - -	4
Disrepair, dirty - - - - - -	4
B. to B. damp, dilapidated - - -	2
Drains defective - - - - - -	4
Yards dirty - - - - - - -	5
Disrepair - - - - - - - -	6
B. to B. - - - - - - - -	2
House dirty - - - - - - -	1
Short waste pipe - - - - -	4
ditto - - - - -	4
B. to B. - - - - - - - -	2
House dirty - - - - - - -	1
B. to B. - - - - - - - -	2
Yard covered, small - - - - -	2
Living room floor broken - - - -	2
Disrepair - - - - - - - -	2
House dirty - - - - - - -	1
ditto - - - - - - -	2
B. to B. - - - - - - - -	2

Lodging Houses, Insanitary.	Rooms.
Disrepair, L. H. - - - - - -	1
ditto - - - - - - -	1
ditto - - - - - - -	1
ditto - - - - - - -	1
ditto - - - - - - -	2
ditto - - - - - - -	1
ditto - - - - - - -	1
ditto - - - - - - -	1
ditto - - - - - - -	1
ditto - - - - - - -	1
Total - -	34

TABLE IV.

No. OF ROOMS IN RELATION TO THE AVAILABLE DIET.*

1	2	3	4	5	6	No. of Rooms.
d.	d.	d.	d.	d.	d.	
3¾	8	6	2	7	8 +	
2	5	—	3½	8	—	
8 +	3½	—	8	—	—	
8 +	5½ xxx	—	5	—	—	
1¼	8	—	7	—	—	
8 +	6½	—	2¾	—	—	
8 +	8 +	—	8 +	—	—	
8 +	7½	—	4¼	—	—	
8 +	8 +	—	6	—	—	
7	3	—	6	—	—	
4	2¼	—	8 +	—	—	
8 +	1½	—	8 +	—	—	
—	4½	—	7½	—	—	
— — —	8 +	—	2¼	—	—	
average.	0	—	— — —	—	—	
6·2	4¼	—	average.	—	—	
—	— — —	—	5·6	—	—	
—	average.	—	—	—	—	
—	5·2	—	—	—	—	
2	4	—	4	—	Total 10.	Unable to provide diet at rate of 3¾d.
4	10	1	7	—	Total 22.	At rate of 7d.

* *Note.—For explanation, see "Remarks" after Table VIII.*

TABLE V.

SIZE OF FAMILY IN RELATION TO THE DIET AVAILABLE.

1	2	3	4	5	6	7	8	9	10	No. in. Family.
d. 3	d. 7	d. 6	d. 8	d. 8	d. 8+	d. 2¾	d. 2	d. 5½		
—	6	8+	3½	8	4¼	—	7	6		
—	8+	3¾	3½	1½	8+	—	5	—		
—	2	6½	8+	8+	4	—	5	—		
—	8+	8+	7½	4¼	—	—	—	—		
—	8+	8+	4½	—	—	—	—	—		
—	8+	7½	2½	—	—	—	—	—		
—	8+	2	8	—	—	—	—	—		
—	0	1½	—	—	—	—	—	—		
—	8+	—	—	—	—	—	—	—		
—	7	—	—	—	—	—	—	—		
—	8	—	—	—	—	—	—	—		
1	12	9	8	5	4	1	4	2	Families of different size. Total 46.	
1	2	2	3	1	0	1	1	0	Unable to provide diet at the rate of 3¾d. Total 11.	
1	3	5	4	2	2	1	3	2	Diet under 7d. Total 23.	
3d.	6½d.	5¾d.	5¾d.	6d.	6d.	2¾d.	4¾d.	5¼d.	Average diet per man in families of different sizes.	

TABLE VI.

AMOUNTS SPENT ON RENT.

No of Rooms.

1	2	3	4	5	6
s. d. 4 6	s. d. 4 6	s. d. 4 6	s. d. 5 0 x	s. d. 6 4	s. d. 12 0
2 0	2 6	—	5 6 x	5 8	—
4 0 x	4 6 x	—	4 0	—	—
4 0	2 0	—	4 0	—	—
4 6	3 9 b to b	—	4 6 x	—	—
5 0	3 6 b to b	—	4 6 x	—	—
5 6	4 0	—	4 0 x	—	—
5 0	3 6 b to b	—	5 3	—	—
6 0	3 9	—	4 6	—	—
5 0	3 6	—	5 6	—	—
5 0	3 0 x	—	2 0	—	—
5 0	3 0 x	—	5 0	—	—
4 6	5 6 x	—	4 6	—	—
—	3 6	—	4 6	—	—
—	9 0 L.H.	—	—	—	—
Average 4s. 7d.	Average 3s. 11½d.	4s. 6d.	4s. 5¾d.	6s. 0d.	12s. 0d.

x Means that the rent is not regularly paid.

TABLE VII.

SPECIAL REASONS FOR POOR DIET OR OVERCROWDING.

No. of Family.	No. of Rooms.	Diet.	Reasons.
		d.	
8	4	2	Accident to father, two sons out of work (11, Irwell Court).
4	4	3½	Two workers (earnings 16s. ?)
7	2	5	£1 to 25s. earnings. Rent 4s. 6d.
9	2 x	5½	38s. (8s. spent on drink ?), (4, Irwell Court).
9	3 x	6	32s. 6d. (23s. 6d. available for food ?) (4, Back Quay Street).
2	1	2	Man a cripple, wife has diseased leg.
3	2 (2 lodgers)	3	Hawker, has two lodgers (husband dead).
3	2	2½	Two boys, one out of work, mother weak, father dead.
5	2 L.H.	1½	Man has phthisis, mother underfed.
4	2	4½	Mother weak.
2	1 L.H.	8	3s. spent on drink. (? ?)
4	4	2½	One daughter delicate, father dead, son-in-law a lodger.
2	2	1	Charwoman at 66, sole support; husband dead.
3	1 L.H.	1½	Father fitter out of work, wife deputy C.L.H., son errand boy, both said to earn 8s. 6d. a week.
5	1 L.H.	8 x	Rent 6s. a week.
5	2 L.H.	4½	(? ?) Earnings £1 a week. Rent 9s.
4	1 L.H.	8 x	Husband lost leg, said to earn £1 on odd jobs.
6	1 L.H.	4	Baby is wasting, dock labourer, earns 15s. Rent 5s.
4	2	3½	Father dead, daughter a servant.

TABLE VIII.

SHOWING THE CONDITIONS AS REGARDS ILLNESS IN THE ABOVE 46 FAMILIES.

No. of Family.	No. of Rooms.	Diet Scale.	Illness, &c.
		d.	
8	4	2	Family appear weak.
4	4	3½	
4	2	3¾	Appear underfed.
7	4	2¾	Child has died with bronchitis and rickets.
5	1	3¾	Wife appears underfed.
2	2	8	Wife has weak chest.
3	2	6½	Mother a cripple from fall.
3	4	8	Baby has had convulsions.
4	2	8	Man has rheumatism.
4	2	7½	Wife "delicate."
2	1	2	Man and wife tuberculous.
3	4	7½	Man has bronchitis, woman indigestion
2	2	8	Wife "delicate."
3	2	2¼	Woman has "bronchitis."
5	2	1½	Father tuberculous, child died of "waste."
4	2	4½	Mother has "bronchitis."
4	4	2½	Daughter, aged 36, "delicate."
3	1	8	Children appear scrofulous.
2	1	8	Wife "delicate."
5	1	8	Wife narrow-chested, probably tuberculous.
2	1	7	Wife has internal complaint.
6	1	4	Baby wasting.
2	1	8	Wife "delicate"—internal complaint.

REMARKS.

TABLE I. Shows that in this district the head of the family is, for the most part, a labourer or hawker.

TABLE II. This table shows that overcrowding is confined to the families occupying one, two, and three rooms, and is worst where the rooms are sub-let as lodgings.

TABLE III. Shows that disrepair is the principal sanitary defect noted, though there are also noted damp, dirt and defective drainage. Back-to-back houses are badly ventilated and the closet is a pail closet exposed to the public.

TABLE IV. Requires some explanation. I have constructed a number of diets from 8d. down to 3¾d. on which a man, doing moderate work, can be fed, fulfilling Atwater's Dietary. P. 125 grammes, F. 125 grammes, C. 425 grammes, or nearly 8d.

I have taken 3¾d. as the lowest possible for sufficient diet. On this basis the greatest deficiencies are found in two and four roomed dwellings; the total number of households below the limit necessary for healthy life being eleven out of forty-six. See diet tables.

If we take 7d. as the limit, which we generally may, owing to the inability of families to choose a diet properly, there are twenty-three out of forty-six without sufficient food. It should be noted that the average diet available is considerably larger in one roomed occupancies than in two or four roomed houses.

From TABLE V. we see that in this district the deficiency of diet falls more heavily on those having three to five in the family than on those having six to nine, if we take the diet at 3¾d.; but more heavily on the larger families if we take 7d. as the limiting diet for efficiency. The importance of diffusing knowledge on this subject is thus illustrated.

TABLE VI. Is not quite satisfactory. It is impossible to trace the effect of intemperance, except now and then, as in the fourth family shown. The effects of disease, slackness of work, death of the bread-winner are clearly shown. This table shows by a X where the rents are not regularly paid. This is most frequent in four roomed houses.

TABLE VII. Shows the relation of disease to the question of housing and food. All the one-roomed occupancies are in houses let in lodgings and we perceive that the ailing condition of the wife has much to do with the recourse to this class of dwelling. The prevalence of tuberculosis amongst these people is painfully in evidence.

TABLE VIII. More rent in proportion is paid for one room because this is let furnished. But it is remarkable how closely the rents of two roomed approximate to those of four roomed houses. The reason probably is that the former are scarce in this district.

II.—ANALYSIS OF A SIMILAR ENQUIRY MADE INTO THE CIRCUMSTANCES OF FORTY-TWO FAMILIES IN ANGEL MEADOW.

TABLE I.

Occupations, at Different Ages.

Male.						Female.					
Age — 14.	15.	25.	35.	45.	65.	14.	15.	25.	35.	45.	65.
Errand Boy	Window Roller Manufacturer Labourer Iron Turner Apprentice at Iron Works.	Warehouse Porter Market Porter Carter Corporation Labourer Railway Labourer Hawker Hawker Steeple Jack Labourer Labourer Scavenger Whip Maker Carter	Flower Seller Builder's Labourer Builder's Labourer Labourer Book Hawker Labourer, Gas Works Labourer Labourer Cooper Hawker Bricklayer	Market Porter Street Musician Cleansing Labourer Market Porter Furrier Market Porter Straw Mat Manufacturer Hawker Labourer's Cook Labourer Labourer Mason's Labourer Gas Stoker Light Porter Market Porter Market Porter Market Porter	Light Porter	Errand Girl	Charwoman Printer's Machinist (er Tobacco Work- Bolt Works Machinist Seamstress	Umbrella Coverer Waste Sorter Tennis Net Maker Nurse (Dom.) Hawker Hawker Laundress Machinist	Quilt Maker Furrier Hawker Cook Shopkeeper Hawker Shopkeeper Charwoman	Charwoman Waste Sorter Straw Mat Maker Dressmaker Charwoman	Cotton Operative
1.	4.	13.	11.	17.	1.	1.	5.	8.	8.	5.	1.

Males	47
Females	28
Total	75

TABLE II.

NO. OF ROOMS, WITH PROPORTION OVERCROWDED, OCCUPIED BY 42 FAMILIES.

Class of House.	1 Room.		2 Rooms.		3 Rooms.		4 Rooms.		5 Rooms.		6 Rooms.	
		Over-crowded.		Over-crowded.		Over-crowded.		Over-crowded.		Over-crowded		Over-crowded.
Private Houses	—	—	18	2	3	—	2	—	—	—	1	—
Common Lodging Houses	—	—	—	—	—	—	—	—	—	—	—	—
Houses let in Lodgings	14	3	2	—	1	—	1	—	—	—	—	—
Total - -	14	3	20	2	4	—	3	—	—	—	1	—

5 overcrowded out of a total of 42, none of which contain more than 2 rooms.

TABLE III.

INSANITARY CONDITIONS NOTED.

Private Dwellings Insanitary.	Rooms.
Back-to-back, bad ventilation, pail closets close to doors and windows - - -	2
Back-to-back, ill-ventilated, closely confined, pail closets close to doors and windows - - - - - - - - -	2
Ill-ventilated, dark, dirty - - - -	2
Ill-ventilated - - - - - - -	2
ditto - - - - - - - -	1
ditto - - - - - - - -	2
ditto - - - - - - - -	2
ditto - - - - - - - -	2
Ill-ventilated, confined - - - -	2
Ill-ventilated, drainage defective - -	2
Ill-ventilated, confined, drains defective .	2
ditto ditto - - -	2
Confined, drains defective - - - -	2
Ill-ventilated, dark - - - - - -	2
Four pail closets under one of the bedrooms	3
Pail closets adjoin living rooms, ill-ventilated and dark - - - - - - - -	2
Ill-ventilated, confined, close to pail closets	2
Ill-ventilated, close to pail closets - -	2
Ill-ventilated - - - - - - -	3
Four pail closets under bedroom - -	6
Ill-ventilated - - - - - - -	4
ditto - - - - - - - -	4

Lodging Houses Insanitary.	Rooms.
Ill-ventilated - - - - - - -	1
ditto - - - - - - -	1
ditto - - - - - - -	1
ditto - - - - - - -	1
ditto - - - - - - -	1
ditto - - - - - - -	1
ditto - - - - - - -	1
ditto - - - - - - -	2
ditto - - - - - - -	1
ditto - - - - - - -	1
ditto - - - - - - -	3
ditto - - - - - - -	1
ditto - - - - - - -	3
ditto - - - - - - -	4
ditto - - - - - - -	1
Total - -	37

TABLE IV.

NO. OF ROOMS IN RELATION TO THE AVAILABLE DIET.

1	2	3	4	5	6	No. of Rooms.	
d.	d.	d.	d.		d.		
2¼	2	4	8	—	6½		
8	5	3¾	6¾	—	—		
8	0¾	5¾	7¾	—	—		
8	2	—	—	—	—		
8	4	—	—	—	—		
8	4½	—	—	—	—		
8	2¾	—	—	—	—		
7½	8	—	—	—	—		
2¾	4¾	—	—	—	—		
3½	8	—	—	—	—		
8	3¼	—	—	—	—		
7¼	3¾	—	—	—	—		
2½	6	—	—	—	—		
4	3½	—	—	—	—		
8	3½	—	—	—	—		
—	3¾	—	—	—	—		
—	4¾	—	—	—	—		
—	4¾	—	—	—	—		
—	7	—	—	—	—		
—	8	—	—	—	—		
Av., 6¼d.	Av., 4½d.	Av., 4½d.	Av., 7½d.	—	—		
						Total.	
4	7				—	11	Unable to provide a diet at the rate of 3¾d.
5	16	3	1	—	1	26	At the rate of 7d.

TABLE V.

SIZE OF FAMILY IN RELATION TO THE DIET AVAILABLE.

1	2	3	4	5	6	7	8	9	10	No. of Family.
d.	d.	d.	d.	d.	d.	d.				
8	4	$0\frac{3}{4}$	5	$2\frac{1}{2}$	2	$7\frac{3}{4}$	—	—	—	
—	8	8	$4\frac{1}{2}$	$3\frac{1}{4}$	2	—	—	—	—	
—	$4\frac{3}{4}$	$4\frac{3}{4}$	$3\frac{3}{4}$	$4\frac{3}{4}$	$2\frac{3}{4}$	—	—	—	—	
—	8	6	$3\frac{1}{2}$	$3\frac{3}{4}$	4	—	—	—	—	
—	8	$3\frac{1}{2}$	7	$6\frac{1}{2}$	$3\frac{3}{4}$	—	—	—	—	
—	8	8	$6\frac{3}{4}$	$5\frac{3}{4}$	—	—	—	—	—	
—	8	$2\frac{3}{4}$	$2\frac{1}{2}$	4	—	—	—	—	—	
—	8	8	—	—	—	—	—	—	—	
—	$7\frac{1}{2}$	—	—	—	—	—	—	—	—	
—	$3\frac{1}{2}$	—	—	—	—	—	—	—	—	
—	8	—	—	—	—	—	—	—	—	
—	$7\frac{1}{4}$	—	—	—	—	—	—	—	—	
—	8	—	—	—	—	—	—	—	—	
1	13	8	7	7	5	1	—	Families of different size. Total 42.		
0	1	3	2	2	3	0	—	Below $3\frac{1}{2}$d. Total 11.		
0	3	5	6	7	5	0	—	Below 7d. Total 26.		
8d.	7d.	$5\frac{1}{4}$d.	$4\frac{3}{4}$d.	$4\frac{1}{4}$d.	3d.	$7\frac{3}{4}$d.	—	Average diet per man in families of different sizes.		

TABLE VI.

AMOUNTS SPENT ON RENT.

Rooms. 1	2	3	4	5	6
s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
3 6 b to b	3 6 b to b	3 8 b to b	5 0	—	6 4
5 0 b to b	3 6 b to b	4 0	4 9	—	—
4 0 b to b	3 6 b to b	5 6	6 0	—	—
5 3 b to b	3 6 b to b	—	—	—	—
5 0	3 6 b to b	—	—	—	—
4 8	3 6 b to b	—	—	—	—
4 8	3 6 b to b	—	—	—	—
5 0	3 6 b to b	—	—	—	—
5 3	3 6 b to b	—	—	—	—
4 8	4 0 b to b	—	—	—	—
4 8	4 0 b to b	—	—	—	—
2 0	3 6 b to b	—	—	—	—
4 8	3 6 b to b	—	—	—	—
5 0	3 8 b to b	—	—	—	—
2 0	3 8 b to b	—	—	—	—
—	3 8 b to b	—	—	—	—
—	3 8 b to b	—	—	—	—
—	3 8 b to b	—	—	—	—
—	5 0 b to b	—	—	—	—
s. d.	s. d.	s. d.	s. d.	s. d.	s. d.
Average: 4 4	3 9	6 7	7 10½	—	6 4

b to b signifies back to back

TABLE VII.

SPECIAL REASONS FOR POOR DIET OR OVERCROWDING.

No. of Family.	No. of Rooms.	Diet.	Reasons.
		d.	
6	2	2	Earnings 10s. to 16s. weekly.
4	2	5	Earnings 13s. to 15s. weekly.
3	2	0¾	Earnings 5s. to 12s. weekly. Wife has rheumatism.
6	2	2	Earnings 10s. to 15s.
2	2	4	Earnings 9s. to 12s. for two workers.
5	1	2¼	Husband in prison. Wife earns 1s. a day covering umbrellas at 4½d. per doz.
4	2	4½	Husband out of work. Wife earns about 10s. per week.
6	2	2¾	Man and wife together earn 14s. to 18s.
3	2	4¾	Mother and two daughters earn 11s. weekly.
5	2	3¼	Son out of work.
4	2	3¾	Hawker and wife earn 13s. to 24s.
3	2	6	Man and wife earn 15s. to 21s.
4	2	3½	Man earns 10s. to 20s
6	3	4	Earnings of father 15s. to 20s. (Married son assists family.)
3	2	3½	Three persons earn 6s. to 8s. total.
6	2	3¾	Man and wife earn 14s. or 15s.
2	2	4¾	One earns 6s. to 8s. Another out of work.
5	2	4¾	Man and wife earn 15s. to 20s. Man drinks.
5	3	3¾	Two workers earn 16s. weekly.
3	1	2¾	Father earns 10s. to 20s. (Out of his usual work.)
2	1	3½	Man and wife earn 10s. to 25s. (Rent 4s. 8d.)
4	4	6¾	Man and two children earn 22s. Mother ill.
5	3	5¾	Man earns 20s. to 25s.
4	1	2½	Man and wife earn 12s. to 18s.
5	3	4	Man earns 12s. to 15s. (Out of his usual work.)

TABLE VIII.

SHOWING THE CONDITIONS AS REGARDS ILLNESS IN THE ABOVE 42 FAMILIES.

No. of Family.	No. of Rooms.	Diet Scale.	Illness, etc.
		d.	
6	2	2	Wife "delicate."
3	2	0¾	Wife suffers from rheumatism.
6	2	2	Confinement six months ago.
6	2	2¾	Confinement five months ago.
4	2	3¾	Confinement four months ago.
6	3	4	Eldest daughter appears delicate. A son has chorea.
5	6	6½	Mother seems delicate. Confined six months ago.
4	4	6¾	Mother suffers from "bronchitis."
5	3	4	Confinement three weeks ago.
7	4	7¾	Son had pleurisy a few months ago.

REMARKS.

The second district to which a report relates is partly in Angel Meadow on the North of the Manchester Township. This district contains many common lodging houses of a low type.

The number of houses taken was 42.

These contained (Table I.) 75 workers whose occupations are given.

Insanitary conditions were found in connection with 37 houses (Table II-). In fact 23 of the houses were back to back, and these are, *ipso facto*, insanitary.

As in Deansgate, overcrowding is confined to the smallest houses, or to rooms sublet (Table III.). The amount of overcrowding here is, however, comparatively small.

From Table IV. we see that the best diet falls to those families living in one furnished room. Those having 2 or 3 rooms fare much worse.

The average diet here is lower than off Deansgate.

From Table V. we see that the families are not large, and that in this district the depth of destitution increases with the size of the family.

Table VI. shows lower rents than in Deansgate and the difference in rents between two roomed and four roomed houses is here quite marked.

Table VII. gives an idea of the reasons causing poor diet and overcrowding.

Table VIII. shows a comparatively small list of illnesses. The tendency is to tuberculosis and heart disease.

It will be noted that out of the above 42 households 11 are unable to get a diet on the scale of 3¾d. per man; 19 are starving, except for help; while 26 are unable to live at the rate of 7d. per man, which in their ignorance of foods probably means insufficiency.

III.—ANALYSIS OF A SIMILAR ENQUIRY INTO THE CIRCUMSTANCES OF 48 FAMILIES IN ANCOATS.

TABLE I.

Occupations at different Ages.

Male.						Female.					
Ages - 14.	15.	25.	35.	45.	65.	14.	15.	25.	35.	45.	65.
Nipper Nipper	Cabinet Maker Checker Labourer Trolley Boy Brush Maker Labourer Corporation Labourer Toy Maker Carter Hawker Glass Worker Glass Worker Blacksmith Stone Mason	Railway Labourer Hawker Print Sorter Furniture Polisher Blacksmith Market Porter Railway Porter Hawker Scavenger Labourer Builder's Labourer Glass Worker Dyer's Labourer Hawker Weaver	Builder's Labourer Labourer Slipper Maker Cats' Meat Dealer Scavenger Night Watchman Railway Porter Boot Maker Builder's Labourer	Labourer Navvy Painter Labourer Market Porter Firewood Cutter Market Porter Labourer Bricklayer Warehouse Porter Railway Porter Coal Heaver	Hawker		Machinist Paper Sorter Waste Sorter Rag Sorter Charwoman Cotton Piecer	Machinist Kitchen Maid Furniture Polisher Tobacco Worker Charwoman Charwoman Charwoman Rag Sorter Toy Maker Cigar Maker Fishing Tackle Maker Hawker	Charwoman Charwoman At Glass Works Charwoman	Charwoman Charwoman Seamstress Paper Bag Maker Charwoman Tailoress Cotton Reeler Hawker Charwoman Hawker	Charwoman Charwoman
2	14	15	9	12	1	0	6	12	4	10	2

Males - - - - - - -	53
Females - - - - - -	34
Total -	87

TABLE II.

No. OF ROOMS, WITH PROPORTION OVERCROWDED, OCCUPIED BY 48 FAMILIES.

Class of House.	1 Room.		2 Rooms.		3 Rooms.		4 Rooms.		5 Rooms.		6 Rooms.	
		Over-crowded.		Over-crowded.		Over-crowded.		Over-crowded.		Over-crowded.		Over-crowded.
Private Houses	—	—	30	4	—	—	10	—	—	—	—	—
Common Lodging Houses	—	—	—	—	—	—	—	—	—	—	—	—
Houses let in Lodgings.	6	2	2	—	—	—	—	—	—	—	—	—
Total - -	6	2	32	4	—	—	10	—	—	—	—	—

6 overcrowded out of a total of 48.

TABLE III.

INSANITARY CONDITIONS NOTED.

Private Dwellings Insanitary.	Rooms.	Lodging Houses Insanitary.	Rooms.
Ill-ventilated	2		
ditto and confined	4		
ditto	2		
ditto and confined	4		
ditto	2		
ditto	2		
ditto	2		
ditto and confined	4		
ditto	2		
ditto	2		
ditto	2		
ditto	2		
ditto	2		
ditto	2		
ditto	2		
ditto	2		
ditto	2		
Confined and ill-ventilated at back	4		
ditto ditto	4		
Ill-ventilated	2		
ditto	2		
ditto	2		
ditto	2		
Bad repair	4		
Ill-ventilated	2		
Confined and ill-ventilated	4		
Ill-ventilated	2		
ditto	2		
ditto	2		
ditto	2		
ditto	2		
Confined and ill-ventilated at back	4		
	32		

TABLE IV.

NUMBER OF ROOMS IN RELATION TO THE AVAILABLE DIET.

Rooms. 1	2	3	4	5	6	
d.	d.		d.			
8	2¼	—	2¼	—	—	
8	8	—	8	—	—	
2¼	3½	—	5¼	—	—	
8	7½	—	3½	—	—	
7	8	—	8	—	—	
3¾	4¾	—	8	—	—	
—	6	—	8	—	—	
—	8	—	8	—	—	
—	2½	—	8	—	—	
—	5	—	5¾	—	—	
—	8	—	—	—	—	
—	4¾	—	—	—	—	
—	8	—	—	—	—	
—	2½	—	—	—	—	
—	5½	—	—	—	—	
—	7½	—	—	—	—	
—	4	—	—	—	—	
—	4½	—	—	—	—	
—	3¼	—	—	—	—	
—	6	—	—	—	—	
—	6¾	—	—	—	—	
—	8	—	—	—	—	
—	3½	—	—	—	—	
—	2½	—	—	—	—	
—	3¾	—	—	—	—	
—	5	—	—	—	—	
—	4	—	—	—	—	
—	7½	—	—	—	—	
—	8	—	—	—	—	
—	4¾	—	—	—	—	
—	8	—	—	—	—	
—	4	—	—	—	—	
Average 6	Average 5½	—	Average 6½			
1	7	—	2		Total 10.	Unable to provide a diet at the rate of 3¾d.
2	21	—	4		Total 27.	At the rate of 7d.

TABLE V.

SIZE OF FAMILY IN RELATION TO THE DIET AVAILABLE.

1	2	3	4	5	6	7	8	9	10	No. of family.
d. 8	d. 2¼	d. 3½	d. 4¾	d. 2¼	d. 6¾	d. 6	d. 5¾	—	—	—
3½	8	8	2¼	3½	5	—	3¼	—	—	—
—	8	5	5¼	4½	4¾	—	—	—	—	—
—	7½	8	2½	7¼	—	—	—	—	—	—
—	8	5½	8	8	—	—	—	—	—	—
—	8	7¼	4¾	—	—	—	—	—	—	—
—	2½	6	4	—	—	—	—	—	—	—
—	2½	8	8	—	—	—	—	—	—	—
—	3¾	4	8	—	—	—	—	—	—	—
—	8	8	8	—	—	—	—	—	—	—
—	3¾	—	7	—	—	—	—	—	—	—
—	8	—	8	—	—	—	—	—	—	—
—	—	—	4	—	—	—	—	—	—	—
2	12	10	13	5	3	1	2	Number of families of different size. Total 48.		
1	3	1	2	2	—	—	1	Number without possibility of sufficient food at 3¾d. per man. Total 10.		
1	5	5	7	3	3	1	2	Number at less than 7d. per man. Total 27.		
5·8d.	5·9d.	6·3d.	5·7d.	5·1d.	5·5d.	6d.	4·5d.	Average diet per man in families of different size.		

TABLE VI.

AMOUNTS SPENT ON RENT.

Rooms.	2	3	4	5	6
s. d.	s. d.		s. d.		
5 3 L	2 10 b	—	4 0	—	—
5 3 L	2 7 b	—	4 4	—	—
5 6 L	7 0 L	—	5 6	—	—
4 8 L	7 6 L	—	5 6	—	—
6 0 L	3 0 b	—	4 6	—	—
4 8 L	3 0 b	—	4 3	—	—
—	2 9 b	—	4 3	—	—
—	2 10 b	—	4 9	—	—
—	2 10 b	—	3 3	—	—
—	3 6 t	—	4 3	—	—
—	3 2 b	—	—	—	—
—	3 1 t	—	—	—	—
—	3 6 b	—	—	—	—
—	3 6 b	—	—	—	—
—	3 1 t	—	—	—	—
—	2 7 b	—	—	—	—
—	2 10 b	—	—	—	—
—	2 10 t	—	—	—	—
—	3 0 b	—	—	—	—
—	3 0 b	—	—	—	—
—	2 9 b	—	—	—	—
—	3 9 b	—	—	—	—
—	2 7 b	—	—	—	—
—	2 6 b	—	—	—	—
—	2 7 b	—	—	—	—
—	3 9 b	—	—	—	—
—	3 6 b	—	—	—	—
—	3 9 b	—	—	—	—
—	2 9 b	—	—	—	—
—	3 9 b	—	—	—	—
—	3 0 b	—	—	—	—
—	3 2 b	—	—	—	—
Average 5s. 3d.	Average 3s. 4d.	—	Average 4s. 5½d.	—	—

L = Rooms let in lodgings.
b = Back to back.
t = Through house.

TABLE VII.

SPECIAL REASONS FOR POOR DIET OR OVERCROWDING.

No. of Family.	No. of Rooms.	Diet.	Reasons.
		d.	
2	2	2¼	Mother and daughter earn 6s. weekly.
5	4	2½	Daughter out of work, son earns 10s.
3	2	3½	Three persons earn 17s. in winter.
4	2	4¾	Father out of work, mother and son earn 17s.
4	1	2¼	Father cuts firewood, 10s. weekly, and pays 5s. 6d. for one room.
8	4	5¾	Three persons earn 29s. weekly.
4	4	5¼	Two persons earn 17s. 6d. weekly.
7	2	6	One person earns 22s. weekly.
5	4	3½	Father and mother earn 15s. weekly.
4	2	2½	Father earns 9s.
3	2	5	Two daughters earn 14s.
4	2	4¾	Son earns 7s. Not known what father earns? 13s.
2	2	2½	Two persons earn 7s. 6d. (Rent 3s. 6d.)
3	2	5½	Soldier sends 8d. per day home, and Government allows 1s. 1d. per day. (Rent 3s. 1d.)
4	2	4	Father earns 13s.
5	2	4½	Man and wife earn 14s.
8	2	3½	Man earns 14s.
3	2	6	One son in hospital, and one out of work. When working 17s. weekly.
6	2	6¾	Father earns 10s. in winter.
1	2	3½	Earnings 5s. 6d. weekly. (Rent 2s. 7d.)
2	2	2½	Mother earns 6s. to 8s. Husband does nothing.
2	2	3¾	Man earns 8s. Wife broke ankle and cannot work.
6	2	5	Man earns 20s.
4	2	4	Daughter earns 14s. Father does the housework.
4	1	7	One person earns 20s. (Rent 6s.)
5	2	7¼	Four persons earn 30s. A son out of work.
2	1	3¾	Earnings 10s. weekly. (Rent 4s. 8d.)
6	2	4¾	Father earns 18s.
4	2	4	Mother and son earn 11s.

TABLE VIII.

SHOWING THE CONDITIONS AS REGARDS ILLNESS IN THE ABOVE FAMILIES

No. of Family.	No. of Rooms.	Diet.	Illness, &c.
		d.	
1	2	8	Rheumatism for a month.
4	1	2¾	Mother has a bad foot through accident.
7	2	6	Child ruptured ; has been in hospital.
5	4	3½	Confinement eight months ago.
3	2	8	Grandmother (lives here) ill at present.
3	2	6	Son, aged 17, in workhouse hospital with pneumonia.
6	2	6¾	Confinement six months ago.
2	2	2½	Father (aged 73) not able to work.
2	2	3¾	Wife broke ankle five months ago.
4	1	7	Confinement three months ago.

REMARKS.

The third district in which an investigation has been made is a part of Ancoats in the Manchester Township. The portion of the Ancoats district enquired into contains no common lodging houses and only a small number of houses let in lodgings.

The number of houses taken was forty-eight.

These contained (Table I.) eighty-seven workers whose occupations are given.

Insanitary conditions were found in connection with thirty-two houses (Table II.) and twenty-six of the houses were back-to-back.

As in Deansgate and Angel Meadow overcrowding is confined to the smallest houses, or to rooms sublet.

Here again, however, the amount of overcrowding is small (Table III.).

In Table IV. we find that out of six families occupying tenements of one room three were able to provide an 8d. diet and one a 7d. diet. The average, however, only allows a 6d. diet, this being lower than that in the other two districts mentioned.

The average diet for all the families is higher than in either Deansgate or Angel Meadow.

In Table V. we see that the families are not large, and that the depth of destitution increases with the size of the family. This is not so marked, however, as in the Angel Meadow district.

Table VI. shows that the rents for the two roomed and four roomed houses are lower than in Deansgate or Angel Meadow The difference between the rents of two roomed and four roomed houses in Ancoats is less marked than in Angel Meadow.

Table VII. gives an idea of the reasons causing poor diet and overcrowding.

Table VIII. shows a remarkably small list of recent illnesses.

Out of the forty-eight households, ten are unable to get a diet on the scale of 3¾d. per man, while twenty-seven are unable to live at the rate of 7d. per man.

IV.—TABLE SHOWING DEATH RATES FROM PHTHISIS IN MANCHESTER IN AGE GROUPS.

Years.	All Ages.	—5	5—	10—	15—	20—	25—	45—	65—
1881—1890	2·32	0·48	0·36	0·58	1·76	2·62	4·12	3·55	1·61
3 *Unions: Manchester, Chorlton and Prestwich.*									
1891–1895	2·09	0·36	0·37	0·43	1·47	1·91	3·74	3·57	1·39
1896–1900	2·07	0·45	0·31	0·41	1·25	1·73	3·42	3·94	2·33
1901	2·09	0·28	0·37	0·44	1·04	1·82	3·43	4·29	1·56
1902	2·08	0·29	0·35	0·49	1·07	1·63	3·22	4·49	2·84
1903	1·85	0·34	0·24	0·50	1·02	1·52	2·88	3·78	2·50

This table shows a considerable reduction in the total death-rate from phthisis in the twenty-three years, 1881–1903, interrupted by a slight increase in the years 1901, 1902. At ages under 5 a reduction is manifest in the last three years. At ages 5–9 no steady improvement is apparent. At ages 10–14 the last three years show retrogression. On the whole, at school ages there has been an increase in the death-rate during the last three years. On the other hand, at ages 15–19, 20–24, and 25–44, a decided improvement is manifest. At ages above 45 the death-rate from phthisis has increased. It should be observed that less importance attaches to the death-rate from phthisis at the earlier than at the later ages. The total death-rate is so small that errors in diagnosis (which are more likely to occur at the earlier stages) would have a much greater effect on the rate at the earlier ages. With this caution, it may be said that the figures show a decided improvement at ages under 5, a tendency to retrogression at school age, a marked improvement in adolescents and adults, and an inclination to retrogression at advanced age.

V.—TABLE SHOWING THE NUMBER OF DEATHS UNDER 1 YEAR PER 1,000 BIRTHS OF LEGITIMATE AND ILLEGITIMATE INFANTS RESPECTIVELY.

Year.	Legitimate.	Illegitimate.
1891	184	375
1892	170	367
1893	190	498
1894	150	338
1895	193	395
1896	167	375
1897	187	374
1898	187	401
1899	196	425
1900	179	432
1901	188	463
1902	147	263

APPENDIX XIII.

Appendix to Evidence of Mr. Shirley Murphy.

EXTRACT FROM MEMORANDUM WITH TABLES OF FIGURES.

I have no other test of the physical condition of the population than that of its ability to resist disease and death; but dealing in this way with London as a whole, the statistics available show that progress is being made.

Thus the death rate of the London population has for a long period been steadily decreasing, as will be seen from the following table:—

Period.	Death rate.
1841–50	24·8
1851–60	23·7
1861–70	24·4
1871–80	22·5
1881–90	20·5
1891–1900	19·2
1901	17·1
1902	17·2
1903	15·2

The following figures extracted from life tables relating to three decennia, further emphasise this fact.

MALES.

Expectation of life, at particular ages, in years.

Age.	1861–70.	1881–90.	1891–1900
0		39·9	41·0
5	47·5	50·4	51·6
10	44·6	46·8	47·8
15	40·1	42·4	43·4
20	36·7	38·3	39·1
25	33·1	34·2	35·0
35	26·3	26·9	27·3
45	20·3	20·4	20·7
55		14·6	14·8
65		9·7	9·8
75		5·8	5·9

The figures relating to females are in the same direction.

With respect to the physical condition of the poorer classes of the population, I have again no other test than that afforded by their ability to resist disease and death, compared with the corresponding ability of the classes better circumstanced.

The sanitary areas of Southwark and Hampstead may be taken as illustrative of a poor and of a well-to-do district, and the following figures showing the expectation of life in the two districts enable comparison to be made between them in respect of viability.

MALES.

Expectation of life, 1897–1900.

Age.	Hampstead.	Southwark.
At birth.	50·8	36·5
5	57·4	48·7
10	53·3	45·0
15	48·7	40·6
20	44·2	36·4
25	39·8	32·4
30	35·5	28·6
35	31·3	25·0
40	27·5	21·9
45	23·8	18·9
50	20·3	16·2
55	17·0	13·6
60	14·1	11·3
65	11·5	9·1
70	9·2	7·0
75	7·1	5·2

Further opportunity is given of comparing the death-rates of populations differing in social condition, by grouping the London sanitary areas according to the proportions of population occupying tenements of less than five rooms to the extent of more than two persons to a room.

Metropolitan Borough.	Proportion of total population living more than two in a room in tenements of less than 5 rooms.	Proportion of total population living in tenements of 1 and 2 rooms.
Lewisham	2·67 %	4·8 %
Wandsworth	4·46 %	5·6 %
Stoke Newington	5·52 %	10·1 %
Hampstead	6·37 %	11·1 %
Woolwich	6·60 %	11·0 %
Greenwich	8·30 %	10·3 %
Deptford	9·06 %	13·0 %
Camberwell	9·65 %	12·9 %
Hackney	10·18 %	14·4 %
City of London	10·85 %	19·3 %
Fulham	10·85 %	13·0 %
Battersea	10·89 %	15·2 %
Hammersmith	11·76 %	17·0 %
Lambeth	12·22 %	19·6 %
Westminster	13·03 %	24·3 %
Paddington	13·57 %	22·1 %
Chelsea	14·43 %	25·0 %
Kensington	14·84 %	22·1 %
Poplar	16·41 %	17·9 %
Islington	17·00 %	27·4 %
Bermondsey	19·66 %	25·4 %
St. Marylebone	21·12 %	34·4 %
Southwark	22·35 %	31·6 %
St. Pancras	23·98 %	37·9 %
Holborn	25·05 %	37·5 %
Bethnal Green	29·62 %	31·7 %
Shoreditch	29·95 %	37·2 %
Stepney	33·21 %	33·8 %
Finsbury	35·22 %	45·2 %

LONDON.

All Causes and Phthisis.

1901–3.

Proportion of total population living more than two in a room in tenements of less than five rooms. (Census, 1901).	Death-rate per 1,000 living.					
	All causes.			Phthisis.		
	1901.	1902.	1903.	1901.	1902.	1903.
Class 1—(0–7½%)	13·22	13·49	12·02	1·09	·99	·95
„ 2—(7½–10%)	15·24	15·30	13·35	1·36	1·31	1·21
„ 3—(10–12½%)	16·61	16·33	14·39	1·54	1·49	1·36
„ 4—(12½–15%)	15·39	15·73	13·82	1·51	1·40	1·38
„ 5—(15–20%)	18·08	18·10	16·18	1·64	1·63	1·56
„ 6—(20–25%)	19·04	19·52	16·93	2·10	2·15	2·03
„ 7 —(25% and up)	20·95	21·03	18·65	2·20	2·04	2·25

1901.

Proportion of total population living in tenements of one and two rooms. (Census, 1901.)	Death-rate per 1,000 living.	
	All causes.	Phthisis.
Class 1—(0–12%)	13·42	1·19
„ 2—(12–15%)	16·13	1·43
„ 3—(15–20%)	17·72	1·63
„ 4—(20–25%)	15·39	1·51
„ 5—(25–32%)	18·91	1·92
„ 6—(32% and up)	19·77	2·08

LONDON.

INFANT MORTALITY.

1891–1900.

Proportion of total population living more than two in a room in tenements of less than five rooms. (1891 Census.)	Deaths under one year of age. 1891–1900.	Deaths under one year of age per 1,000 living at age 0–1. 1891–1900.
Districts with under 10%	13,533	142
„ „ 10–15%	56,208	180
„ „ 15–20%	42,158	196
„ „ 20–25%	36,521	193
„ „ 25–30%	23,219	210
„ „ 30–35%	22,580	222
„ „ Over 35%	16,800	223

The following table relating to persons resident in the artizans' dwellings of the London County Council is interesting as showing the death rates of a working-class population living under favourable circumstances:—

Year 1903.

Cause of death.	Death rates per 1,000 living in	
	Council's dwellings.	London.
All causes—All ages	11·8	15·2
,, Ages 0–1	149·7	152·6
,, ,, 0–5	37·2	49·5
,, ,, 5–20	1·2	2·6
,, ,, 20 and upwards	9·9	14·9
Principal epidemic diseases	1·64	1·75
Phthisis	1·48	1·55
Tuberculous diseases other than Phthisis	0·55	0·60
Bronchitis	0·55	1·13
Pneumonia	1·25	1·28

The following table shows the death rates at several ages of the London common lodging house population in 1903, those of London at the same ages being stated for the purposes of comparison:—

Death rates per 1,000 *males living from certain causes at certain ages in Common Lodging Houses during* 1903, *and in London during* 1901.

Cause of Death.		Age 25.	Age 35.	Age 45.	Age 55.	Age 65.
All causes	C.L.H.	15·24	22·62	42·56	66·30	144·30
	London	6·74	12·76	21·79	37·82	70·42
Phthisis	C.L.H.	6·89	12·49	20·27	16·29	11·49
	London	2·65	4·30	5·01	4·12	2·72
Alcoholism (including cirrhosis of liver)	C.L.H.	1·04	1·27	1·78	3·79	5·11
	London	0·17	0·61	1·17	1·39	1·36
Urinary Diseases	C.L.H.	1·26	1·09	3·57	4·17	14·05
	London	0·22	0·67	1·28	2·91	5·88
Violence	C.L.H.	0·63	0·72	1·78	1·89	5·11
	London	0·64	0·92	1·43	1·77	2·36
Cancer	C.L.H.	0·21	0·72	2·23	7·20	21·72
	London	0·14	0·57	1·95	4·36	7·24
Tubercular diseases other than Phthisis	C.L.H.	0·21	0·18	0·22	0·76	1·28
	London	0·22	0·16	0·19	0·15	0·27
Circulatory Diseases	C.L.H.	1·46	2·35	4·46	7·58	24·27
	London	0·68	1·34	3·82	8·93	19·04

Death Rates per 1,000 males living from certain causes at certain ages, etc.—continued.

Cause of Death.		Age 25.	Age 35.	Age 45.	Age 55.	Age 65.
Nervous Diseases	C.L.H.	—	—	1·78	2·27	5·11
	London	0·21	0·53	0·91	1·70	3·56
Bronchitis	C.L.H.	0·21	1·09	2·01	11·36	30·66
	London	0·08	0·36	1·18	4·28	11·54
Pneumonia	C.L.H.	1·26	1·81	2·01	6·44	12·77
	London	0·53	1·20	1·88	2·82	3·81
Other causes	C.L.H.	2·07	0·90	2·45	4·55	12·77
	London	1·20	2·10	2·97	5·39	12·64

Table showing for London and the population residing in Common Lodging Houses the number of deaths of Males from certain causes out of 1,000 deaths from all causes at five age periods.

Cause of Death.	Age 25.		Age 35.		Age 45.		Age 55.		Age 65.	
	C.L.H.	London.	C.L.H.	London.	C.L.H.	London.	C.L.H.	London.	C.L.H.	London.
All Causes.	1,000.	1,000.	1,000.	1,000.	1,000	1,000.	1,000.	1,000.	1,000.	1,000
Phthisis	*452	393	*552	337	*477	229	*246	109	*80	39
Alcoholism (including Cirrhosis of Liver).	*68	26	*56	48	42	54	*57	37	*35	19
Urinary Diseases	*82	32	48	52	*84	59	63	77	*97	84
Violence	41	95	32	72	42	65	29	47	*35	33
Cancer	14	20	32	45	52	90	109	115	*150	103
Tubercular Diseases other than Phthisis	14	32	8	13	5	9	*11	4	*9	4
Circulatory Diseases	96	100	104	105	105	176	114	236	168	270
Nervous Diseases	—	32	—	42	42	42	34	45	35	51
Bronchitis	*14	11	*48	28	47	54	*171	113	*213	164
Pneumonia	*82	79	80	94	47	86	*97	75	*89	54
Other Causes	137	180	40	164	57	136	69	142	89	179

* Proportions in C.L.H.'s starred are those in excess of the corresponding London proportions.

In insanitary areas the death rates are frequently 35 and 40 in the 1,000 of the population.

A noteworthy exception is to be found in Jewish populations who when living in houses of the sort usually demolished under the Housing of the Working Classes Act nevertheless have death rates which, compared with those of the district or of London, are in no way high. This is, I believe, due to the better care these people take of their health, especially of their children, and to their temperance.

It would appear from the tables that there has been an improvement in the power of the London population to resist disease and death, and in all probability a considerable cause of this improvement is the better feeding of the population.

It is deserving of notice, however, that infant mortality has not shown corresponding reduction.

The following table shows the annual number of deaths of infants under one year of age in 1,000 births in London in successive periods.

Period.	Annual Mortality of Infants.
1841—50	157
1851—60	155
1861—70	162
1871—80	158
1881—90	152
1891—1900	160

The improved food supply of the population as a whole has, perhaps, not been shared by infants, and it is significant that their mortality rate has remained practically stationary.

APPENDIX XIV.

Appendix to Evidence of Dr. Shadwell.

TABLES SHOWING THE URBANIZATION OF GERMANY.

I.

	Percentage of Population.			
	1871.	1880.	1890.	1895.
Towns containing more than 100,000 inhabitants	4·8	7·2	11·4	13·5
„ „ from 20,000 to 100,000 inhabitants	7·7	8·9	9·3	10·5
„ „ „ 5,000 to 20,000 inhabitants	11·2	12·6	11·5	13·6
„ „ under 2,000 inhabitants	63·9	58·6	57·5	50·2

(Schmoller's Jahrbuch, 1901.)

II.

	Percentage of Population.	
	1895.	1900.
Rural Communities (under 2,000 inhabitants)	50·2	45·6
Urban „ (over 2,000 inhabitants)	49·8	54·4

(Statistisches Jahrbuch für das Deutsche Reich, 1903.)

III.

	1882.	1895.
Population engaged in agriculture, forestry, and fishing	18,840,818	18,501,307
Population engaged in mining, manufacturing, and building	16,058,080	20,253,241

(Occupational Census of German Empire.)

IV.

TABLE OF RECRUITING RETURNS IN GERMANY, 1901.

	Percentage of Recruits Examined.				
Predominantly Agricultural Districts.	Fit.	Prospectively Fit.	Less Fit.	Unfit.	Unworthy.
East Prussia	68·6	11·3	13·3	6,6	0·2
Elsass	67·6	14·1	11·7	6·5	0·1
West Prussia	65·1	13·7	14·0	6·9	0·3
Pomerania	60·1	19·3	13·5	6·8	0·3
Posen	59·9	15·9	15·6	8·4	0·2
Predominantly Industrial Districts.					
Rhineland	52·8	20·3	17·4	9·4	0·1
Saxony	54·9 and 50·7	13·5 and 13·6	24·5 and 28·4	6·8 and 7·0	0·3 and 0·3
Hannover	53·7	17·6	18·2	10·3	0·2
Silesia	49·2	15·6	24·7	10·1	0·4
Brandenburg	47·6	11·4	33·7	7·0	0·3
German Empire	55·2	16·7	19·7	8·1	0·3

COMPARATIVE TABLE OF RECRUITING RETURNS FOR THE GERMAN EMPIRE IN YEARS 1894 AND 1901.

Year.	Fit.	Prospectively Fit.	Less Fit.	Unfit.	Unworthy.
1894	56·2	16·7	20·0	6·8	0·3
1901	55·2	16·7	19·7	8·1	0·3

The "Fit" have fallen 1 per cent., and the "Unfit" have risen 1·3 per cent.

TABLES SHOWING THE RATES OF REPRODUCTION IN TEXTILE AND IN METAL TOWNS.

BIRTHS PER 1,000 OF POPULATION, 1901

V.—ENGLAND.

Textile Towns.		Metal Towns.	
Bolton	27·4	Gateshead	36·7
Blackburn	26·5	Bilston	36·5
Oldham	24·5	Sunderland	35·3
Burnley	23·7	Sheffield	33·0
Bradford	23·0	Newcastle	32·1
Huddersfield	22·9	Birmingham	31·9
Halifax	22·3	Wolverhampton	31·9
Mean	24·7	Mean	33·9

VI.—GERMANY.

Plauen	39·6	Oberhausen	50·1
Chemnitz	39·5	Gelsenkirchen	49·0
M. Gladbach	39·4	Hörde	47·0
Zwickau	34·4	Essen	46·1
Elberfeld	34·0	Duisburg	46·0
Barmen	33·2	Dortmund	42·9
Krefeld	28·8	Bochum	42·4
Mean	35·5	Mean	46·2

APPENDIX XV.

Appendix to Evidence of Miss Anderson.

TABLE I.

SHEWING WOMEN AND GIRLS WHOSE WORK IS REGULATED BY THE FACTORY ACT.

	Census 1901.	England and Wales.	Scotland.	Ireland.	United Kingdom.
	(*a*) Female population over 10 years	13,189,585	1,790,242	1,818,403	16,798,230
	(*b*) Ditto in all occupations -	4,171,751	591,624	549,874	5,313,249
Employed in Textile Factories, 1899:	Women - -	359,031	75,694	37,862	472,587
	Young Persons -	121,316	21,687	8,601	151,604
	Children - -	19,590	2,538	2,668	24,796
	Total - -	499,937	99,919	49,131	648,987
Employed in Non-Textile Factories, 1899:	Women - -	292,416	48,206	28,012	368,634
	Young Persons -	125,272	21,338	6,797	153,407
	Children - -	1,435	271	49	1,755
	Total - -	419,123	69,815	34,858	523,796
Employed in Workshops, 1897:	Women - -	198,858	38,707	12,815	250,380
	Young Persons -	87,531	11,646	5,144	104,321
	Children - -	911	359	127	1,397
	Total - -	287,300	50,712	18,086	356,098
Employed in Factories and Workshops:	TOTAL - -	1,206,360	220,446	102,075	1,528,881
Percentages:	(*a*) Of Total over ten years - -	9·146	12·313	5·613	9·101
	(*b*) Ditto, all occupations - -	28·917	37·264	16·744	28·774

TABLE II.

SHEWING NUMBER, AGE, AND SEX OF WORKERS EMPLOYED IN LAUNDRIES IN 1901.

(*a*). Under the Factory Act. (*b*). In all laundry work. Census 1901.

		England and Wales.		Scotland.		Ireland.		United Kingdom.		
		M.	F.	M.	F.	M.	F.	M.	F.	Total number of Laundries.
Employed in Steam or FACTORY Laundries.	Adults	5,135	38,098	387	3,312	209	1,629	5,731	43,039	
	Young Persons	842	8,300	111	1,077	47	343	1,000	9,720	2,102
	Children	13	39	2	3	—	—	15	42	
	Total	5,990	46,437	500	4,392	256	1,972	6,746	52,801	
Employed in Hand or WORKSHOP Laundries.	Adults	1,365	25,536	41	1,708	7	285	1,413	27,529	
	Young Persons	229	1,684	6	553	6	9	241	2,246	5,011
	Children	29	21	5	35	—	—	34	56	
	Total	1,623	73,678	52	2,296	13	294	1,688	29,831	
a. TOTALS in Steam and Hand Laundries under regulations.	Adults	6,500	63,634	428	5,020	216	1,934	7,144	70,588	
	Young Persons	1,071	9,984	117	1,630	53	352	1,241	11,966	7,113
	Children	42	60	7	38	—	—	49	98	
	Total	7,613	73,678	552	6,688	269	2,286	8,434	82,652	
b. Census, 1901. All laundry work.	Employers as well as employed.	*8,874	196,141	*511	17,630	*253	12,919	9,638	226,690	

These figures do not include Engineers, whereas in the Returns to the Factory Department all employers and employees are included.

TABLE III.

SHOWING WOMEN AND GIRLS EMPLOYED IN THE LARGEST WOMEN'S INDUSTRIES UNDER THE FACTORY ACT.

	Employed in Factories. Women and Girls. (1899.)				Employed in Workshops. Women and Girls. (1897.)				Total. Women and Girls in Factories and Workshops.	Men and Boys.
	Children.	Young Persons.	Adults.	Total.	Children.	Young Persons.	Adults.	Total.		
1.—Textile trades, 1899 and 1897	24,796	151,604	472,587	648,987	89	2,718	7,139	9,946	658,933 (43·099% of total.)	391,528
1901	19,613	148,888	481,641	650,142	(Not accessible.)					
2.—Clothing trades, 1899 and 1897 (Tailoring, dress, millinery and corset making, shirt, linen collar, blouse, boot and shoe making, etc.)	629	39,159	109,964	149,752	1,161	79,843	178,750	259,804	409,556 (26·787% of total female workers.)	191,976
3.—Laundries, 1901	42	9,720	43,059	52,821	56	2,246	27,529	29,831	82,652 (5·406%)	8,434
4.—Food preserving, 1899 and 1897 (Bread, confectionery, cocoa, chocolate, fruit and fish preserving, etc.)	206	14,841	34,132	49,179	48	3,004	18,890	21,942	71,121 (4·651%)	96,141
5.—Print, Bleach and Dye Works, 1899 (Mainly warehouse calendering and finishing processes)	282	7,869	24,534	32,685	None.	None.	None.	None.	32,685 (2·137%)	103,880
6.—Earthenware and China, 1899	119	8,375	20,835	29,329	None.	None.	None.	None.	29,329 (1·918%)	44,547
7.—Tobacco, Snuff, and Cigars, 1899	65	10,117	13,745	23,927	None.	None.	None.	None.	23,927	9,217
8.—Furniture, 1899 and 1897	4	3,786	9,253	13,043	8	2,570	7,615	10,193	23,236	95,716
9.—Bookbinding, 1899	10	7,892	14,653	22,555	None.	None.	None.	None.	22,555	14,893

10.—Letterpress and Lithographic Printing, 1899 and 1897	28	7,803	11,301	19,132	—	103	204	307	19 439	117,984
11.—Miscellaneous Metal Articles, 1899 and 1897	8	3,336	8,353	11,697	6	728	1,315	2,049	13,746	25,653
12.—Paper Making, 1899	26	2,283	9,197	11,506	None.	None.	None.	None.	11,506	22.340
13.—Chains, Nails, Screws, Locks, and allied trades, 1899 and 1897	3	2,658	6,299	8,960	7	585	1,658	2,250	11,210	26,569
14.—Fancy Box Making, 1899 and 1897	19	3,151	4,630	7,800	3	889	1,746	2,638	10,438	4,035
15.—Paper Box Making, 1899 and 1897	12	3,019	3,697	6,728	14	991	2,055	3,060	9,788	1,942
16.—Envelopes and other Stationery, 1899 and 1897	2	2,856	5,308	8,166	—	275	448	723	8,889	3,036
17.—India-Rubber and Gutta-Percha, 1899 and 1897	2	2,061	5,699	7,762	—	175	528	703	8,465	11,790
18.—Explosives, 1899 and 1897	—	984	3,489	4,473	4	91	170	265	4,738	7,880
19.—Aerated Water Making, 1899 and 1897	1	392	4,101	4,494	—	16	34	50	4,544	17,831
20.—Brush Making, 1899 and 1897	1	917	1,960	2,878	—	383	1,032	1,415	4,293	7,340
21.—Umbrella Making, 1899 and 1897	4	518	1,959	2,481	1	290	1,362	1,653	4,134	2,015
22.—Fustian Cutting, 1899	15	898	2,485	3,398	None.	None.	None.	None.	3,398	1,368
23.—Artificial Flower Making, 1899 and 1897	—	54	396	450	8	908	2,019	2,935	3,385	382
24.—Soap and Candle Making, 1899 and 1897	3	1,074	1,972	3,049	—	37	199	236	3,285	11,240
25.—*Lucifer Match Making, 1899	—	1,065	2,003	3,068	None.	None.	None.	None.	3,068	11,240
26.—Rag Sorting, 1899 and 1897 (Not including Textile trade 3056)	—	109	750	859	2	215	1,982	2,199	3,048	710

TABLE IV.

HOURS OF EMPLOYMENT OF WOMEN AND GIRLS UNDER THE FACTORY ACT, 1901.

	Period of Employment.		Meal Times.		Overtime for Press of Work and Perishable Articles (Women over 18 years).	Sunday and All-Night Work.	Annual Holidays.
	Monday to Friday.	Saturday.	Monday to Friday.	Saturday.			
Textile Factories:							
Women	6 a.m. to 6 p.m. or 7 a.m. to 7 p.m.	6 a.m. to 12.30 p.m. (if one hour for meal) or 6 a.m. to 12 p.m. (if ½ hour for meal), 7 a.m. to 1 p.m. (if ½ hour for meal).	Two hours at least, of which one at least to be before 3 p.m.	Half-an-hour at least.	Prohibited in Textile Factories except for warehouse processes (same as for press of work in Non-Textile Factories), or to recover time lost by drought or flood in water mills.	Prohibited.	Christmas Day, Good Friday, and four Bank Holidays, or other days substituted by notice.
Young Persons (under 18 years)	Same as women.	Same as women.	Same as women.	Same.			
Children (under 14, or 13 if with educational certificate, and over 12 years)	Either on alternate days as above, or in morning and afternoon sets: 6 a.m. to 1 p.m. 7 a.m. to 1 p.m. 2 p.m. to 6 p.m. and 7 p.m.	Same as young persons, but not on two successive Saturdays	Same.	Same.			
			In all cases work not to continue over 4½ hours without a break of at least half-an-hour.				
Non-Textile Factories and Workshops:							
Women	6 a.m. to 6 p.m. 7 a.m. to 7 p.m. 8 a.m. to 8 p.m. (In a few industries 9—9.)	6 a.m. to 2 p.m. 7 a.m. to 3 p.m. 8 a.m. to 4 p.m.	One and a half hours at least, of which one before 3 p.m.		1. For press of work in many processes, specified by Order of Secretary of State:—Two hours on three days a week and thirty days a year with extra half hour for meal. 2. For perishable articles specified by Order of Secretary of State:—Two hours on three days a week, and fifty days a year with extra half-hour for meal.	Prohibited (outside overtime permitted).	Same as Textiles.
Young Persons	Same as women.	Same as women.	Same.				
Children	Either on alternate days as above, or in morning and afternoon sets: 6, 7, or 8 a.m. to 1 p.m. 2 p.m. to 6, 7, or 8 p.m.	Same as young persons, but not on two successive Saturdays.	Same.				
			In all cases work not to continue over 5 hours without a break of at least half-an-hour.		In Creameries, exceptional hours and Sunday and holiday employment permitted, with restrictions, by Order of Secretary of State. (*See also below* Special Exemptions from the Law.)		

Women's Workshops (where no young persons or children are employed).	A specified period of 12 hours taken between 6 a.m. and 10 p.m.	A specified period of 8 hours taken between 6 a.m. and 4 p.m.	One and a half hours.	Half-an-hour.	No overtime.	Prohibited between 10 p.m. and 6 a.m.	Same as Textiles, etc.
			Five hours' spell may be exceeded.				
	Women's hours, meal times, holidays, etc., entirely unregulated in Domestic Workshops.						
Domestic Workshops (where only family living there are at work):							
Young Persons	Outside limits:— 6 a.m. to 9 p.m. ($10\frac{1}{2}$ hours exclusive of meal times).	6 a.m. to 4 p.m. ($8\frac{1}{2}$ hours exclusive of meal times.)	$4\frac{1}{2}$ hours (unspecified).	$2\frac{1}{2}$ hours (unspecified).	No overtime beyond the ordinary period limits.	Prohibited (for young persons and children).	Not provided for.
Children	6 a.m. to 1 p.m. or 1 p.m. to 8 p.m.	6 a.m. to 1 p.m. or 1 p.m. to 4 p.m. not two successive Saturday afternoons.	Work not to continue over 5 hours without a break of at least half-an-hour for a meal.				
Laundries (in which over two persons besides the family are employed):	Daily Limits: (Exclusive of meal times).		Meal Times.		Overtime on three days a week, 30 days in a year, without extra meal time.	Both permitted for women, young persons, and children.	Same as Factories and Workshops.
Women	Fourteen hours.		Work not to continue more than five hours continuously without half-an-hour for a pause.				
Young Persons	Twelve hours.						
Children	Ten hours.				N.B.—Certain processes normally under the Factory Act or as regards sanitation and safety are specifically exempted from regulation for hours of employment:— Preserving and Curing of Fish on arrival of fishing boats (women and young persons throughout the year). Preparing and Cleaning of Fruit on arrival at a factory or workshop; women and young persons in June, July, August and September. Flax Scutch Mills where women only employed and work intermittent, not more than six months in the year.		
	Weekly Limits: (Exclusive of meal times).		No other provision for meals.				
Women	Sixty hours.						
Young Persons	Sixty hours.						
Children	Thirty hours.						

APPENDIX XVI.

Appendix to Evidence of Mr. W. McAdam Eccles and Dr. Robert Jones.

STATEMENTS UPON WHICH THE EVIDENCE ON THE RELATION OF ALCOHOL TO PHYSICAL DETERIORATION WAS BASED.

NAMES OF THE MEDICAL MEN INTERESTED IN THE SUBJECT WHO MET IN CONFERENCE.

Sir THOMAS BARLOW, Bart., K.C.V.O., M.D., F.R.C.P., Physician to University College Hospital.
FLETCHER BEACH, M.B., F.R.C.P., Physician to the West End Hospital for Diseases of the Nervous System.
HARRY CAMPBELL, M.D., F.R.C.P., Physician to the North-West London Hospital.
W. McADAM ECCLES, M.S., F.R.C.S., Assistant Surgeon to St. Bartholomew's Hospital.
C. F. HARFORD, M.D., M.R.C.S., Physician to the St. James-the-less Medical Mission, Bethnal Green.
Sir VICTOR HORSLEY, F.R.S., B.S., F.R.C.S., Surgeon to University College Hospital.
T. B. HYSLOP, M.D., M.R.C.P., Physician and Superintendent at Bethlem Royal Hospital.
ROBERT JONES, M.D., M.R.C.P., F.R.C.S., Physician and Superintendent at the London County Asylum, Claybury.
T. N. KELYNACK, M.D., M.R.C.P., Physician to Mount Vernon Hospital for Consumption.
J. J. RIDGE, M.D., M.D. (State Medicine), B.S., Medical Officer of Health for Enfield.
T. CLAYE SHAW, M.D., F.R.C.P., late Physician and Superintendent at the London County Asylum, Banstead.
G. E. SHUTTLEWORTH, M.D., M.R.C.S., late Medical Superintendent, Royal Albert Asylum for Imbeciles.
E. CLAUDE TAYLOR, M.D., M.S., F.R.C.S., Medical Officer, Hampstead Workhouse.
A. J. WHITING, M.D., M.R.C.P., Assistant Physician to the Tottenham Hospital.

There were also present—

JOHN Y. HENDERSON, Chairman of the National Temperance League.
E. STAFFORD HOWARD, C.B., Director of the United Kingdom Temperance and General Provident Institution.
A. F. HARVEY, Secretary of the Central Temperance Legislation Board.
JOHN T. RAE, Secretary of the National Temperance League.

I.—EFFECT OF ALCOHOL ON GROWING CHILDREN.

By SIR THOMAS BARLOW, Bart., K.C.V.O., M.D.,

Physician to University College Hospital; late Physician to the Hospital for Sick Children, Great Ormond Street.

Disease in Children due to Alcohol.

I have been asked to give my experience on the question of the administration of alcohol to children.

In answering the question whether any appreciable amount of actual disease is caused in children by the prolonged administration of alcohol, it is immensely difficult to give statistics, but it is easy to give illustrations.

Some years ago I saw large numbers of out patients at the Children's Hospital, Great Ormond Street, and I satisfied myself that definite cases of alcoholic disease existed.

Cases.

Thus, in a boy, aged about ten years, who was under my observation for several weeks, there was well marked evidence of gin-drinker's liver, with abdominal dropsy. He had for a long time carried to his father, who was a cabman, his daily meal, of which some spirit was one of the constituents. The cabman had given the boy little "nips" of spirit, and he had got to like it.

Again, a boy, aged between four and five years, was brought to me with abdominal dropsy and enlargement of the liver. He had been given a certain daily quantity of beer for several months. The beer was stopped, and suitable remedies were given. The dropsy rapidly subsided, and subsequently the liver slowly lessened in size and the boy recovered.

Effects of Alcohol on Tissues of Children.

The occasional administration of gin to children for flatulence is very common amongst certain classes of the London poor. The production of fibroid changes, or, in other words, the hardening and toughening of certain of the viscera of a child during the period of development, may be very far-reaching in its ultimate effects.

II.—PREVALENCE OF ADULT MALE INTEMPERANCE.

British Medical Association Investigation, 1887

In August, 1887, the report of the Collective Investigation Committee of the British Medical Association on the "Connection of Disease with Habits of Intemperance" was published.

It related to the 4,222 men between twenty-five and sixty-five years of age who had died during the preceding three years.

Only 40 per cent. were reported as habitually temperate. 55 per cent. were more or less intemperate, viz. :—

25·6 per cent. careless drinkers,
12·9 per cent. free drinkers,
16·5 per cent. decidedly intemperate,

the rest were unclassed.

This shows the prevalence at that time of intemperance among adult males. Taking the average duration of life of the habitually temperate as the standard, one-sixth of the 4,222 men had shortened their lives on the average ten years, two in every thirteen five years, and the rest on the average from two to three years.

Comparative Mortality of Adult Males. Publicans and Abstainers.

The Registrar-General has ascertained that of 61,215 men between twenty-five and sixty-five in the community, 1,000 die in one year;
but of 61,215 publicans, 1,642 die in one year;
but of 61,215 Rechabites (abstainers), 560 die in one year.

III.—ABSTRACT of a PAPER read before the INSTITUTE OF ACTUARIES, on the 30th November, 1903, on the COMPARATIVE MORTALITY AMONG ASSURED LIVES OF ABSTAINERS AND NON-ABSTAINERS FROM ALCOHOLIC BEVERAGES.

By R. M. MOORE,

Actuary of the United Kingdom Temperance and General Provident Institution.

Experience of the United Kingdom Temperance and General Provident Institution.

The paper is based upon the experience of the United Kingdom Temperance and General Provident Institution from its establishment in 1841 to the year 1901: a period of sixty-one years. There were 125,000 policies issued by the institution; about one-half of which were on the lives of abstainers, the remainder being on non-abstainers;

the continued abstinence of the former class being ascertained by an annual declaration. These two classes are known respectively as the "temperance" and the "general" section. The policies were further divided into sexes, and classes of assurance (viz., whole-life, endowment assurance, or otherwise); those policies which were accepted on higher terms than ordinary being also separated: the remaining policies, issued at ordinary rates of premium, being described as "healthy lives."

It is upon the experience of healthy male lives assured under whole-life policies in the temperance and general sections respectively (being the bulk of the institution's business) that the conclusions arrived at are mainly based; though these conclusions are completely supported by the experience of other classes of policy, and of female lives.

After describing the various actuarial processes by which the results are arrived at, the writer shows that the experience of the general section, from age thirty-four upwards, was practically identical with the most recent experience of the life offices generally, known as the O^m Table, published under the authority of the Institute of Actuaries.

That the experience of the general section of the office is sufficient in quantity is indicated by the fact that it consists of 467,000 "years of life"; in other words it is the equivalent of 467,000 persons of various ages from ten to ninety-nine being under observation for a year: technically called "exposed to risk." As an indication how closely the experiences agreed, it may be mentioned that the actual deaths, 1841—1901, in the general section of the institution were 8,947. Had the mortality been at the O^m rate (the average rate of the life offices generally) the number of deaths would have been 8,911: a difference of less than one-half per cent.; thus showing that the lives assured in the general section of the office were good average lives.

In the temperance or abstainers' section there were 398,000 years of life under observation, or "exposed to risk." The deaths "expected" among these lives, if the ordinary average rate of mortality (O^m) had prevailed among them, would have been 6,899. Or, if the mortality of the general section had prevailed, the deaths would have been 6,959. But the actual deaths among the abstainers were only 5,124: being less than 75 per cent. of the "expected" deaths according to the average rate of mortality of assured lives.

Higher Vitality.

The higher vitality of the temperance lives is also shown by the fact that out of 100,000 persons aged thirty, according to the average rates of mortality (or the experience of the general section of the institution), some 44,000 would survive to age seventy. But according to the experience of the abstainers, over 55,000 would reach age seventy; or 25 per cent. more.

Higher Average of Life after 30.

Again it is shown that the average number of years of life enjoyed after age thirty by ordinary assured lives is thirty-five years. But among abstainers it is thirty-eight and four-fifth years: about 11 per cent. more. At age forty these figures are twenty-seven and one-third years among ordinary assured lives and thirty and one-third years among abstainers; a gain of about the same proportion.

Policies and "Lives."

The results throughout are based on the experience of "policies" and not "lives": that is to say, every separate policy on one life is regarded as a separate risk: but the writer shows that the two methods of dealing with the data produce practically identical results.

"Transfers."

It is also shown, by an exhaustive examination, that the results are not affected by transfers from the temperance to the general section and *vice versa*: such transfers being proportionately very few in number.

Conclusions.

In conclusion, the author claims:—Firstly: that the non-abstainers assured in the institution are good average lives, generally equal to the best accepted standard of assured life, namely, the O^m table. Secondly: that the abstainers show a marked superiority to the non-abstainers throughout the entire working years of life for every class of policy, and for both sexes, however tested. Thirdly: that this superiority has not been brought about by the operation of the transfers between the two sections. Fourthly: that the financial working of the institution in the allotment of bonuses, as between the abstainers and the non-abstainer sections, has not been influenced by such transfers.

Statistical Tables (Nos. refer to original paper).

The detailed experience in quinary groups of ages of healthy male lives assured under whole-life policies, non-abstainers and abstainers respectively, is appended:—

TABLE III.

Healthy Males. NON-ABSTAINERS. *Entrants* 1841-1901.

Whole-Life Policies. *"Transfers to" excluded.* *Experience* 1841-1901.

Ages.	Exposed to Risk.	Died.	Rate of Mortality per cent. per annum unadjusted.	Adjusted O^m Rate of Mortality per cent. Central Ages of Groups.	Expected Deaths by O^m.	Taking O^m as 100, the Non-Abstainers' Experience is	Ages.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
– 9	74	..	..	..	..	..	– 9
10–14	590	1	·170	·345	2	49·3	10–14
15–19	2,104	10	·475	·375	8	127·	15–19
20–24	9,516	63	·662	·431	41	154·	20–24
25–29	27,099	157	·579	·523	142	111·	25–29
30–34	46,965	339	·772	·648	304	111·	30–34
35–39	61,106	495	·810	·804	491	101·	35–39
40–44	67,423	645	·957	1·001	675	95·6	40–44
45–49	65,931	846	1·283	1·277	842	100·	45–49
50–54	58,941	992	1·683	1·693	998	99·4	50–54
55–59	47,879	1,136	2·373	2·338	1,119	101·	55–59
60–64	35,161	1,148	3·265	3·344	1,176	97·6	60–64
65–69	23,219	1,176	5·065	4·900	1,138	103·	65–69
70–74	12,857	992	7·171	7·281	936	98·5	70–74
75–79	5,780	614	10·623	10·882	629	97·6	75–79
80–84	1,890	307	16·252	16·240	307	100	80–84
85–89	358	79	22·607	24·001	86	94·2	85–89
90–94	49	16	32·653	34·788	17	93·9	90–94
95–99	1	1	100·000	48·276	..	207·	95–99
All Ages	466,943	8,947	..	..	8,911	..	All Ages

TABLE IV.

Healthy Males. ABSTAINERS. *Entrants* 1841-1901.

Whole-life Policies. "*Transfers to*" *excluded.* *Experience* 1841-1901.

Ages.	Exposed to Risk.	Died.	Rate of Mortality per cent. per annum Un-adjusted.	Adjusted O^m Rate of Mortality per cent. Central Ages of Groups.	Expected Deaths by O^m	Taking O^m as 100, the Abstainers' Experience is	Rate of Mortality per cent. per annum. Non-Abstainers' Experience Table III.	Taking Non-Abstainers' Experience as 100, Abstainers' Experience is	Ages.
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
- 9	77	1	1·299	..	..	..	..	..	- 9
10-14	1,051	2	·190	·345	4	55·1	·170	112·	10-14
15-19	4,491	30	·668	·375	17	177·	·475	141·	15-19
20-24	15,760	73	·463	·431	68	108·	·662	69·9	20-24
25-29	32,740	133	·406	·523	171	77·8	·579	70·1	25-29
30-34	46,555	190	·408	·648	302	62·9	·722	56·5	30-34
35-39	54,097	240	·444	·804	435	55·2	·810	54·8	35-39
40-44	55,604	304	·547	1·001	557	54·6	·957	57·2	40-44
45-49	51,377	385	·749	1·277	656	58·7	1·283	58·5	45-49
50-54	44,138	463	1·049	1·693	747	62·0	1·683	62·4	50-54
55-59	34,974	585	1·673	2·338	818	71·5	2·373	70·6	55-59
60-64	25,263	648	2·565	3·344	845	76·7	3·265	78·5	60-64
65-69	16,479	702	4·260	4·900	803	86·9	5·065	84·0	65-69
70-74	9,325	578	6·199	7·281	679	85·1	7·171	86·5	70-74
75-79	4,351	505	11·607	10·882	474	107·	10·623	110·	75-79
80-84	1,346	205	15·230	16·240	219	93·6	16·252	93·7	80-84
85-89	322	6	20·497	24·001	77	85·8	22·607	90·7	85-89
90-94	55	14	25·455	34·788	19	73·7	32·653	77·9	90-94
95-99	5	..	..	48·276	3	..	100·000	..	95-99
All Ages.	398,010	5,124	..	..	6,899	..	..	..	All Ages.

IV.—ALCOHOL AS A CAUSE OF MENTAL DEGENERATION, AND ITS ACTION INDIRECTLY UPON OFFSPRING.

Report of ROBERT JONES, M.D., M.R.C.P.,

Chief Medical Officer, London County Asylum, Claybury.

There are probably at the present time more than 114,000 certified insane persons in England and Wales alone, of whom approximately 52,000 are males and 62,000 females.

If the fifty-seventh Report of the Commissioners in lunacy to the Lord Chancellor, 1903, be consulted, the proportion per cent. of instances in which alcohol has been assigned as the cause of insanity to the yearly average number of patients admitted into asylums in the five years, 1896-1901 inclusive, is 21 per cent. for males and 9·2 per cent. for females, and probably the proportion for Scotland is much higher.

During the year 1902, which is the last upon which there are at present published records, there were 22,851 persons (male 11,217, females 11,634) admitted into lunatic asylums in England and Wales, and the Lunacy Commissioners who compile these numbers state that of these alcoholic excess was the assigned cause in 23·1 per cent. males and 9·6 per cent. females—a higher ratio than for the average of the five previous years. I believe that upon the lowest computation, and after making the necessary deduction for the more rapid death in some cases, such as those of general paralysis, a disease which certainly bears an indirect relation to alcohol, that at the present time there remain in asylums no less than about 11,000 males and 6,000 females who are mentally decrepit, mainly through the effects of alcohol.

During the last ten years, 1893-1902 inclusive, 35,916 persons (16,356 males and 19,560 females) have been admitted into all the London County Asylums. Of these 5,727 persons (3,497 males, 2,320 females) have been admitted whose insanity was assigned to drink as a cause, a proportion of 21 per cent. among the men and 11 per cent. among the women.

During the time that the London County Council's Asylum at Claybury has been opened, now over ten years (1893-1904), a period of which I have direct experience as medical officer, 9,544 patients (males 4,251, females 5,393, including private patients) have been admitted thereto, of whom 965 males, 699 females, a proportion of 22·7 per cent. of the males and 13·1 per cent. of the females, were definitely ascertained to owe their insanity to drink.

Insanity due to Alcohol

A total, therefore, of 1,664 persons of both sexes have been thus rendered incapable of productive work through their own act, and have been or are being compulsorily and of necessity detained, supported and clothed, at the ratepayers' expense. During last year, 1903, in Claybury asylum, out of a total of 607 persons among the poorer classes (296 males, 311 females) admitted, no less than 113 males and 69 females, a proportion of 37 per cent. of men and 22 per cent. of women, were brought into the asylum insane, their condition being in some way directly or indirectly connected with alcoholic excess, indirectly contributing through loss of inhibition or self-restraint to the contagion of syphilis and to incurable general paralysis—a disease which is higher in proportion among those who drink than among the general population.

Syphilis and General Paralysis in Soldiers and Sailors.

This fact certainly lends favour to the view that drink favours general paralysis—a disease which is without hope of relief, but which, on the other hand, is entirely preventible, and a form of insanity to which, above all others, our service men—soldiers and sailors—are most prone. Of these 182 drink cases admitted into this asylum about one-third have been discharged during the year, in many cases probably again to relapse, but 47 of the males remained in the asylum during a total aggregate of 640 weeks and 17 of the women 260 weeks. The cost of their maintenance, apart from their certification, previous infirmary residence and conveyance hither, falling upon the already over-burdened ratepayers.

Effect of Alcoholic Insanity upon Dependents

Of the other 119 cases many, perhaps most of them, are probably doomed for the rest of their lives. Nor is this all, for out of these 70 per cent. men and 80 per cent. women were married, had families dependent upon them, and the cruelty of neglect induces a feebleness in their descendants which it is impossible correctly to estimate. Of the cases brought into this asylum, no less than 30 per cent. of the men and 56 per cent. of the women (where this could be ascertained) were country born, showing that their town environment, to say the least, was not favourable to their self-restraint. They were also brought at their best age, men between thirty-five and forty, and

women twenty-five and thirty-five, although many chronic cases of long-continued drink are admitted after the climacteric period.

I am certain that other factors, such as competition, insecurity of trade, insanitary surroundings, poverty—in some cases starvation and want—improper food in kind and quality, may have induced their alcoholism.

Of this, there is in my mind no possible doubt. The proportion of women whose insanity is ascertained to be due to drink is higher in Claybury than in the other asylums of London—possibly owing to the fact that it is the territorial asylum for the East-end of London, where so many women are employed in factory work.

This view is supported by the fact that in the City of Nottingham, where so many women are employed in lace factories, twice as many women as men are received into the asylum whose insanity is ascribed to drink. In Sunderland, on the other hand, where the prosperity of the mechanic and the miner is evidenced by higher wages and abundant work—and here also the question of climate as well as occupation may have to be considered, for the Northerner drinks habitually more than the Southerner—the proportion reaches 38·6 per cent. as compared to 21 per cent. among the women, the combined average being the exceptionally high one of 38 per cent. In Scotland this proportion is even higher. The statistics from this year's report of the Gartloch Asylum for the City of Glasgow gives the high percentage of 45 per cent. for males, 26·8 per cent. for females.

In marked contrast with this is the case of Cornwall, which for men and women gives the combined average of under 2 per cent., and of rural Kent, which gives a combined average of 3·8 per cent. For the whole county of London the total average for the same period was 19 per cent. for males, 10 per cent. for females, and it is a sad reflection that every year over 600 persons (over 400 men and 200 women) become inmates of pauper asylums in London from this cause alone. The misery and cruelty resulting to the family, and the absolute degradation of the home as the result of intemperance, are too well known to need description or reference.

Alcohol perverts the moral nature, affects the judgment and impairs the memory, it moreover especially affects the motor system, and creates an enormous loss to the community through destroying the productiveness of the skilled craftsman; no less than 30 per cent. of the admissions at Claybury during 1903 were of this class, who, as breadwinners, not only lose their trade, but have, moreover, to be detained, with others to look after them, in an asylum, leaving their dependents to swell the list of the "legal poor" or the criminal class.

In regard to the effects of alcohol upon the descendants, anything which devitalizes the parent unfavourably affects the offspring, and clinical experience supports this in the lowered height, weight, and impaired general physique of the issue of intemperate parents. It also records the fact that no less than 42 per cent. of all periodic inebriates relate a history of either drink, insanity or epilepsy in their ancestors.

It is also my experience that cases of alcoholic insanity are more prone to phthisis than other varieties—possibly owing to their susceptibility to the inimical effects of cold and exposure. They also suffer—more especially women—from the various forms of peripheral paralysis and from renal disease, which, with other deleterious effects of alcohol, induce arterio-sclerosis and premature senility. I can point out, not one, but many cases in my own experience of men at fifty-five years of age who are "played out" through what their friends describe as "moderate drinking," but it has been a constant indulgence, due to loss of self-restraint.

The fact pointed out by the Lunacy Commissioners that the proportion per cent. of alcoholic admissions to total admissions into asylums bears a ratio in the private class of 18·5 per cent. for males and 8·8 per cent. for females, showing a loss of self-restraint and a moral weakness which prefers immediate gratification to ultimate good among the poorer classes, proves the need there is for cultivating a greater inhibition, and the need also for encouraging a healthy public opinion in this class which will tend to make the drunkard a reproach even among his own people, instead of, as is too often the case, an object of pity. There is probably less drinking, in proportion, among the well-to-do classes than among the poor, and the effect of social ostracism is more felt among them. It is among the poor that the increase of alcoholic insanity occurs, and the Lunacy Commissioners state this as a sad fact throughout the Kingdom.

It must not be surmised from the above that I am a strict and stern advocate of total abstinence; I think it involves too many limitations upon the demands of reasonable men and women, and I also think it is a counsel of perfection; but I believe it, nevertheless, to be the best working hypothesis for the cure of and the prevention of drunkenness. Could not this Committee advocate some such measure as the compulsory sale of food with drink. If "licensed victuallers," where does the *victual* come in?

V.—The Relationship of Alcohol to Tuberculosis and Syphilis.

By Dr. A. E. T. Longhurst.

Late Surgeon-Major in the Army.

Alcohol predisposes to Tubercle and Syphilis.

Both clinical research and practical observation prove that the use, and especially the abuse, of alcohol, predisposes to, and aggravates both tuberculosis and syphilis in the human system.

Tuberculosis.

At the British Congress on Tuberculosis, held in London in 1901, Professor Koch and others expressed very strongly the opinion that the intemperate were much more liable to fall victims to tuberculosis infection, and that the disease once established in such persons takes an unfavourable and rapid course.

Syphilis.

With regard to syphilis, there is abundant evidence that intemperance seriously predisposes to the contraction of the disease, deadens sensibility, making the persons indifferent as to the consequences of infection, and regardless of cleanliness, and other precautions calculated to protect them from reception of the virus. And no one who has had any experience of the disease and its treatment, in either soldier or civilian, can fail to realise its injurious action, and how seriously it militates against successful treatment.

VI.—Rechabite Statistics.

Alcohol and Liability to Disease.

The Rechabite Directory for 1903–1904 contains the Annual Report for 1902 by the High Secretary, Mr. Richardson Campbell, from which we make the following extract:—

M.U. New Experience.

The new investigation into the sickness and mortality experience of the Manchester Unity of Oddfellows, by Mr. Alfred W. Watson, F.I.A., has now been published, and the sickness experience per annum in weeks, as compared with ours, is as follows:—

Age.	M.U. Weeks.	I.O.R. Weeks.	M.U. Advantage. Weeks.	I.O.R. Advantage. Weeks.
18	0·952	1·095	0·143	—
19	0·924	1·077	0·153	—
20	0·901	1·060	0·159	—
25	0·928	0·986	0·058	—
30	1·007	1·029	0·022	—
35	1·168	1·146	—	0·022
40	1·449	1·391	—	0·058
45	1·794	1·684	—	0·110
50	2·384	1·933	—	0·451
55	3·438	2·075	—	1·363
60	5·198	3·257	—	1·941
65	8·731	5·035	—	3·696
70	14·617	9·891	—	4·726
75	22·428	15·054	—	7·374
80	30·320	21·497	—	8·825
85	35·411	26·000	—	9·411
90	38·247	26·000	—	12·247
95	39·022	26·000	—	13·022
100	39·022	26·000	—	13·022

Members admitted to Rechabites at fifteen years old.
Members admitted to Oddfellows at eighteen years old.
∴ a much larger proportion of young members.

From the Report of the Public Actuary of South Australia, Mr. H. Dillon Gouge, F.S.S., in accordance with the South Australia Friendly Societies Amendment Act, 1892 :—

"In S. Australia there are three Societies which may be regarded as being conducted on strictly tectotal principles—the Albert District of Rechabites, the South Australian District of Rechabites, and the Sons of Temperance ; and I have selected the three largest of the mixed societies for the purposes of comparison" :

Society.	Mortality	Average Rates per cent. Sickness—Weeks.
Rechabites (S.A.)	0·620	1.267
Rechabites (Albert)	0·687	1.140
Sons of Temperance	0·724	1.291
Abstainers' Average	0·689	1·248
Foresters	1·133	1·828
Oddfellows (M.U.)	1·351	2·208
G.U. Oddfellows	1·658	2·915
Non-abstainers' Average	1·381	2·317

From the foregoing figures it will be observed that in the first column (mortality) the non-abstainers' average is more than double, and in the second (sickness) nearly double, that of abstainers.

From another standpoint, also, the figures of the actuary tell a similar tale, *i.e.*, the mortality per cent. of the members actually sick, and the average weeks of sickness of such. These are as follows :—

Society.	Mortality per cent. of the Members actually sick.	Average Weeks of Sickness per Member Sick.
Rechabites (S.A.)	3·333	6·81
Rechabites (Albert)	3·616	5·99
Sons of Temperance	3·638	6·49
Abstainers' Average	3·557	6·45
Foresters	5·840	9·43
Oddfellows (M.U.)	6·789	11·06
G.U. Oddfellows	6·966	12·24
Non-abstainers' average	6·532	10·91

These figures show the mortality per cent. of members actually sick among non-abstainers is nearly double that of abstainers, and the fact that the non-abstainers experience ten weeks' sickness for the six weeks of the abstainers, is a strong argument in favour of abstinence.

Many of the Foresters and Oddfellows are abstainers. If they were removed the difference would be greater still.

VII.—The Question of Physical Deterioration produced by Alcohol, with Special Reference to the Lower Orders.

By T. Claye Shaw, M.D., F.R.C.P.,

Late Chief Medical Officer London County Asylum, Banstead, etc.

Effects of Alcohol.

Alcohol is indirectly responsible for many lesions from accidents, and for placing people in false conditions, where they contract disease and commit themselves socially.

Indirect Effects on Offspring.

By the indulgence of parents in it, children are deprived of necessary food, clothing and warmth, thus becoming starved, stunted, and more liable to be killed by intercurrent disease.

Banstead Asylum Statistics.

At the Banstead Asylum, 30 to 40 per cent. of the admissions were due, directly and indirectly, to excessive alcoholism.

Direct Influence of Alcoholism in Parents on Offspring.

As to the question of direct influence of alcoholism in the parents on the progeny there is little doubt in the experience of alienists.

Alcoholism in the Father.

We must be careful to eliminate, in the case of the father, the time when he became an excessive alcoholic. One often sees the later members of a family of worse development than the earlier ones, because the father began his excessive indulgence after the earlier children were begotten.

Hereditary Transmission.

Remembering the undoubted facts of the frequent similarity in features, gait, mental peculiarities, of children to one or other of their parents, there is every reason to believe in the hereditary transmission of qualities quite independent of the influence of environment. I can quote one family where the impulsive and periodic craving for alcohol has been a notable feature for the last three generations.

Alcoholism in the Mother.

The influence of the mother is probably greater than the father. It has been shown that pregnant women who are decided alcoholics miscarry to a much greater extent than others, and that when deprived of alcohol at an early stage of pregnancy (as when sent early to prison, and subsequently delivered there) they may go through the full period of gestation.

Again, the influence of the alcoholised blood of the mother on the microkinesis and the micropsychosis of the fœtus must be very pernicious.

Developmental Insanity.

One can recall cases of early convulsions in children, of developmental insanity, of imbecility, and of epilepsy which can only be accounted for by the known inebriety of the parents. Alcoholic amenorrhœa and dysmenorrhœa point to the effect of the poison on the genital system of the mother.

Deterioration caused by Alcoholism.

Finally, if alcohol in excess sets up a condition in which people commit acts which, when free from the influence, they recognise as injudicious and the result of a lowered condition of responsibility, then it (alcohol) does by the very setting up of this condition cause deterioration.

Experiments are not wanting—they are in daily evidence. We have inebriate mothers and either abortions or degenerate children. The teleological relationship of the two seems to be as certain as any other conditions of cause and effect.

Evidence from Animal Breeding.

The effect of food in the breeding of animals is acknowledged ; why should not it be recognised in humans ? Place the foals of a thoroughbred and of a cart mare in the same environments, you will never be able to eradicate either the nervous or the organic differences.

Breed from sickly parents, the result is either an abortion or a degenerate. If there is nothing in the theory of heredity, if qualities are not transmitted, but everything depends upon environment, then there seems to be no reason why imbeciles should not marry, nor why epileptic and insane people should not be allowed to add to the race on the off-chance of creating a Hercules or a genius.

VIII.—Effect of Maternal Intemperance on Embryos. The Offspring of Female Chronic Drunkards in Liverpool Prison.

By W. C. Sullivan, M.D.,

Deputy Medical Officer, H.M. Prison, Pentonville.

Death-rate of Infants.

The death-rate among the infants of inebriate mothers was nearly two and a half times that among the infants of sober mothers of the same stock.

Deterioration in Offspring.

In the alcoholic family there was a decrease of vitality in successive children : *e.g.*, in one family the earlier born children were healthy, the fourth was of defective intelligence, the fifth an epileptic idiot, the sixth still-born.

Of 219 children of drunken mothers which survived, nine became epileptic—4·1 per cent.

Taking women of the same class he found

Twenty-one drunken mothers with 125 children—sixty-nine died under two years—55·2 per cent.

Twenty-eight sober mothers with 138 children—thirty-three died under two years—23·9 per cent.

(Paper read before the Society for Study of Inebriety, 1900.)

IX.—Parental Alcoholism as a Cause of Mental and Physical Degeneracy in Offspring.

By G. E. Shuttleworth, M.D.,

Formerly Medical Superintendent, Royal Albert Asylum for Idiots and Imbeciles, of the Northern Counties, Lancaster ; Medical Expert, Rochester House Institution for Improvable Imbeciles, Metropolitan Asylums Board, etc.

Loose Statements.

Many loose statements have been made as to the intemperance of parents being, in a preponderating number of cases, the sole and sufficient cause of mental degeneracy (idiocy, imbecility, and feeble-mindedness) in the offspring.

Starting with the Massachusetts Statistics presented by Dr. Howe's Commission (of three) to the State Legislature in 1848, the statement deduced therefrom that "out of 300 idiots 145 had drunken parents" has been again and again quoted.

An examination of the original tables, however, shows that this statement is inexact, Dr Howe's own figures being that out of 359 idiots the condition of whose progenitors were ascertained, ninety-nine were the children of drunkards. From a detailed account of forty-five of the cases it would appear that the parents of eleven (one-fourth) were of intemperate habits, and it appears also that in all but one "they were not in a normal state of health," and ten of the cases are noted as scrofulous as well as idiotic.

From a similar inquiry made in 1856 in Connecticut, it would seem that out of 235 cases in which the habits of parents were investigated, there were seventy-six (less than one-third) in which intemperance was noted, and details show concurrent etiological factors in all of those set forth fully.

(It is open to question as to amount of drink taken which connoted "intemperance" in these documents.) Dr. Kerlin, the late able superintendent of the Pennsylvania Institution for Imbeciles, calculated that alcoholic taint was a factor in 38 per cent. of his cases, but he took into account the habits of grandparents as well as parents (*i.e.*, six progenitors in all). So far, as regards oft-quoted statistics of American origin.

In this country Dr. Graham, the Superintendent for fifteen years of the Earlswood Asylum, stated that out of 800 cases tabulated by him, in six cases only is intemperance of parents assigned as the probable cause, and in two of these there was also insane heredity.

Dr. Shuttleworth, after seven years' experience at the Royal Albert Asylum, with 418 cases of idiocy and imbecility, made a scrutiny in 1877 of the history of 200 male and 100 female congenital idiots, in which full information had been obtained, with the following results:—

(*Videdicet* Paper in *British Medical Journal*, 1877, and *American Transactions*, 1877.)

Of the 200 males, nine had intemperate parents, classed thus: seven, intemperate fathers; one, intemperate mother; and one, both parents intemperate.

Of the 100 females, seven had intemperate parents. In two of these cases the mothers were intemperate, and in five the fathers were intemperate.

Of the 300 patients, sixteen had intemperate parents, eight of whom are described as habitual, and eight as occasional drunkards.

Applying to the examinations of these cases a method akin to that suggested by Dr. Bucknill for the estimation of the drink-etiology of insanity, they may be arranged in the following classes:—

	Males.	Females.	Total
Class A.—Parental intemperance the direct or only ascertained cause	4	5	9
Class B.—Parental intemperance complicated by hereditary tendency to insanity or nervous disease	2	0	2
Class C.—Parental intemperance complicated by adverse physical circumstances affecting parents (*e.g.*, ill-health, phthisis, and consanguinity)	1	2	3
Class D.—Parental intemperance complicated by adverse mental circumstances (*e.g.*, emotion or anxiety of the mother while pregnant, etc.)	2	0	2
Total	9	7	16

It is to be noted that the 300 cases are congenital cases, or cases in which idiocy was observed as an early consequence of fits during dentition; cases resulting from falls and other clearly accidental causes being excluded.

After a more mature experience, viz., in 1890, Dr. Shuttleworth collaborated with Dr. Fletcher Beach in an article published in the late Dr. Hack Tuke's "Dictionary of Psychological Medicine." The former furnished etiological statistics with regard to 1,200 cases fairly well investigated at the Royal Albert Asylum, the latter with regard to 1,180 cases who had been under care at Darenth. Dr. Shuttleworth's histories gave a percentage of 13·25 of his cases with evidence of alcoholic parentage. Dr. Beach's 19·57 with regard to the Darenth patients, derived, it will be understood, from a lower social stratum than those at the Royal Albert Asylum. If grand-parental as well as parental histories were taken into account, the latter percentage was raised to 21·44.

Contributory Causes.

In both Asylum groups, however, the concurrence of other factors was recognised, such as neurotic, insane and phthisical heredity and frights and accidents to mothers, these contributory causes appearing in nearly half of Dr. Shuttleworth's cases. Generally parental intemperance was more marked than that of mothers (but information for case books was usually given by the latter). It is interesting to note that the late Dr. Langdon Down stated in his Lettsomian Lectures (1887) that in 12 per cent. of the fathers and 2 per cent. of the mothers of patients noted by him there was "avowed and notorious intemperance," though he found that the proportion varied extremely with the stratum of society from which the records were taken.

Latest Statistics from Darenth and Earlswood.

The latest English writer on the causation of Coagenital Amentia, Dr. A. F. Tredgold, who has had exceptional opportunities of investigating the family histories in 150 selected cases of idiocy and imbecility under care at the London County Asylums, Darenth and Earlswood, states that "alcoholism is present in the antecedents of 46·5 per cent. of the 150 cases, in the greater number in combination with insanity or other neuropathic conditions." (*Mott's Archives.*)

Conclusions.

My own conclusions may be summarised as follows:—

(1) That parental intemperance is a large factor in the degeneracy of offspring, both mental and physical.

(2) That intemperance (*per se*) is not so large a factor as has been sometimes assumed in the causation of congenital mental defect; but that in combination with other heritable taints (*e.g.*, tuberculous, neurotic, insane, and syphilitic) alcoholism is a prevalent though not altogether predominant cause of idiocy, imbecility and feeble-mindedness. Parental intemperance is sometimes a consequence of a neurotic or insane heredity, and in such cases the latter must be looked on as the predominating factor.

X.—Statistics in Relation to the Effect of Alcohol in Inducing Physical Deterioration in the Offspring of Alcoholic Parents.

By Fletcher Beach, M.B., F.R.C.P.,

Physician to the West End Hospital for Nervous Diseases; formerly Medical Superintendent of Darenth Schools for Imbecile Children.

Statistics of Darenth Asylum.

On examining this question some years ago with reference to the influence of intemperance in the parents causing idiocy and imbecility in the children, I investigated 1,180 cases at Darenth Asylum, and found that intemperance in the parents was assigned as a cause of the idiocy and imbecility in 231 cases, or 19·57 per cent.

Intemperance combined with other causes.

In 196 of these cases, however, intemperance was combined with the following causes:—Phthisis, insanity, imbecility, syphilis, consanguinity, excitability, chronic-neuralgia, abnormal conditions of the mother during pregnancy, premature labour, disease of the brain, and paralysis.

Further analysis showed that intemperance was combined with one cause alone in ninety cases, the most frequent associations with it being insanity, phthisis, and worry of the mother during pregnancy. Intemperance was combined with two other causes in fifty-eight cases, with three in twenty-five, with four in eighteen, with five in four, and with six causes in one case. From these figures it will be seen that in only thirty-five cases was intemperance given as the only cause, or 2·96, certainly not a large percentage.

Intemperance in Father, in Mother, in both Parents.

It was found that intemperance was chiefly marked in the father, but in twelve cases the mother drank, and in seven cases both father and mother gave way to drink. In a few cases, intemperance was found to be a family failing; thus, in three cases the father's side of the family were described as intemperate for several generations. In one case only was the mother's side of the family given to drink, but the result was very marked, for, not only was the patient in the asylum an imbecile, but her two cousins were imbeciles also. In two cases

sporadic cretinism was present in the children, and in one case three children in the family were microcephalic idiots.

The higher percentage of intemperance in my cases, 19·57, compared with 13·25 of Dr. Shuttleworth's, is explained by the fact that my cases were all paupers, and in the lower classes intemperance is not looked upon as a disgrace.

XI.—Comparative Statistics of France, Belgium, Norway and Sweden.

By Dr. Legrain,

Superintendent of the Asylum at Ville Evrard, Paris.

Statistics of Dr. Legrain of Paris.

Another proof, if more proof were needed of the inevitable connection of drinking with the increase of vice, crime, and the deterioration of the race and character, is afforded by some remarkable diagrams, recently compiled by Dr. Legrain, of Paris. By his permission these have been re-drawn and translated into English, and are deserving of careful study.

France.

The first deals with France, and shows the increasing consumption of spirits (proof) per head since 1830 in litres. Coincident with this there is an increase of accidental deaths and suicides due to alcoholism, a large increase in lunacy, also of common crimes and recommitals; and, particularly, a definite increase of the percentage of conscripts refused as unfit for service.

Belgium.

In Belgium again we see a similar upward trend of drink and its consequences.

Norway.

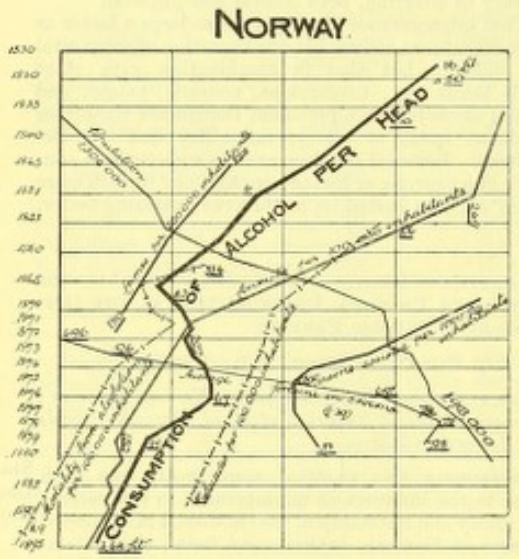
On the other hand, there are two countries of Europe where the consumption of drink, largely owing to wise legislation, has been steadily decreasing. The first is Norway, where it has come down from sixteen litres, containing 50 per cent. alcohol in 1830, to 3·68 litres in 1895; mortality from alcohol, suicides and crimes generally have, of course, diminished in like manner; paupers have become fewer, and the average wealth of the people increased.

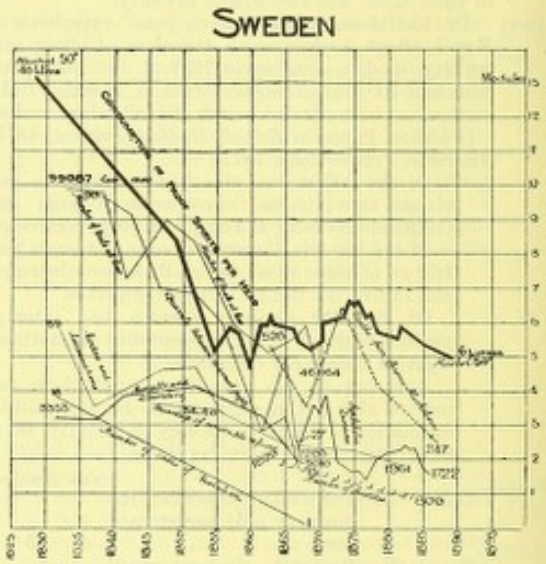
Sweden.

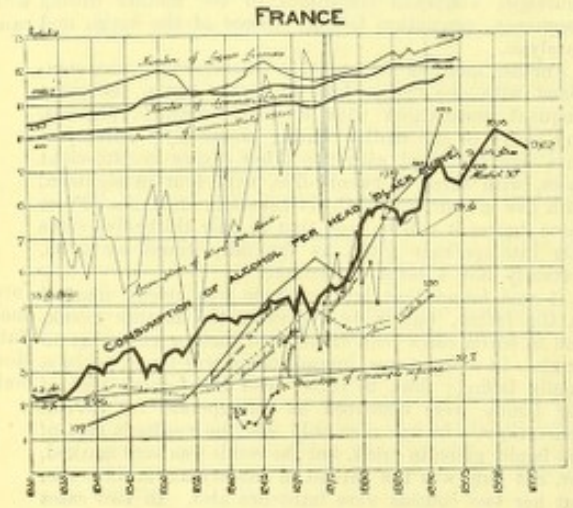
Turning to the neighbouring country, Sweden, we find the same thing. Serious crimes, such as murder, rape, common assaults, and even quarrels and lawsuits, have diminished; suicides are less frequent; also deaths from alcoholism, of course, and even syphilitic diseases, and here is a further reverse of the picture in France, for the percentage of conscripts refused has steadily diminished, showing an elevation in the standard constitution of the people.

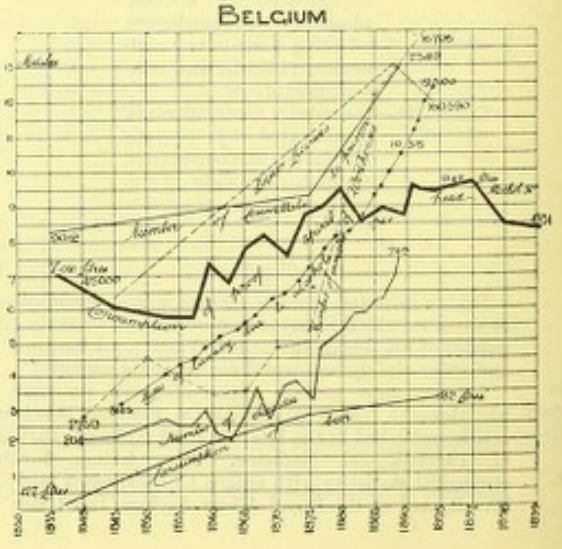
Alcohol as one of the factors of Physical Deterioration.

No one should assert that the rise and fall of crime, disease, lunacy, death-rate, etc., is only affected by the amount of drink consumed. There are undoubtedly several other causes at work in both directions. But no reasonable man can fail to be convinced that, as far as it goes, the increase of the consumption of alcohol is shown hereby to be injurious to the health of a nation, and thus tends to its physical deterioration.









XII.—Action of Alcohol on the Living Cell.

By J. James Ridge, M.D. and M.D. (State Medicine), B.S., B.A., B.Sc. Lond.,

Medical Officer of Health for Enfield.

It is a truism to say that the human body is composed of cells and their products. It originates from a single cell, which, by repeated cell division, is multiplied and then differentiated to form the various organs and tissues. When we know how alcohol behaves to individual cells, we can very certainly understand what its effects will be on the billion-celled mass which we call the human body.

An interference with the natural growth of protoplasm by the action of alcohol was noticed by me in 1879 in the growth of the seeds of cress. It is always a matter of astonishment to me that as little as one drop in a quarter of a pint of water can exert an adverse influence on the growth of protoplasm.

The same effect is seen on the growth of geraniums, as I showed in 1891, plants watered occasionally with water containing one per cent. of alcohol soon beginning to droop and wither.

I have watched the growth of common chara under the influence of 1 per cent. of alcohol, one drop in two ounces. The chlorophyll loses its green colour; this accounts for the pale colour of the cress in the presence of alcohol.

The same fact has been established for animal protoplasm. Sir B. W. Richardson found that medusæ were killed by one in 4,000 of alcohol (one drop in 8 oz). I have observed a similar deleterious action of alcohol on Daphniæ in proportion to the amount down to one drop in a quart of water.

Action of Alcohol on the development of Eggs.

The effect on the development of eggs is very marked. The eggs of a blowfly kept moist with alcohol and water do not mature so quickly or not at all. A precisely similar interference can be evidenced with the development of frog's spawn, small percentages of alcohol having an incredibly bad effect. Feré has noticed the same injurious influence of the vapour of alcohol on the development of hens' eggs.

Effect of Alcoholism among Women.

These facts are of immense importance, as we realise the great increase of drinking among women in recent years. In past centuries there have been many instances of drunken nations, whose vitality does not seem to have been greatly interfered with. I attribute this to the fact that in those days the women, the mothers of the race, were sober. But if the mother as well as the father are given to drink, the progeny will deteriorate in every way, and the future of the race is imperilled.

APPENDIX XVII.

[The Appendix originally intended to have been numbered XVII. has been printed in Volume I. as Appendix Va.]

APPENDIX XVIII.

(a) LEAFLET ISSUED BY THE HEALTH DEPARTMENT OF SHEFFIELD.

"Advice on the Feeding and Rearing of Infants."

Issued by the Health Department, and intended to be followed in all cases except where a Doctor is in attendance and gives special instruction.

1. **Infants should have no food but Milk for the first six or seven months of their life.**

2. They should, if possible, be fed at the breast, because breast-fed infants are much healthier than bottle-fed infants. They should have the breast every two hours during the day, and every four hours during the night for about ten minutes, and as they grow older, less frequently. Irregular feeding upsets the infant's digestion. The infant must not be allowed to go to sleep at the breast. In order that her milk may be wholesome, the mother should lead a healthy life, eat only plain and wholesome food, and not take intoxicating drinks, such as spirits and beer. If her nipples are sore, she should wash them with warm water before and after the child is fed and apply glycerine to them.

3. If from want of milk or other absolutely unavoidable cause the mother cannot suckle her infant, it will be necessary to feed it on fresh cow's milk. For a newly-born infant the cow's milk should be mixed with an equal quantity of water, and should be sweetened and boiled before use. If the milk curdles on the child's stomach, barley-water may be used in its preparation instead of plain water, or one or two tablespoonfuls of lime-water may be added to each pint of milk and water. As the infant gets older, the amount of water should be lessened, until at the end of six months about one and a half pints of pure milk without any water are given. Infants are often starved by being given too much water with their milk. The newly-born infant should be fed every two hours during the day, and every four hours during the night. As the infant grows older its meals should be less frequent. Irregular feeding upsets the infant's digestion.

Bottles should not have long tubes, because it is impossible to clean a long tube. The best kind of bottle has a rubber teat, which can be turned inside out and properly cleaned. Only sufficient milk for one meal should be put in the bottle at a time, and both bottle and teat should be thoroughly cleaned with water and soda after each time of using, and boiled once a day. If any old milk is left in the bottle or its fittings it will sour the next meal, and give the infant diarrhœa or a disordered stomach.

4. **Diet from Six Months to Twelve Months old.**

First meal, 7 a.m.—A suitable quantity of some infant food, such as Mellin's, Ridge's, Frame, Benger's, Neave's, etc., prepared accordingly to the directions, with twelve tablespoonfuls of milk.

Second meal, 11 a.m.—Twelve tablespoonfuls of pure milk which has been brought to the boil.

Third meal, 1.30 p.m.—Same as first.

Fourth meal, 5.30 p.m.—Same as second.

Fifth meal, 10 p.m.—Same as first.

Diet from Twelve to Eighteen Months old.

First meal, 7 a.m.—Bread boiled in milk, or oatmeal porridge with plenty of milk.

Second meal, 11 a.m.—Twelve tablespoonfuls of milk.

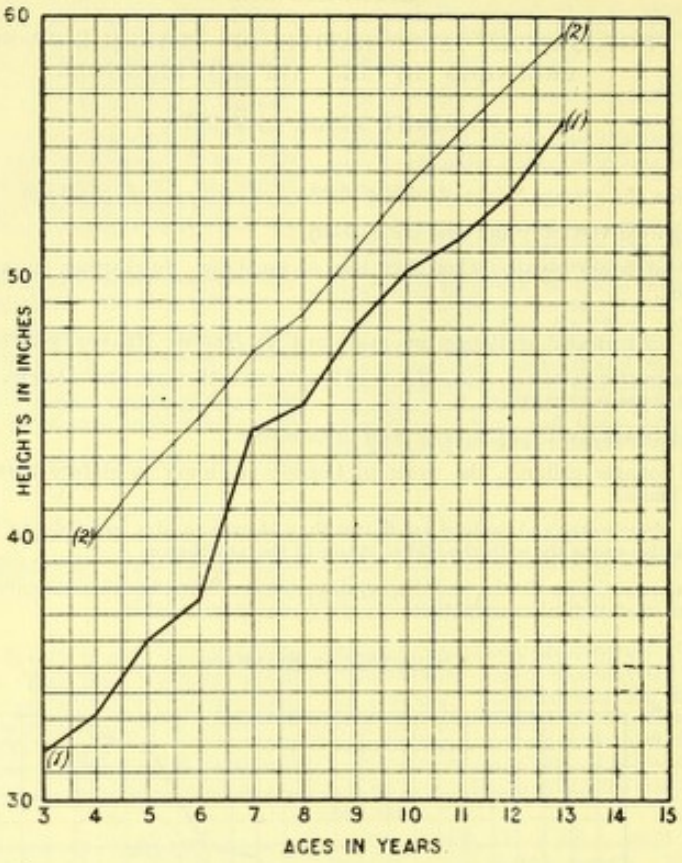
Third meal, 1.30 p.m.—Bread crumbs and gravy, or a lightly-boiled egg and bread and butter, or a milk pudding.

Fourth meal, 5.30 p.m.—Bread and milk.

Fifth meal.—Milk to drink.

5. Infants should on no account be given all sorts of things to suck, such as carrots, turnips, raw potatoes, or unripe fruit, neither should they be given bits from their mother's or father's plate to get them used to it.

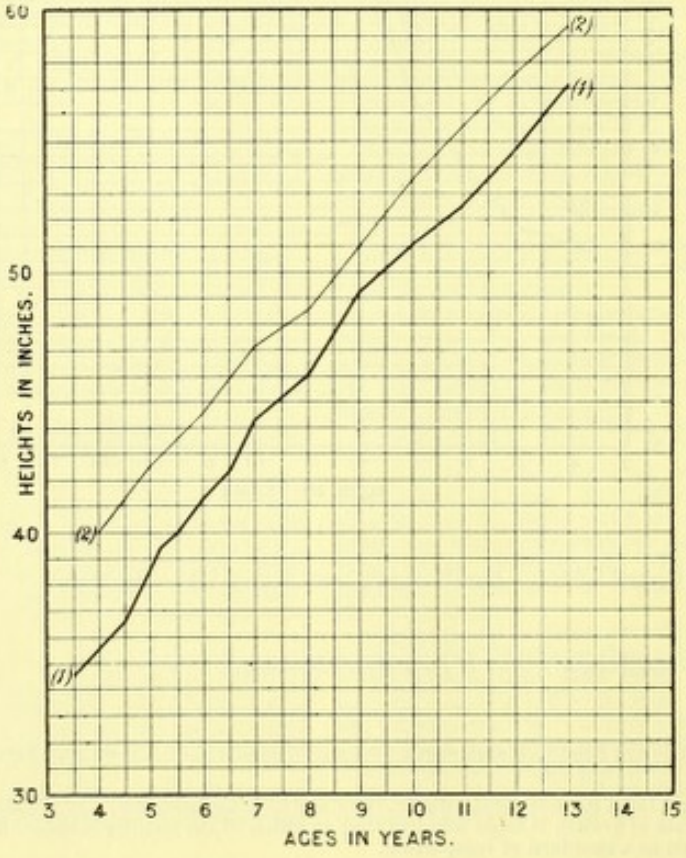
A LOW GRADE TOWN SCHOOL IN A NEGLECTED DISTRICT (LONDON).



(1) *Lambeth.*
Johanna Street Board School.

(2) *Honeywell Road* (Standard).
Note.—Irregular growth and severe retardation of a very grave nature.

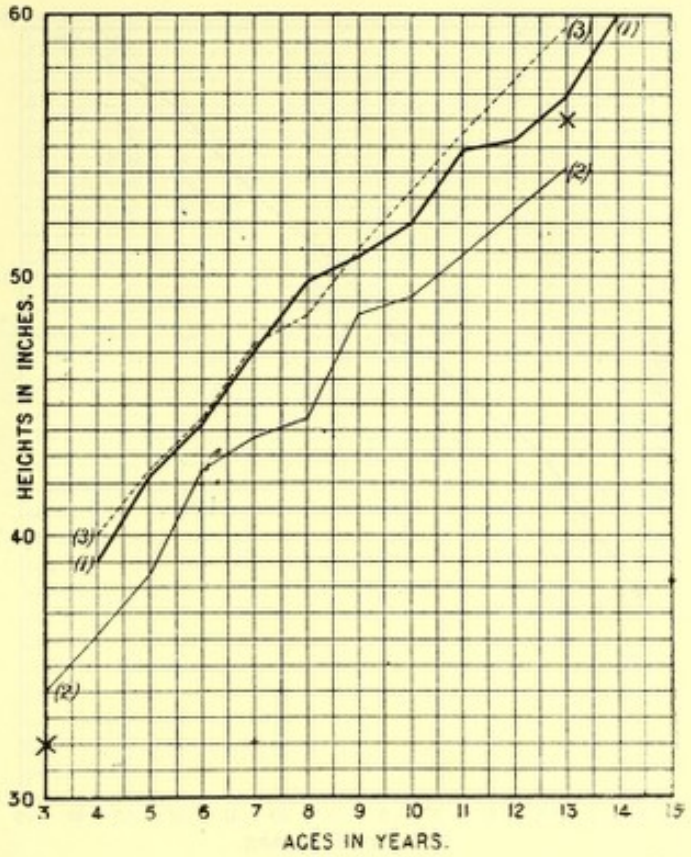
A LOW GRADE TOWN SCHOOL IN A CRIMINAL AND NEGLECTED AREA (LONDON).



(1) *Notting Hill.*
St. Clement's Road Board School.

(2) *Honeywell Road* (Standard).
Note.—Conspicuous retardation in growth, only less than Johanna Street.

MANCHESTER.



(1) *Ducie Avenue Board School.*

A school of the best type.

(2) *Sharp Street.*

A notably bad slum area.

(3) *London.*

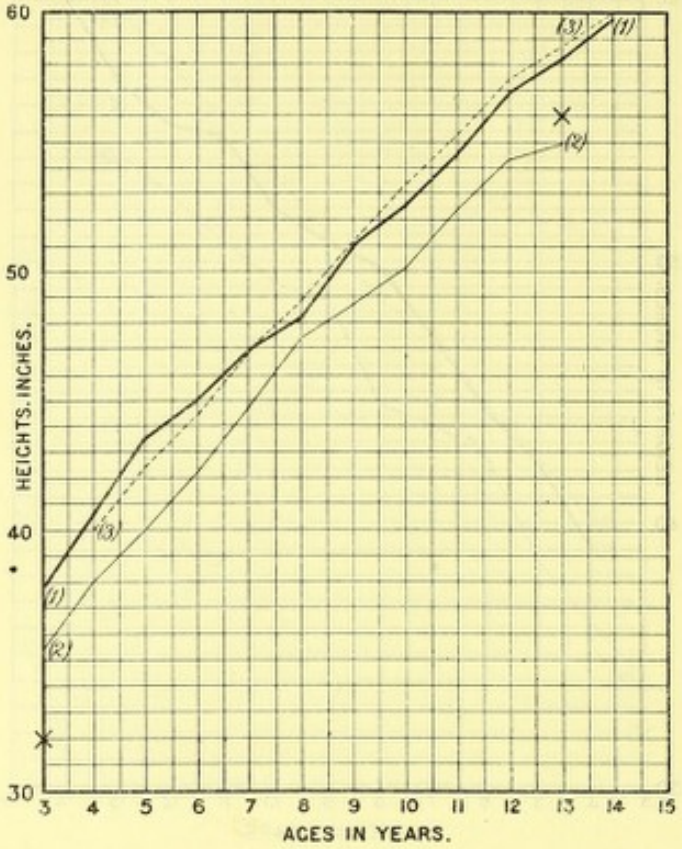
Honeywell Road (Standard).

× —— × Johanna Street (London) limits.

Note.—Good population in Manchester practically as good as best in London (Apparent falling off in Ducie Avenue at later ages, probably associated with the transference of the best children to the Central Higher Grade School and other higher schools).

Curve of worst population is flatter than corresponding curve in London. Adolescent population more stunted (rickets). The difference between best and worst is very serious.

SALFORD.



(1) *Grecian Street Board School.*

Better class.

(2) *John Street Board School.*

Poorer class.

(3) *Honeywell Road, London* (Standard).

× —— × Johanna Street (London) limits.

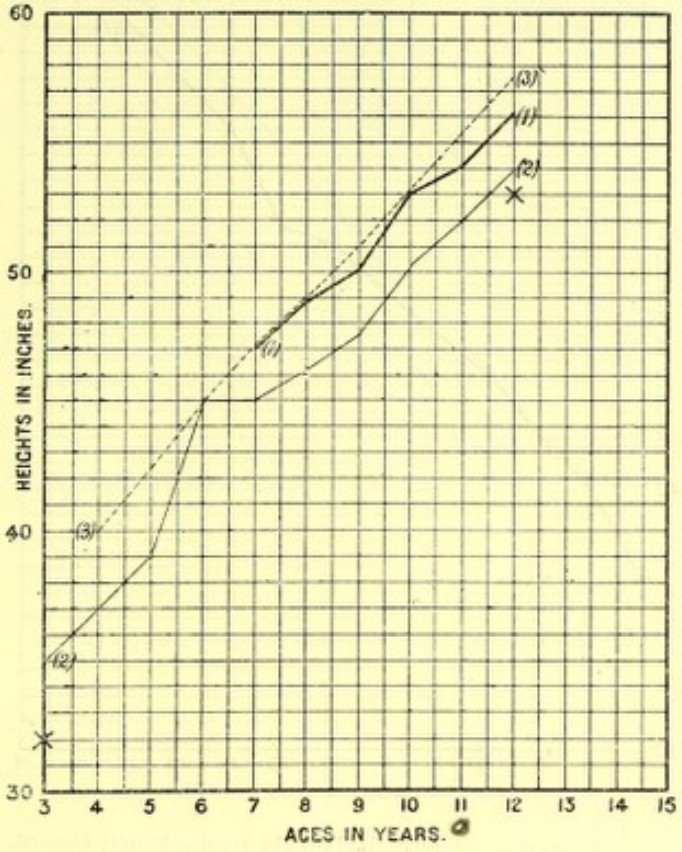
Note.—Good population in Salford as good as best in London.

Difference between worst and best not so great as in London.

Salford low type population is not so bad as corresponding population in London.

Low type curve in Salford flatter than low type curve in London (more rickets in northern towns).

LEEDS



(1) *Brudenell School.*

Good Type.

(2) *Sweet Lane Board School.*

Poorer neighbourhood.

(3) *Honeywell Road* (Standard).

×——× Johanna Street (London) limits.

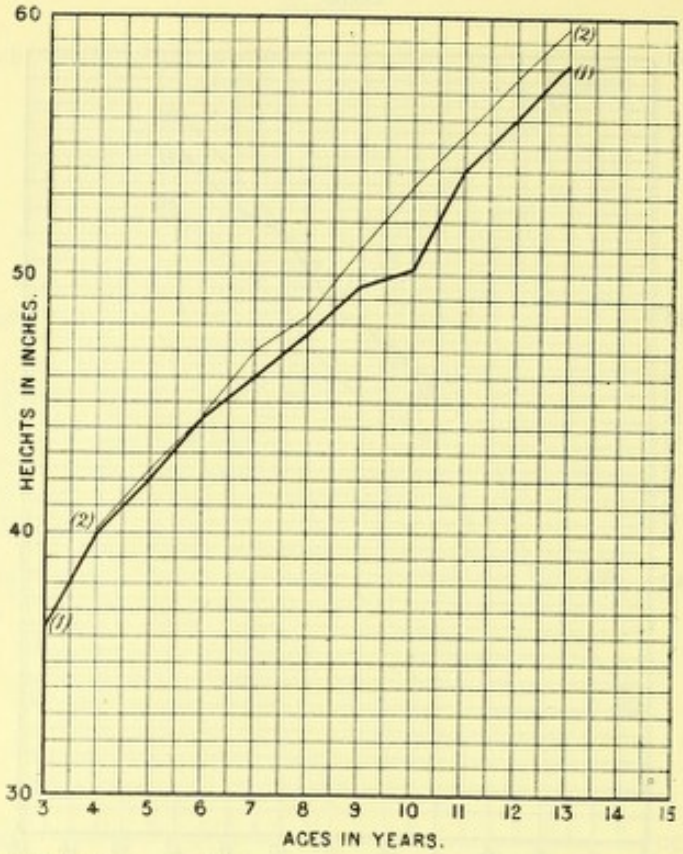
Note.—Good type Leeds School almost as good as best London Schools, though somewhat depressed at senior ages.

The divergence between "good" and "bad," though significant, is not so acute as in London.

Leeds poorest population on the whole much better than poorest in London.

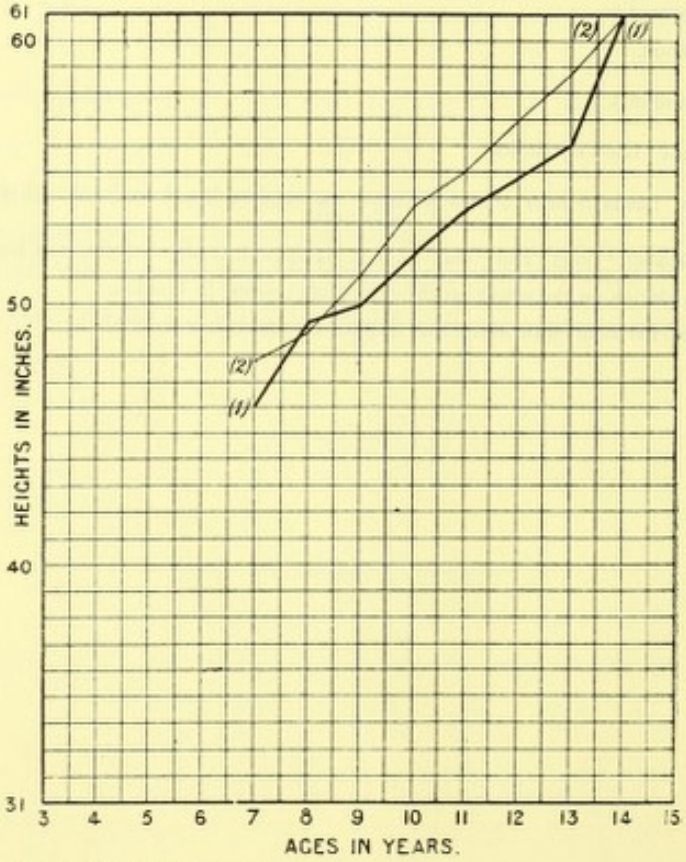
No flattening of curves as in Manchester and Salford (Probably less rickets).

A POOR GRADE SCHOOL IN AN IMPROVING NEIGHBOURHOOD (LONDON).



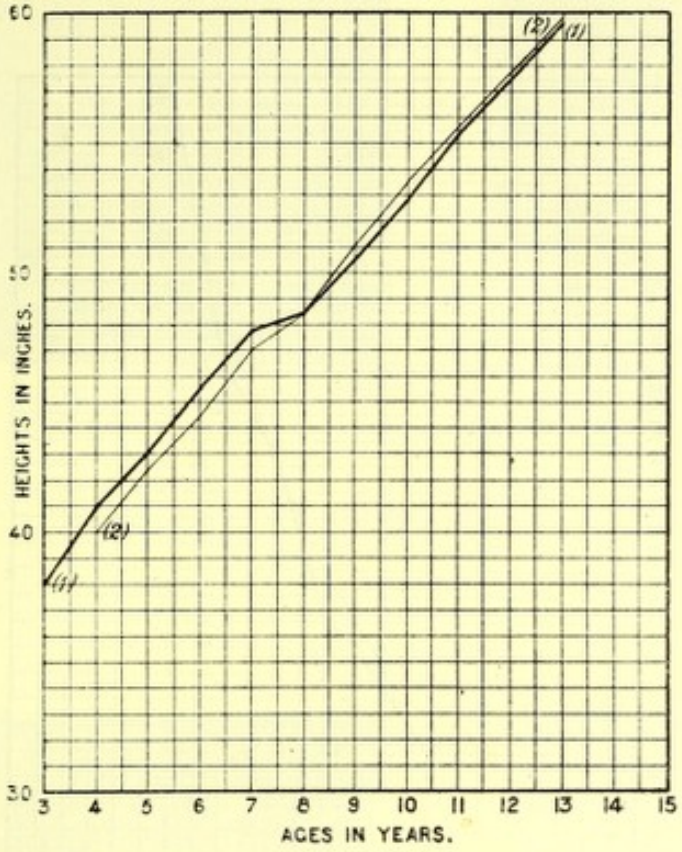
(1) *Bethnal Green, Virginia Road.*
Improving circumstances: Erection of modern dwellings by London County Council.
(2) *Honeywell Road* (Standard).
Note.—Children fairly good—just short of the best.

A SCHOOL IN A POOR INDUSTRIAL NEIGHBOURHOOD UNDER EXCELLENT DRILL EXERCISES AND ORGANISED GAMES FOR TWELVE YEARS (LONDON).



(1) *Eltringham Street Boys' School, Wandsworth.*
(2) *Honeywell Road* (Standard).
Note.—Shows recovery of physique at limit of school age.

A BOARD SCHOOL FREQUENTED BY CHILDREN OF ALIEN IMMIGRANTS (JEWISH), LONDON.

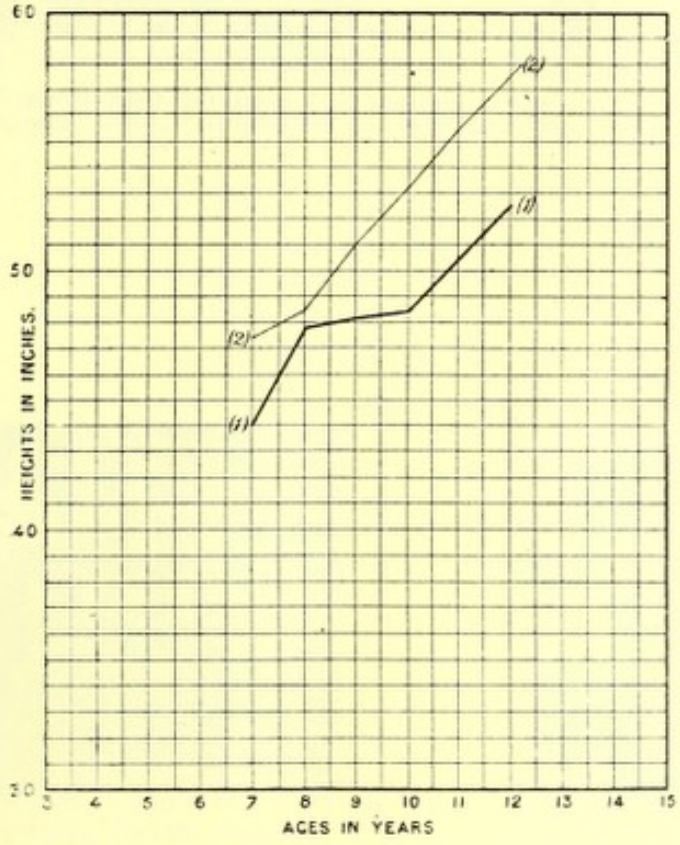


(1) *Houndsditch Gravel Lane Board School.*

(2) *Honeywell Road* (Standard).

Note.—A high grade rate of growth.

A SCHOOL FOR FEEBLE MINDED CHILDREN.



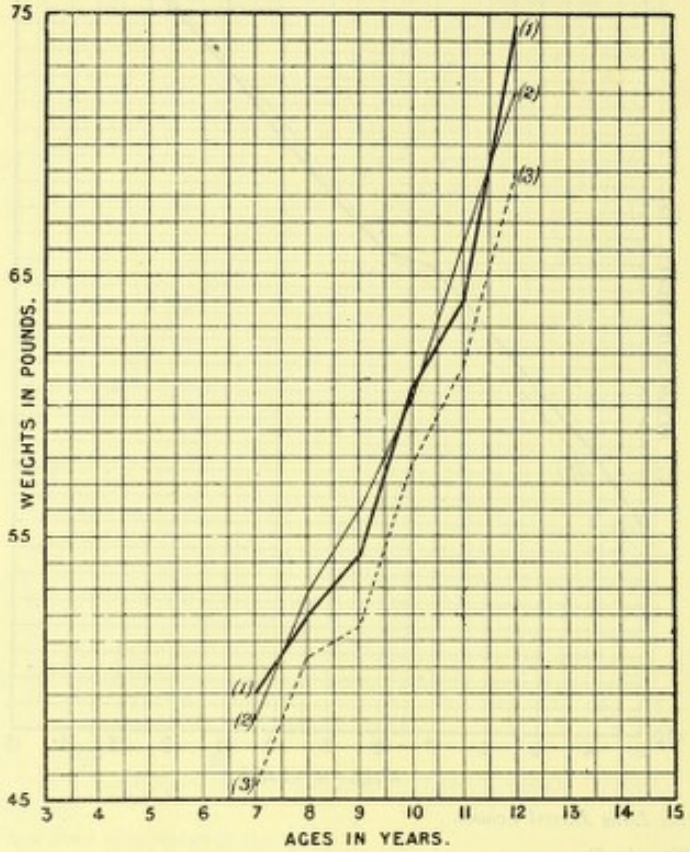
(1) *St. Clement's Road Centre, Notting Hill, London.*

(2) *Honeywell Road* (Standard).

Note.—Growth irregular and retarded. Retardation severe.

WEIGHT MEASUREMENTS—WHOLE SCHOOLS.

(FROM DR. HALL'S NUMBERS.)



(1) *Country School* (*Ripon*).

(2) *Good Town School* (*Brudenell School, Leeds*).

(3) *Poor Town School* (*St. Peter's and Sweet Lane, Leeds*).

Note.—General retardation of poor children.

General parallelism between rural and better town children.

Weight curves show discrepancies less distinctly than height curves. As both curves show similar results, height curves are preferable for statistical purposes on account of their distinctness.



LANT ST. BOARD SCHOOL (SOUTHWARK), 1875.
Lowest type.



HOLLAND ST. BOARD SCHOOL, BLACKFRIARS.
Lowest type; present time. Compare with Lant St., 1875, and note improvement.



LANT ST. BOARD SCHOOL (SOUTHWARK), 1878.
Slight improvement.



HONEYWELL RD. BOARD SCHOOL, WANDSWORTH COMMON.
Best type of London child, present time.



LANT ST. BOARD SCHOOL (SOUTHWARK), 1902.
Great Improvement.



MENTALLY DEFECTIVE CHILDREN, IRWELL ST. SALFORD.

APPENDIX XX.

Appendix to Evidence of Mrs. Greenwood.

Cases of Rickety Children Investigated in Sheffield.

(1). 20, *Court, A—Road.*

A back to back house containing three rooms, rent 3s. 9d. per week, occupied by a man and wife and five children. Eldest boy twelve years, at school; a boy ten years has a diseased spine, girl three years, small; child seventeen months, cannot walk, and a baby ten weeks at the breast. Husband gives wife 20s. per week.

History of child seventeen months. Was weaned at three months and fed on "pobs" (bread boiled in water) and 1d. worth of milk each day until it was twelve months old, when no more milk was given, now lives on bread and butter and tea, dinner same as others. At the present time 1d. worth of milk taken daily for whole family.

(2). 28, *W—B— Road.*

A back to back house in the suburbs, with three rooms, rent 4s., occupied by a couple and three children. Eldest three years, second child two years, very rickety, cannot walk (fontanelle not closed) and a baby seven months at the breast.

Husband gets up early and makes own breakfast, wife never gets up until about 9 a.m.

Diet of children, breakfast, bread and butter and tea; dinner, potatoes, gravy and tea; at 5 p.m., bread and butter and tea; supper, tea and a piece of cake, several slices of bread and butter between meals. No milk taken at all. The woman rarely goes out except to see mother in next street; has no mail-cart, husband gives wife 20s. per week.

(3). 16, *H—L—*

Back to back three-roomed house occupied by a couple and two children, husband gives wife 20s. week, rent 3s. 6d.

Child fifteen months cannot walk, was brought up on the bottle which it left off at twelve months; now it has breakfast, bread and butter and tea; dinner, potatoes, Yorkshire pudding, etc.; tea, bread and butter and tea; supper, bread and butter and a "sup" of milk. Slices of bread and butter in between meals whenever it wants it. Appearance pale and flabby, there is another child eight weeks old having the breast. They rarely go out.

(4). 4, *A— St.*

Emma D., aged three years, small, enlarged joints, knock-kneed. An illegitimate child whose mother goes out cleaning, has never had breast or bottle, was reared from the beginning on "pobs" (bread boiled in water) and a little milk added, has had no milk since twelve months old, now lives on bread and butter and tea, with "whatever is going" for dinner. Is eating all day pieces of bread and butter.

(5). 7, *S—x St.*

Occupied by a couple and four children, contains a small shop, living room behind and two bedrooms; youngest child sixteen months, not weaned, puny and white; Freddy, three years, very rickety, small and deformed; George five, and Nellie eight, both small for age. One pint of milk taken daily for whole family. Mother very ignorant and indignant when told the children were not having the right kind of food. Man gives wife 23s. week, and she sells pastry and sweets.

(6). 2 *Court*, 3 *House, H—St.* (*Two bedrooms*).

Occupied by a man and wife and four boys, aged ten, eight, seven and three years. The youngest cannot walk, his food is the same as the others but he is eating bread and butter all day long. No milk taken. Man gives wife 23s. per week.

(7). *Back of* 147, *C—St.* (*Two bedrooms*).

This is a back to back house with a small scullery, containing sink and copper, built out in front of the door and keeping light and air from the living room. In addition the house is so situated with regard to other buildings that it receives less sunlight and air than it otherwise would. It is occupied by a man and wife, seven children and grandmother. They have lived in this house eleven or twelve years. The eldest son, eighteen years, is strong and well; Annie, thirteen years, is pale and thin; Ellen, eleven years, legs very deformed; Willie, nine years, ditto; Clara, six years, bow legs and eczema; boy four years, very rickety, and a baby sixteen months not yet weaned and getting rickety. The house is generally dirty and the windows are seldom opened, several of the children have been operated on to straighten their legs. Cause of this condition, overcrowding, want of sunshine and air and improper food. No milk has been taken until recently and by the advice of the lady inspector. The old grandmother who is paralysed sits over the fire and nurses each child as it comes so that it rarely goes out or uses its limbs and no breath of fresh air is allowed in the house.

It is a most pitiable sight. Mrs. F. has at last promised to remove to another house.

(8). 2 *Ct.*, 1 *H, B—St.*

A back to back house, very dark, occupied by a couple and three children. Has had six but three died of convulsions, the youngest seven weeks, at breast, the next, aged two years and eight months, has a large head and enlarged joints and all the symptoms of rickets. Mother says she suckled him until he was over two years old, indeed she was pregnant with her next child. Had to be told by the doctor to wean him.

(9). 65, *S—St.*

An infant seven weeks old being fed on breast, arrowroot biscuits and gravy, and sometimes given a mussel to suck..

Instances of Waste of Life.

Mrs. R.—.

Age about thirty-five, had been married fifteen years. Husband a hawker, wife works at a rag pickers. Very degraded people who both drink. Two children living, eleven and twelve years.

Mrs. R. was visited owing to an inquest held on a boy burned to death. When questioned as to number of children lost, she seemed much afraid of incriminating herself, but finally admitted the following facts.

That when she lived in S—Street, she lost a child named Florrie, six months, of bronchitis. In M.— Street, she lost Harriet, four months, of convulsions. She removed to C— Street, where she lost one or two children (she could not quite remember, but knows Maggie, six months old, died there.) When asked of what disease she said "oh, the same complaint." She then removed to H—C.— (all houses in the lowest part of the city) where John five-and-a-half years was left alone in a room with an unprotected fire, and was burned to death. During the inquest it came out that she was in the habit of leaving the children alone. She has since lost another infant, seven months, of "*Marasmus enteritis*," the child was a "bonny baby born."

Mrs. S—.

Aged forty, been married twenty-two years, has had fifteen children born alive. Seven living aged, twenty-two, twenty, eighteen, thirteen, eleven, and six years, and an infant seven months. Mrs. S. has lost three sets of twins all under or about twelve months, and two other infants eleven months and three months.

Mrs. B —.

Has lost seventeen children, stillborn and living: cannot remember the names and ages of those who died in infancy except the following:—John, James, and Charles (triplets,) lived twenty-four hours only, Charles II., lived to nine months, "teeth," cause of death. Sarah Ann, nine months, died of convulsions. Joe, five months, died of convulsions. Eliza, the 18th eighteenth child lived, and is now twenty-one years old, she is the only one who survived the first year of life.

INSTANCES OF OVERCROWDING.

(1). 58 *M — Street.*

House contains two bedrooms, a living room, and scullery. The occupier was Mrs. T. a widow, and living with her were three daughters, Nellie, twenty-one, Emily, nineteen, and her infant, and Ethel sixteen years. In addition there were Mr. and Mrs. F. (Mrs. T's father and mother); Tom F. (a brother of Mrs. T.) his wife and their two children, seven and two years; Emily F. (a sister of Mrs. T.), and Tom R. (who were living together as man and wife), and their two children; also William F. (an unmarried brother) and Lena F. another sister of Mrs. T. Upon a visit from the inspector these people dispersed, and the F's have been again proceeded against in another part of the town for overcrowding.

(2). 28, *S — Square.*

Containing two small bedrooms, a living room and scullery. Occupied by John B. and his wife; a married son and his wife and infant; three other sons, aged twenty-one, twelve, and eight years; a daughter, nineteen years, and her infant; and Sarah and Edwin F. and their three children. These people left the house shortly after a notice was served to abate the overcrowding.

(3). 18, *N — Street.*

A small house with one sleeping room, and one living room. The occupier was John S. a widower with two girls, thirteen and eight years. In the same bedroom slept Samuel S. (a brother), his wife and four children.

(4). 10, *K — Street.*

A house with a living room, bedroom, and garret. In the bedroom slept four persons over ten years of age, and in the garret six persons over ten years.

(5). 12, *M—Lane.*

House containing one living room and two bedrooms, larger one 875 cubic feet, smaller one 513 cubic feet. In the two bedrooms were sleeping father and mother, five sons, aged twenty-three, nineteen, seventeen, eleven, and seven years and three daughters, twenty-one, fourteen, and five years.

(6). 2, *N — Lane.*

A house with one bedroom in which slept man and wife; widowed daughter and her two children, eight and ten years; other daughters, twenty-two and ten years, and sons, fifteen and thirteen years. There were fourteen fowls sleeping in two cupboards in the living room below.

Out of 100 houses specially investigated and measured, twenty contained two rooms only, forty contained three rooms and forty contained four and sometimes five rooms. In twenty houses not more than two persons occupied the bedroom or bedrooms. In eighty houses more than two persons occupied each bedroom.

Out of the latter number (eighty) fifty-one were not over-crowded taking 300 cubic feet as a standard, but in twelve cases there was not sufficient separation of the sexes. Twenty-nine were badly over-crowded in every sense of the word. In fifteen houses the over-crowding was quite unnecessary as there were other rooms not made use of.

(Mrs.) F. J. GREENWOOD,
(Sanitary Inspector),
Sheffield.

APPENDIX XXI.

Appendix to Evidence of Mr. T. C. Horsfall

We have in Manchester two classes of boys whose working-time is spent chiefly in the open air, the boys who are employed to sweep up horse-droppings in the busiest streets, and the boys, called in Manchester "nippers," who work under lorrymen. Both of these sets of boys get much exercise. Their physique, though often not very good, as a rule is superior to that of the boys who work in mills and offices, and they have much more spirit.

Mr. Charles Russell, who has a very large amount of knowledge of the poorer classes of Manchester boys, tells me that the sons of "navvies" living in miserable homes in Manchester, if they become out-of-door workers, generally grow up into strong men. If exercise in the impure open air and under the dim light of Manchester causes the boys who take it when their school-years are over to be comparatively healthy and strong, it is only to be expected that Manchester children, living under home-conditions which are unfavourable to health, and who are destined to work in mills and offices, will suffer seriously from being kept in crowded school-rooms for a large part of five days a week, during the years when they are most susceptible to the influence of unfavourable conditions, unless great attention is paid to keeping the rooms well-ventilated, well-lighted and, in winter, adequately warmed, and unless the children are enabled and encouraged to take much varied physical exercise, and unless the mental training they receive is well-chosen and given in right ways. I have not visited very many elementary schools in Manchester, but I have recently had occasion to visit nine schools in Cheshire, some denominational and some provided, which doubtless have much in common with many of the denominational and smaller provided schools in other parts of the land, and I have found in a considerable proportion of them conditions in respect of ventilation, lighting and warming so bad, that they seem to me to be sufficient by themselves to ensure the stunting of the growth, and much injury to the health, of most of the children attending the schools. In the school in which the conditions were the worst, a school the average attendance at which is about 170, not only were the rooms badly lighted, and miserably ventilated, but also so badly heated that the temperature, taken by a thermometer, whose accuracy I tested, had been at 10 a.m. on four successive days 43°, 42°, 45°, and 45°. Most of the children and of the teachers looked sickly. I hardly need mention that until recently no physical training of any value has been given in a large proportion of our elementary schools, and that the amount now given, which often does not exceed the minimum fixed by the Code, an hour a week, is quite insufficient in the case of most children. The influence of the poor teaching given in many schools by pupil-teachers, Article 68 teachers, and many teachers, who, though they have been trained in training colleges, have never thrown off the bad effects of the habits which they formed when they were pupil-teachers, in causing physical deterioration receives far too little attention. Such teaching, on the one hand makes it impossible for children to gain the knowledge and the habits of attention and industry which will enable them to earn good wages, the tastes and habits which will keep their minds and bodies healthy and prevent the temptations of drink, betting and licentiousness from being irresistible to them; and, on the other hand, it irritates the brains of the few children who continue to attend to it. The habit which many managers have of allowing children of three years of age, and of still lower age, to come into the infants' class makes it exceedingly difficult for teachers to deal with that class, as the teaching needed to enable children of nearly five to learn the subjects, of which they require some knowledge when they pass into the standards, is quite unfit for mere babies, and simply trains them to hate lessons and to form, often for life, the habit of closing their minds to them. In a Working Men's Club in Manchester, I sought in vain to find in the minds of the members, who had been "educated" in elementary schools in Manchester, some kind of knowledge, some kind of interest, which could make the study of some subject attractive to them. It is not generally known in England that our pupil-teacher system, which has hitherto made interesting teaching impossible in a large proportion of our schools, was tried in Germany when its supposed success in England in the days of Lancaster and Bell had called attention to it there. Dr. Petersilie, in his work on "Das Oeffentliche Unterrichtswesen im Deutschen Reiche" says that the German authorities soon came to the conclusion that in this

matter "England's best was Germany's worst" and discontinued the experiment of employing ignorant children as teachers.

The experience of Germany, where in many large towns all the elementary schools are supervised by medical men, has shown that schools can cause much injury to children which cannot be directly the effect of bad air, but must be in part the effect of keeping children too long in one position and of not letting them have enough varied exercise. Bardenheuer and Castenholz found that, while in the German schools which they examined there were no cases of appreciable curvature of the spine among children in their first school-year, 6 per cent. of those in their second year, 19 per cent. of those in their third school-year, 27 per cent. of those in the fourth, and 52 per cent of those in the fifth and sixth school-year, suffered from curvature. Scholder, Weith and Combe, who examined 1,290 boys and 1,024 girls in Lausanne found curvature of the spine in 23 per cent. of the boys, and in 26·7 per cent. of the girls. The number of cases increased rapidly as the length of time passed in school increased, till nearly the end of school life.

	Girls per cent.	Boys per cent.
Children in their 8th year of age - -	9·7	7·8
Children in their 9th year of age - -	20·1	16·7
Children in their 10th year of age - -	21·8	18·3
Children in their 11th year of age - -	30·8	24·2
Children in their 12th year of age - -	30·2	27·1
Children in their 13th year of age - -	37·7	26·3
Above the 13th year of age -	26·8	33·3

Dr. Wilhelm Schulthess of Zurich, from whose book on "Schule und Rueckgratsverkruemmung" (Leopold Voss in Hamburg) I take these statistics, indicates as the means needed to counteract the tendency of school to cause curvature of the spine, a considerable shortening of the time during which children are compelled to sit, the giving an interval for play every hour, systematic gymnastic exercise for an hour each day, the proper lighting of school rooms, and the provision of suitable school benches and desks.

In the year 1877 Geheimer Regierungs-Rat Dr. Finkelnburg showed by the publications of the Prussian Statistical Bureau that of 17,246 young men, who were entitled by their higher education to serve as One-Year Volunteers, only 20 per cent. were physically qualified to serve, while of the ordinary recruits who were less highly educated, from 50 to 55 per cent. were physically fit for service.

It seems to me impossible to doubt that the confinement of children in schools in which the conditions needed for health have not been provided, has been one of the principal factors in the production of physical deterioration since 1870. Mr. Marr, the Warden of the Men's House of the University Settlement in Ancoats, tells me that at the meetings at, and in connection with, the Settlement, which bring together a large number of working people, he notices that "usually the older men and women are better built and taller than the younger ones (*i.e.* those from twenty to thirty)." Other observers say that they have noticed similar inferiority on the part of young men and women to men and women of the immediately preceding generation in villages as well as in large towns.

Much injury to health is certainly caused in Manchester and Salford by the bad ventilation and lighting of a very large proportion of the offices in which clerks do their work. As clerks are often compelled to work until very late at night, it is very desirable that the rooms they occupy shall be well ventilated and well lighted and warmed. It is certain that as a rule offices which are not inspected are less wholesome than the rooms in mills which are inspected periodically. In the majority of cases the neglect of employers to provide the conditions necessary for health for their clerks, is due to thoughtlessness, and a single visit to each place where persons work for hire by a competent inspector would doubtless suffice to ensure a great improvement in the conditions of work for thousands of people. One of the most unwholesome rooms that I have known in Manchester was one occupied by a clerk of one of the most enlightened and kind-hearted members of the Manchester Town Council. The late William Morris, who hated impure air and water as much as any man I have ever known, told me that the usefulness of inspection was brought home to his mind when his attention was drawn by an inspector to the fact that his works at Merton Abbey were polluting a stream by an escape of colouring matter of which Morris was not aware.

All those members of the Sanitary Association, and of Manchester associations with cognate aims, who have given attention to the habits of the people with regard to food, agree in believing that bad health and physical weakness are largely caused by bad choice of food, due in some cases to poverty, in others to ignorance, and in very many to depraved appetite. Miss Margaret Simpson, who does excellent work in connection with the Church of England Temperance Society, tells me: "There is no doubt that numbers of working girls in Manchester and Salford have totally insufficient food. Roughly, I believe the following reasons account to a large extent for the underfeeding:—

1. From childhood the girls are used to all sorts of unsuitable food, pastry, cakes, etc., instead of nourishing food, and to taking it in snatches, probably standing at table and eating hurriedly. So they do not acquire a taste for sensible food, and get into the habit of eating irregularly and uncomfortably.

2. When the girls go to work they nearly always hand over their wages to their mothers, who give them a trifle for pocket-money, and if they cannot return for dinner, a copper or two only for dinner. Some of the better mothers make up little dinners for the girls to take out.

3. The girls have no taste for sensible food, and the heated rooms in which they work tend to make their appetites jaded and unhealthy, so instead of making the best of the few pence they have, they buy cakes and pastry, or chipped potatoes, or fried fish and pickles, anything they consider "tasty."

4. Low wages. In many cases the girls really do not earn a living wage, so cannot get proper food. We had a girl at the "Cosy Corner" who had twopence once a week to spend on her dinner. I do not know what she did on other days.

It is most difficult to get the girls to eat sensible food and in really sufficient quantities, even when provided. One of the girls, who belongs to St. Philip's Club, said that she had not tasted bread for more than a week. She takes biscuits to work for breakfast in preference to bread and butter, and so on. The same girl comes for dinner once a week to the club, and at first it was difficult to get her to take some of the most ordinary food. She would not touch potatoes, and declined minced beef, because she did not like it. Yet this girl comes, we know, because she has poor wages and hard times at home, and she is a most respectable, well-meaning girl. This sort of thing is typical. The girls do not want to have good food in many cases. They do not seem to know what a healthy appetite is. If we go for a day's picnic into the country with them, we find that they do not eat anything like what we ourselves require. The only time that I have seen them really enjoying good platefuls of meat and vegetables is when we go away with them in the summer for a week at the seaside. Then they have real appetites and appreciate proper food."

Miss Simpson, Miss Hobbs, Mr. Russell, Mr. Marr, all believe that the general use of stewed tea does very much to ruin health in our towns. Unfortunately the habit of using tea which has been long boiled or stewed is very general in country places as well as in towns. When I was a boy the finest set of people I used to see were the inhabitants of Craven, in Yorkshire. Mr. Walter Morrison, who lives in Craven, tells me "Charles Kingsley drove with me to Settle on market day. On coming back he described the men as the biggest and the handsomest in the world, and I agree with him. A doctor spoke to me about the farmers somewhat in this fashion: 'You know what big hearty chaps our farmers seem to be. Now I am old enough to have doctored their fathers, who lived largely on porridge with plenty of milk to it. They used to eat eggs and bacon and some meat. They got drunk once a week on gin and water, and their horses took them home. They lived as hale and hearty men till eighty. Their sons, some of them, think that porridge is not genteel; they eat white bread, not baked at home. They think it is not genteel to get drunk, so they make tea and leave it on the hob to stew. Only we doctors know how indigestion tortures them. They will not live to be eighty.' So far, my friend, I think myself that tea is doing as much harm as alcohol."

In my summary of evidence I mentioned as causes of bad health, children's lack of sufficient sleep, and filthiness of person and clothes among persons of all ages, due partly to the foulness of the air in manufacturing towns, partly to many other causes. Fifty years ago all but the principal streets in our towns were very dimly lighted, and so were the great majority of workpeople's dwellings and most shops, and comparatively few places of instruction and recreation, accessible to working people, were open late at night. Children had therefore much fewer reasons for wishing to leave their homes at night than they have now, and as a rule went early to bed. Now both homes and many streets even in poor parts of the towns are well lighted, and innumerable evening classes, boys' and girls' clubs, music halls and other places of wholesome and unwholesome recreation and instruction, and the interest of well-lighted streets have trained the majority of children to spend much of their evenings away from home, and to stay out of doors till very late. Nor can it be doubted that children have been made much more independent of their parents by modern habits. A large number of children are sent on week-days to the elementary school when they are mere babies, and to Sunday schools on Sundays, and if they go to church or chapel it is under the charge of Sunday school teachers and not of their parents. As many of the children who are thus separated from their parents by our educational system are also separated from them in the evenings by the influences of which I have already spoken, it is not to be wondered at that a parent's wish that children shall go early to bed often receives little attention.

Although many homes in our towns are kept surprisingly clean, workmen's houses in manufacturing towns as a rule are very inferior in respect of cleanliness to workmen's houses in the country, and Germans who have visited our towns, and English people who have visited workmen's houses in large German towns, say that English town homes are much less clean than the homes of German town-workpeople. Mr. James Johnston, who for many years has had a camp of Manchester girls of the working-class at the sea-side, tells me that lice are found on the heads of a large proportion of the girls. Miss Hobbs says that as a rule a mill-girl wears a chemise night and day for a week.

There is abundant evidence to prove that if better conditions of life were created and maintained in Manchester and Salford the majority of the population have all the innate good qualities needed to enable them under the new conditions to rise to a much higher level of physical, mental, and moral health, of efficiency in work, and of good sense in recreation and rest, than that at which the majority of the population are now living. The high level of public spirit and of intellectual and moral life attained by Manchester men and women in the University Settlement in Ancoats would by itself suffice to prove that this is the case, while the admirable results given by the Ardwick and other industrial schools show that the class most strongly affected by evil conditions can by an improvement in the influences affecting it be enabled and induced to gain a satisfactory degree of physical and moral health and strength.

If the town councils of our large towns obtain and use powers to ensure that all new dwellings shall be potentially wholesome in respect both of their interiors and of their environment, that streets shall be wider, that there shall be a larger supply of playgrounds and parks and of vegetation in the new parts of the towns than in the old, and will inspect, or obtain the inspection of, all workmen's dwellings and of all places where hired persons are employed, including the sleeping places of servants in all houses, the reform of our school system, which has now been begun, will suffice to effect a very great improvement in the health and the physique of the inhabitants of our towns. The chief object to be aimed at by all these means is to give the people more air and light, and another of the chief objects is to give them more wholesome exercise of body and mind.

I have already mentioned that Manchester boys who work in the open air have better physique than mill and office boys. The work of the Manchester and Salford Country Holidays Fund, which during the last nineteen years has sent nearly 15,000 children into the country for a holiday, lasting three weeks, has proved that the health of Manchester children, as a rule, at once improves very greatly under the influence of fresh air and exercise and good food. And there can be no doubt that, by the right use of our school system, the great majority of children can be enabled to feel both during and after their school life the good influence of fresh air, exercise, and good food.

As the most remarkable proof of the power of air, good food, and cleanliness of person to restore health and muscular strength that the world has ever known has been given in the last half dozen years by the new German sanatoria for the treatment of insured persons suffering from consumption and other diseases, and as the results obtained in the sanatoria are hardly known in England, it may be well to give here a part of a statement published in the German Reichs-Arbeitsblatt for October, 1903.

The statistics of the cases of illness treated by the Infirmity-Insurance Institutions in the years 1898 to 1902 have recently been published by the Reichs-Versicherungsamt. All the figures show progressive improvement from 1898 to 1902. The number of persons treated has greatly increased. The number in 1898 was 13,758; in 1899, 20,039; in 1900, 27,427; in 1901, 32,710; and in 1902, 35,949. Of the 35,949 persons treated in 1902 16,518 suffered from tuberculosis, and 19,433 from other diseases. The average time spent in a sanatorium by a patient who suffers from tuberculosis is about three months. The treatment of such persons consists mainly in an abundant supply of fresh air, plentiful food, attention to the skin, and instruction respecting health. A larger proportion of the persons who have recovered power to work in recent years have retained it than was the case in earlier years. Whilst of all the tuberculous patients treated in 1898 45 per cent. were still able to work after the lapse of the first, and 38 per cent. after the lapse of the second, year following the close of the year of treatment, the returns of the tuberculous patients of 1899 show 48 per cent. and 40 per cent. still able to work after the lapse of one year and of two years, and those of 1900, 49 per cent. and 41 per cent. Of the whole number of tuberculous patients treated in 1901 no smaller a proportion than 55 per cent. were still able to work after the lapse of a year from the close of the year of treatment. In the case of the tuberculous patients of the years 1898 and 1899, the diminution which took place in the number of those who were still able to work, from the end of the second year following the close of the year of treatment, to the end of the third year, was only 5 per cent. And after the end of the fourth year the diminution in the number of those still able to work is only small—about 2 per cent.

APPENDIX XXII.

MEMORANDUM, BY MR. E. T. CAMPAGNAC AND MR. C. E. B. RUSSELL, ON THE PHYSICAL CONDITION OF WORKING CLASS CHILDREN IN ANCOATS, MANCHESTER.

There is little doubt that the prime factor as regards physique of boys after leaving the Elementary Schools is the nature of their employment. In the great number of cases, the conditions of their home life remain the same as when they were at school, and the want of proper feeding from which many children suffer in the poor districts of the city continues, but there are in addition other factors which make considerably for physical deterioration.

BOYS.

1. Owing to the large amount of liberty given to youths when they commence to become wage earners, and the lack of sufficient parental control, boys from fourteen to seventeen or eighteen years of age frequently acquire habits of roaming the streets until a late hour at night, and fail to get that amount of rest before the next day's work which is necessary to maintain them in good health.

2. Unfortunately, the conditions of work in many of the factories and warehouses leave very much to be desired. There is not even yet sufficient inspection of these places, and in some of the subsidiary industries connected with the cotton trade, such as "hooking," "making up," &c., during the process of which dust from the chemical materials used in the production of the goods fly about, much harm is done by the particles of dust entering the mouths of the young persons engaged in the work, causing many to become anæmic and often to contract phthisis.

3. Another fruitful and one of the most unsuspected causes of deterioration lies in the long ingrained habit of tea drinking at breakfast and other times in the factories and foundries of the city. *Tea* drinking, if it really were so, might not be harmful, but, unfortunately, the mixture drunk can hardly be called tea at all. More frequently than not, boiling water is poured on to too large an amount of poor tea leaves and is left to stand until the tea has become almost a stew, and this dark and nasty mixture is drunk, sometimes three and four times a day, by hundreds of young lads, setting up frequently various forms of varicocele, and is responsible for several kindred evils (excessive costiveness, &c.) We were informed by the late Chief Recruiting Officer in Manchester some time ago that a very large proportion of young men rejected for the Army had been refused on account of ailments brought about by this practice.

4. The exceedingly low cost at which cigarettes may now be obtained is no doubt the cause of the grave increase in juvenile smoking, and this is having a serious effect upon the physique of many youths. Outwardly there is perhaps little sign of this, but considerable experience has caused us to notice that youths who smoke cigarettes largely are generally unable to take a prominent part in athletic exercises. Further information gleaned from the recruiting authorities goes to show that large numbers of young men are rejected because they have contracted a form of valvular heart disease through excessive cigarette smoking and are consequently unfit to undergo prolonged physical exertion.

5. We would point out that youths who follow outdoor occupations, although they may be living in the most overcrowded and unpleasant parts of the city, and are frequently on very short commons, more often than not develop fine physiques; it is the boy who enters the factory, workshop or office, who is ill-fed and unaccustomed to physical exercise, and given to smoking, who steadily goes down the hill.

6. As previously stated, many youths deteriorate considerably in muscular development after leaving school owing to following sedentary occupations. There being but little proper provision for gymnastic or outdoor exercises made in the larger cities, the failure to teach gymnastics at school leads to an utter want on the part of large numbers to develop their bodies at all after leaving school. In later years many youths cannot get up enough energy to play football, even if a ground is available, and are content to moon about the streets at nights, smoking more or less bad cigarettes, as their only form of exercise, with the result that in later years, when they marry and settle down, their children are weak and puny.

We would point out that it is erroneous to suppose that alcoholic drinking on the part of youths is a fruitful cause of physical deterioration. As a matter of fact only a very small minority of boys up to eighteen years of age drink alcoholic liquors. It is not until later years, about manhood as a rule, that a young fellow falls a victim to the curse of drink.

7. Speaking generally, physique after school-days depends more on occupation than anything else, but there can be no reasonable doubt that, with better feeding, more exercise and gymnastic training when young, the avoidance of excessive cigarette smoking, and the substitution of some other drink for workshop consumption than tea, a very great improvement would be seen in no very long time in the general standard of physique of working class youths.

8. We are convinced that nothing would be more useful than regular medical examination in the elementary schools, particularly with reference to height, weight, and chest measurement, of the children from time to time, as inquiries could then be made with some degree of reliability as to the causes of the deterioration which might be noticed in given districts and given schools.

9. As to whether physique is regained at a later age depends upon many circumstances which we can hardly go into here. Provided a man remains steady and sober, more frequently than not we are of opinion that there is an improvement in physique, particularly if he marries wisely, but so frequently do young men (twenty-one and upwards) acquire drunken habits, with results destructive of all physique, that we do not care to state any positive opinion except as regards the man of sober and steady habits referred to above.

GIRLS.

In the case of girls, it would appear that at the outset work in factories and mills is found to be a great strain when, as is too often the case, girls entering upon such work are insufficiently or unwisely fed. They suffer an arrest of development and perhaps are permanently enfeebled. On the other hand, it seems to be perfectly clear that many of those who painfully feel the strain grow accustomed to it and recover their vigour. On the whole, the main cause of their poor physical condition seems to be ignorance. Ignorance as to food and its preparation, as to proper care of the body, the need of cleanliness and the need of good ventilation, and, like the boys, they suffer also from want of rest and sleep, and still more than the boys from want of wholesome exercise in the fresh air.

Perhaps it may be added that they suffer also from lack of interest; they have fewer sources of amusement than their brothers. It should be remembered further that the working girl's work is not always finished when she leaves the factory. She has duties at home to perform while she is living with her parents, and at an early age she undertakes at marriage still heavier duties in her own home and continues, at great cost of energy and freshness, the double task of housekeeper and wage earner even when she is the mother of several children.

Here the circle begins again—an enfeebled and hard working mother is unable to give careful attention to children who are especially in need of it.

APPENDIX XXIII.

LETTER FROM Mr. BENNETT, CAPTAIN OF THE 1st CADET BATTALION "THE QUEEN'S," ROYAL WEST SURREY REGIMENT, AND TABLES OF MEASUREMENTS OF BOYS IN THE BATTALION.

Headquarters,
Queen's House, 31, Union Street,
Southwark, S.E.,
7th May, 1904.

DEAR SIR,—

Physical Deterioration Committee.

In reply to your letters of 22nd October, 1903, and 20th April 1904, I now forward you a statement of the result of my investigations, and I must confess that, considering the labour it has involved, the result is very poor and disappointing, and I fear will be of little use to your Committee.

This Cadet Battalion was started in Southwark in 1889 and now has companies in eight different districts in London; Southwark, St. Pancras, Stepney, Westminster, Chelsea, Pimlico, Bethnal Green, and Hackney Wick, but no regular records of the nature required have been kept except in Pimlico (height and chest and occupation), and Southwark (height and occupation). The standard of height for enrolment has always been not less than four feet eleven inches in all the companies, but there is no standard of chest measurement. The age limit for service in a Cadet Battalion up to 1901 was fourteen to seventeen, in that year it was raised by War Office authority to eighteen. About 10 per cent. of applicants are rejected as being below standard of height.

The class of boy, and with it the physique, varies much according to the district, the East End boy being badly developed compared to the West End. Stepney supplies the poorest class, and Pimlico the highest, Southwark being a medium between the two. All must be genuine working boys, and pay an entrance fee (by instalments) of from 2s. 6d. to 5s. according to district.

Boys' clubs (with gymnasium in most cases) are attached to each company. The effect of a month or two of drill and gymnastics is most marked in the manner in which boys carry themselves and walk, and is not lost after they leave.

About 10 per cent. of the Cadets pass into Regular Regiments and about 65 per cent. into Volunteer Corps. A larger number would join the Regulars but are rejected on account of height and chest, or bad teeth, which latter is a common disability, caused, I think, by careless feeding when young. Varicose veins are also a frequent cause of rejection, this appears to occur in cases where boys are messengers or errand boys constantly on their feet and running about.

"Occupations" have been difficult to classify, but I have endeavoured to distinguish as follows:—

Clerks.—Sedentary occupation, indoors.

Messengers.—Running about outdoors, and van boys.

Warehouse and office.—Includes packers and boys working partly in and partly out of doors, where skill is not required.

Skilled trades.—Includes "printers' devils" and machine minders and boys learning a trade.

My experience in Southwark has been that a very large number of boys commence their working career in some branch of the printing trade, but they do not appear to stay long at it if they can get other work, and it does not seem healthy or suitable for boys, particularly in the case of those who carry the damp paper about to the machines.

Between 250 and 300 of the Cadets are annually taken to a military camp with some Volunteer Brigade for a week in August, and the amount of work they do and their capacity for marching are surprising, and the improvement in their condition at the end of the week (after good and regular feeding) is naturally very marked.

The Southwark boys wages vary between 7s. and 15s. a week, and when trade is slack many boys are out of work for weeks at a time.

I have little knowledge of their normal home surroundings, but when I have visited their homes (in sickness) I have always found them clean and comfortable and better than I expected.

I have been an officer of the Southwark Company for nearly fifteen years, during which period over 2,000 boys have passed through our hands in that district.

I am, Yours faithfully,
LANCELOT W. BENNETT (*Captain*),
1st Cadet Battalion "The Queen's."

The Secretary,
Physical Deterioration Committee.

I.

SOUTHWARK DISTRICT.

Year.	Age.	†Number of Boys.	Average Height.
			ft. in.
1894	14	4	5 0
1900	,,	11	5 1½
1901	,,	20	5 0¾
1902	,,	11	5 1
1903	,,	10	5 0½
1894	15	19	5 0½
1900	,,	49	5 2
1901	,,	54	5 2½
1902	,,	27	5 2½
1903	,,	27	5 1½
1894	16	7	5 2
1900	,,	23	5 2½
1901	,,	29	5 2½
1902	,,	33	5 3½
1903	,,	41	5 3

Remarks.

In Southwark records of height only were taken in these years, 1894, 1900–3; and in 1894 the height appears to have been only roughly taken.

Very few boys were enrolled here over the age of 16.

ST. PANCRAS DISTRICT.

Year.	*Age.	†Number of Boys.	Average Height.
			ft. in.
1900	15	29	5 1½
1901	15½	15	5 2
1902	15	11	5 3
1903	15½	20	5 3

*In St. Pancras return the *average age* has been calculated and given.

†Number of boys of whom records of height or chest were kept.

PIMLICO DISTRICT.

Year.	Age.	*Number of Boys.	Average Height.	Average Chest.	Year.	Age.	*Number of Boys.	Average Height.	Average Chest.
			ft. ins.	ins.				ft. ins.	ins.
1899	14	26	5 1½	29¾	1899	16	20	5 3¼	31¾
1900	,,	21	5 1½	30	1900	,,	29	5 3¼	31¼
1901	,,	12	5 1¾	30½	1901	,,	18	5 3¾	32
1902	,,	8	5 2¾	31½	1902	,,	22	5 4	30¾
1903	,,	2	5 2¾	30½	1903	,,	8	5 3¼	32¾
1899	15	46	5 2¾	31	1899	17	2	5 3¾	32½
1900	,,	38	5 2	30	1900	,,	3	5 5	33½
1901	,,	26	5 3½	30¾	1901	,,	10	5 4	31½
1902	,,	16	5 4	31¾	1902	,,	13	5 3½	31½
1903	,,	12	5 4	31¾	1903	,,	7	5 5¼	32½

Remarks.

The records here have been carefully kept.

* Number of boys of whom records of height or chest were kept.

II.

OCCUPATIONS OF CADETS AT DATE OF ENROLMENT.

Year.	Occupations.	District.	Ages.			
			14.	15.	16.	17.
1899 to 1900.	Clerks	Southwark	3	14	7	—
		Pimlico	3	16	4	—
	Messengers	Southwark	3	15	3	—
		Pimlico	7	10	2	—
	Warehouse & Office Boys	Southwark	4	17	9	—
		Pimlico	2	6	3	1
	Skilled Trades	Southwark	10	32	21	2
		Pimlico	5	10	9	2
	Apprentices	Southwark	1	2	4	—
		Pimlico	1	2	1	—
1900 to 1901.	Clerks	Southwark	1	5	5	—
		Pimlico	7	9	7	—
	Messengers	Southwark	1	18	4	—
		Pimlico	5	4	4	1
	Warehouse & Office Boys	Southwark	8	10	10	—
		Pimlico	—	1	—	—
	Skilled Trades	Southwark	10	24	9	—
		Pimlico	1	9	6	1

Occupations of Cadets at Date of Enrolment—*cont.*

Year.	Occupations.	District.	Ages.			
			14.	15.	16.	17.
1901 to 1902.	Clerks - - - -	Southwark - - -	—	2	2	—
	Messengers - - -	„ - - -	3	11	7	—
	Warehouse & Office Boys	„ - - -	2	8	11	—
	Skilled Trades - -	„ - - -	5	6	12	—
	Apprentices - - -	„ - - -	1	2	—	—
1902 to 1903.	Clerks - - - -	Southwark - - -	1	2	1	—
	Messengers - - -	„ - - -	2	7	3	—
	Warehouse & Office Boys	„ - - -	4	10	7	—
	Skilled Trades - -	„ - - -	2	21	13	—
	Apprentices - - -	„ - - -	—	4	5	—

Remarks.

Clerks—Sedentary occupation, indoors.

Messengers—Running about outdoors, and van boys.

Warehouse and Office includes packers and boys working partly in and partly out of doors, where skill is not required.

Skilled Trades includes "printers' devils" and machine minders, and boys learning a trade.

III.

Chelsea District.

The officer commanding this Company reports as follows :—

"The average height of the recruit at the age of fifteen is five feet one-and-a-half inches.

"They appear on the whole fairly well developed when they join but muscularly weak. They grow rapidly, and in the majority of cases seem underfed, or rather fed on unwholesome diet.

"The boys coming from the Chelsea district appear to be of a lower class socially than those who join from districts further away, such as Fulham and Notting Hill Gate.

"It has struck me rather forcibly that no boys in this class of life have ever learnt the proper way to walk and thus tend to slouch and are consequently hollow-chested."

APPENDIX XXIV.

TRANSLATION OF THE RESOLUTIONS UNANIMOUSLY ADOPTED BY THE BRUSSELS CONGRESS OF 1899.

I.

Proposed by M.M. Fournier and Le Jeune :—

"The Conference desires to see the various Governments employ all their powers to suppress absolutely prostitution among girls under age (en état de minorité civile)."

III.

Proposed by M.M. Fournier, Pavdoff, Jonathan Hutchison, Doutrelepont, Lesser, Peterson, De Sturmer, Neisser, Wolff, and Mracek :—

"The Conference considering that a profound knowledge of Venereology forms one of the best means for effectually combating the spread of venereal diseases, recommends urgently to the various Governments to provide for the education of truly competent medical practitioners by the institution in every University of complete and compulsory courses, the subject of which shall form part of the State Examinations. The Conference requests that the examiners may be specialists."

VI.

Proposed by the British Medical Association and moved by Dr. Saundby :—

"The Conference requests the various Governments to constitute in each country a Commission charged : (*a*) To determine the frequency of venereal diseases among the civil population apart from temporary variations. (*b*) To enquire into the Institutions actually in existence for the treatment of venereal diseases, the distribution of hospitals, the number of beds available in different places, and to propose the most efficacious measures for the treatment of these diseases. (*c*) To collect opinions as to the best means for preventing and limiting the spread of venereal diseases among the civil population and to formulate conclusions upon the subject."

VII.

Proposed by Professor Lassar (Berlin) :—

"The various Governments are requested to seize every favourable opportunity for drawing public attention, and especially that of young persons, to the danger resulting from prostitution to the health of the young of both sexes, and to the terrible consequences of venereal diseases."

VIII.

Proposed by M.M. Pierson and Fiaux :—

"The Conference desires to see the venereal statistics of all countries arranged upon uniform basis."

APPENDIX XXV.

Appendix to Evidence of Dr. Mott.

1. The Relation of Syphilis to General Paralysis of the Insane.

In the adult form of the disease, males are affected about four times as frequently as females. In the juvenile form of the disease, where the chances of inherited affection are the same, the sexes are equally affected. As we rise in the social scale, females affected with general paralysis are rare, whereas it is relatively common amongst males. When it does occur in the upper classes there is generally, so I am informed, a history of the husband infecting the wife. Where syphilis is unknown, so also is general paralysis. This argument, however, is not convincing, because in many countries, where syphilis is very prevalent, general paralysis and tabes dorsalis are seldom met with. Another factor or factors are necessary, namely, those conditions of stress and excitement which tend to neurasthenia or the neuropathic or psychopathic constitution.

In 70 or 80 per cent. cases of general paralysis and tabo-paralysis—that is, general paralysis commencing with or being associated with locomotor ataxy—a history or signs of syphilis was found in 200 carefully reported cases.

Since I have pointed out the importance of syphilis as an etiological factor in this disease, the statistics from some of the asylums have conclusively proved and confirmed the important relationship of these two diseases. I may cite, as instances, Bexley Asylum and Hanwell.

Dr. Bolton, my late assistant at Claybury Asylum, in eighty-three carefully reported cases of general paralysis, made out 80 per cent. certain syphilis and 97 per cent. probable. His statistics included a number of private patients at Claybury Hall. It might be argued that in 20 per cent. there is no evidence of syphilitic infection, even on these statistics; but, on the other hand, Crocker has shown that in only 80 per cent. of undoubted syphilitic skin diseases can a history of syphilis be obtained. Moreover, I have found in quite 20 per cent. of certain syphilitic brain diseases no certain history can be obtained of previous syphilitic infection. One of the strongest arguments, however, of the syphilitic origin of general paralysis is afforded by the juvenile form of the disease, of which I have collected thirty cases, most of which I examined personally during life and *post mortem*. In 60 per cent. there were signs of syphilis on the body; in 80 per cent. there was definite evidence of the parents having suffered with the disease; and in the remaining 20 per cent. either it was probable, or the children were illegitimate, or no history was obtainable. In seventeen of the cases, the majority of which I examined personally and interviewed the parents, I found that the families added together were made up as follows:—

16 miscarriages,
25 still born children,
11 died in infancy,
6 diseased or weaklings,
17 general paralytics,
32 alive and well (offspring).

Some of those, however, said to be well, showed traces of congenital syphilis, imbecility or nervous disease.

As a proof of the cause of general paralysis being syphilis, I may here cite the experiments of Kraft-Ebbing, who inoculated nine general paralytics, who exhibited no signs of syphilis on the body, with the virus of a hard chancre. Cases were watched 180 days, but showed no symptoms, proving that they were immune to infection, and that although they showed no signs on the body yet had, in all probability, previously acquired the disease.

II. The Relation of Syphilis to Optic Atrophy and Locomotor Ataxy (Tabes).

In seventy cases of tabes, and seventy cases of tabo-paralysis, antecedent syphilis was found in 70 per cent. or 80 per cent.

In a large proportion there was optic atrophy and blindness. The proportion with antecedent syphilis should be much higher than this, because I have included some cases in which the history was unobtainable. Moreover, I have not included cases of gonorrhœa or soft sores, which should be probable cases of syphilitic infection.

Among these 140 cases were seven of conjugal affection—husband and wife dying of either tabes, tabo-paralysis, or general paralysis; the wife dying in most cases later than the husband, as would be expected, for the wife was infected by the husband. In all these seven cases I saw one or other, or both, and in all but one case, which was probably syphilis, infection could be proved.

	Issue.			
	Children alive.	Born alive but died in infancy.	Born dead.	Miscarried.
23 married females suffering with Tabes or Tabo-paralysis, 7 of which were sterile - - -	10	11	18	31
54 married males suffering with Tabes or Tabo-paralysis - - -	151	73	49 52	

Dr. Bailey, of Hanwell, obtained the following results as regards families of female general paralytics:—

118 female general paralytics:
- 102 were married women.
- 2 were juvenile cases.
- 3 certainly had cohabited.
- 11 were ? virgins.

The 105 women had 129 children alive; 117 children born alive, but dead = 2·3 per cent. instead of 4·5 per cent. 34·5 per cent of these women were sterile.

Statistics of Spencer Wells, Simpson, Sims, and Guttstadt show that normally 10·15 per cent. of women who are married are sterile. Therefore, the sterility of female tabetics and paralytics is two to three times as frequent. This may be explained by the frequency with which one finds *post mortem* in general paralytic women non-tubercular salpingitis; six to seven times as frequently as in other females dying in the asylums; this points again to venereal infection either before or after marriage. Both in tabes, tabo-paralysis, and general paralysis, signs of syphilis are found, *post mortem*, in rather more than 40 per cent. of the cases. In 213 male *post mortems* at Claybury there were eighty-six general paralytics, and 45·4 per cent. of these had some signs of syphilis on the body; of 127 remaining general paralytics 9 per cent. had some signs. In 249 female *post mortems* there were thirty-six general paralytics, of which 19·5 per cent. had signs on the body; 213 general paralytics remaining, only 2 per cent. had signs. In eighteen female general paralytics fourteen had non-tubercular salpingitis.

III.—Nervous Diseases in Hospital Practice.

In the first volume of the Archives of Neurology I collected from my practice at Charing Cross Hospital and the asylums sixty cases (v. Case 58, p. 161). In my hospital practice I invariably try anti-syphilitic remedies for nervous affections in men between the ages of twenty-five and fifty, even when there is no history of syphilis, sometimes with the very best results (v. Case 16, p. 60). A considerable number of these cases have been in the army.

IV.—Arterial Degeneration.

Only in young people, the subjects of congenital syphilis, have I seen *post mortem* nodular fibrosis and atheromatous patches in the aorta. This I have observed in five or six of the cases of juvenile general paralysis the subjects of congenital syphilis.

We may put this fact by the side of other facts, viz.: that these children were of stunted growth, and showed in the generative organs signs of infantilism, even though they had arrived at an age considerably past puberty.

With regard to the questions of degenerative changes of the aorta as a result of syphilis acquired, the statistics of *post mortems* made by my assistant, Dr. Watson, at Claybury Asylum, confirms my previously recorded experiences. As degenerative changes in the large vessels are properly regarded as evidence of senile decay and physical deterioration, I shall not take into consideration those cases of death which have occurred after forty-five.

Out of a total of 176 patients who died during the last year, fifty-five—forty males, fifteen females—were general paralytics.

Of the forty males, twenty-two had signs of syphilis; eleven had probable signs.

Of the fifteen females, ten had non-tuberculous tubal disease.

Of the cases under forty-five, there were forty-one general paralytics, twenty-seven males and fourteen females.

There were thirty non-general paralytics, seventeen males, thirteen females.

Of the fourteen female general paralytics under forty-five, nine showed marked degenerative changes in the aorta—all showed some changes, and with the exception of one case, every one exhibited fibrous patches—two had certain signs of syphilis on the body, two had doubtful signs, and six had signs of venereal infection by old non-tubercular tubal disease.

Whereas of the seventeen female non-general paralytics three showed no arterial degeneration; eleven showed very slight degeneration; only two showed fairly marked degeneration.

Two only of the seventeen had tubal disease, and one of these exhibited marked atheroma and fibrosis of the aorta and was probably syphilitic.

Of the twenty-seven male general paralytics under forty-five, fourteen showed positive signs of syphilis, three doubtful, and ten no signs. Two suffered with aneurism, which was the immediate cause of death, in both of which there was a positive history of syphilis; with one exception all showed pearly nodular fibrosis, and in quite half the cases the degenerative changes of fibrosis and atheroma were either marked, or very marked. In no case was a degenerative case absent.

Of the thirteen non-paralytic males, three showed nodular fibrosis, but one of these certainly had syphilis, and two others doubtful signs on the body.

In three cases there were no degenerative changes at all, and the remainder only showed slight atheroma, but no fibrosis.

APPENDIX XXVI.

Appendix to Evidence of Dr. Wigleswortb.

TABLE I.

Showing the total number of pauper lunatics in the County of Lancaster and the proportion to population.

Year.	Population.		Total number of Lunatics on 1st January.	Number per 1,000.
1861	Census	2,429,440	1862 3,290	1·354
1862	estimated.	2,468,386	1863 3,489	1·413
1863	,,	2,507,332	1864 3,749	1·495
1864	,,	2,546,278	1865 3,793	1·489
1865	,,	2,585,224	1866 3,941	1·524
1866	,,	2,624,170	1867 4,196	1·598
1867	,,	2,663,110	1868 4,387	1·647
1868	,,	2,702,063	1869 4,640	1·717
1869	,,	2,741,012	1870 4,898	1·786
1870	,,	2,779,957	1871 4,982	1·792
1871	Census	2,818,904	1872 5,197	1·843
1872	estimated.	2,882,436	1873 5,349	1·855
1873	,,	2,945,968	1874 5,482	1·860
1874	,,	3,009,500	1875 5,770	1·917
1875	,,	3,073,032	1876 5,873	1·911

TABLE I.—*Cont.*

Year.	Population.		Total number of Lunatics on 1st January.	Number per 1,000.
1876	estimated.	3,136,564	1877 6,071	1·935
1877	,,	3,200,096	1878 6,374	1·991
1878	,,	3,263,628	1879 6,505	1·993
1879	,,	3,327,160	1880 6,789	2·040
1880	,,	3,390,692	1881 6,816	2·010
1881	Census	3,454,225	1882 7,010	2·029
1882	estimated.	3,501,170	1883 7,230	2·065
1883	,,	3,548,115	1884 7,568	2·132
1884	,,	3,595,060	1885 7,704	2·142
1885	,,	3,642,005	1886 7,878	2·163
1886	,,	3,688,950	1887 8,034	2·177
1887	,,	3,735,895	1888 8,290	2·219
1888	,,	3,782,840	1889 8,661	2·289
1889	,,	3,829,785	1890 8,933	2·332
1890	,,	3,876,730	1891 8,974	2·314
1891	Census	3,923,676	1892 9,200	2·344
1892	estimated.	3,971,719	1893 9,548	2·403
1893	,,	4,019,762	1894 9,857	2·452
1894	Census	4,067,805	1895 10,054	2·471
1895	estimated.	4,115,848	1896 10,249	2·490
1896	,,	4,163,891	1897 10,549	2·533
1897	,,	4,211,934	1898 10,832	2·571
1898	,,	4,259,977	1899 11,212	2·631
1899	,,	4,308,021	1900 11,395	2·645
1900	,,	4,356,065	1901 11,726	2·691
1901	Census	4,404,109	1902 11,913	2·704
1902	estimated.	4,452,152	1903 12,393	2·783

TABLE II.

SHOWING THE DISTRIBUTION OF THE PAUPER LUNATICS IN THE COUNTY OF LANCASTER.

No. of Lunatics 1st January.	Haydock Lodge.	%	Out County Asylums.	%	Royal Albert.	%	Friends.	%	Work-house.	%	Lancashire Asylums.	%	Remarks.
1862.													
3,290	50	1·51	6	·18	—	—	388	11·79	1,372	41·70	1,474	44·80	
1872.													
5,197	131	2·52	201	3·86	4	·07	289	5·56	2,325	44·73	2,247	43·23	The 4/- Government Grant per head for all Lunatics maintained in Asylums came into operation in 1875.
1882.													
7,010	126	1·79	102	1·45	54	·77	174	2·48	2,726	38·88	3,828	54·60	
1892.													
9,200	3	·03	4	·04	77	·83	161	1·75	2,179	23·68	6,776	73·65	Between 1882–1892 large additions were made to the accommodation in all the four Asylums in Lancashire.
1902.													
11,913	4	·03	315	2·64	104	·87	162	1·35	2,872	24·10	8,456	70·98	For several years preceding January 1st, 1902, there was a deficiency of Asylum Accommodation.
1903.													
12,393	1	·003	18	·14	103	·87	156	1·25	2,597	20·95	9,513	76·76	A new (fifth) Lancashire Asylum was opened on January 1st, 1902.

COUNTY OF LANCASTER.

RETURN showing the number per thousand of the population who were chargeable lunatics on the 1st January, 1862, 1872, 1882, 1892, 1902, excluding all lunatics who, having no settlement in any Lancaster Union, were chargeable exclusively to the County or to County Boroughs.

Name of Union.	Population on Census of 1861.	Number of Lunatics 1st January, 1862.	Number per thousand chargeable Lunatics.	Population on Census of 1871.	Number of Lunatics 1st January, 1872.	Number per thousand chargeable Lunatics.	Population on Census of 1881.	Number of Lunatics 1st January, 1882.	Number per thousand chargeable Lunatics.	Population on Census of 1891.	Number of Lunatics 1st January, 1892.	Number per thousand chargeable Lunatics.	Population on Census of 1901.	Number of Lunatics 1st January, 1902.	Number per thousand chargeable Lunatics.
*Ashton-under-Lyne	82,305	98	1·190	82,922	171	2·062	99,250	253	2·549	107,825	220	2·040	111,683	201	1·799
Barrow-in-Furness	—	—	—	—	—	—	47,276	28	·592	51,712	70	1·353	57,586	100	1·736
Barton-on-Irwell	33,038	70	1·793	51,563	63	1·221	72,825	73	1·002	93,501	157	1·679	114,773	229	1·995
Blackburn	119,942	79	·658	143,808	180	1·251	175,948	281	1·597	204,903	363	1·771	223·520	580	2·594
Bolton	130,269	167	1·281	158,402	277	1·748	192,413	361	1·876	226,803	488	2·151	257,587	715	2·775
Burnley	75,595	92	1·217	87,475	164	1·874	118,391	210	1·773	165,289	347	2·099	196,541	469	2·386
Bury	101,135	179	1·769	109,133	201	1·841	129,649	263	2·028	137,405	310	2·256	145,579	363	2·493
†Caton	9,312	18	1·932	—	—	—	—	—	—	—	—	—	—	—	—
Chorley	41,678	73	1·751	43,004	92	2·139	47,726	114	2·388	55,058	104	1·888	63,001	122	1·936
Chorlton	169,579	128	·754	211,357	354	1·674	260,257	520	1·997	299,855	766	2·554	342,643	980	2·860
‡Clitheroe	14,081	28	1·988	15,087	30	1·988	17,668	47	2·660	17,916	39	2·176	18,140	36	1·984
Fylde, The	25,682	36	1·401	30,641	50	1·631	40,908	42	1·026	56,299	58	1·030	93,697	121	1·291
Garstang	12,425	8	·643	12,186	17	1·395	12,375	18	1·454	12,151	19	1·563	11,860	22	1·855
Haslingden	69,781	76	1·089	79,944	130	1·626	95,293	161	1·689	103,408	174	1·682	115,223	224	1·944
§Kendal	—	—	—	120	—	—	123	—	—	117	—	—	—	—	—
Lancaster	24,004	32	1·333	32,683	42	1·285	40,842	45	1·101	52,024	65	1·249	67,385	130	1·929
Leigh	37,700	38	1·007	41,915	47	1·121	56,315	66	1·171	70,756	102	1·441	86,254	150	1·739
Liverpool	239,742	573	2·124	238,353	761	3·192	210,161	773	3·678	156,991	764	4·866	147,405	884	5·997
Lunesdale	—	—	—	6,978	16	2·292	7,132	14	1·962	7,347	18	2·450	6,948	25	3·598
Manchester	185,410	407	2·195	173,965	592	3·402	148,805	578	3·884	145,083	578	3·983	132,316	567	4·285
Oldham	111,276	137	1·231	126,969	172	1·354	168,459	276	1·638	201,153	412	2·048	215,624	572	2·652
Ormskirk	46,252	40	·864	59,307	73	1·230	83,179	96	1·154	99,207	137	1·380	108,594	189	1·740
Prescot	73,127	83	1·135	92,538	156	1·685	117,939	225	1·907	140,927	328	2·327	153,648	411	2·674
Preston	110,523	116	1·049	115,848	233	2·011	129,155	313	2·423	143,541	398	2·772	152,231	428	2·811
Prestwich	58,578	62	1·058	77,948	99	1·270	119,218	152	1·274	149,537	258	1·725	196,832	324	1·646
Rochdale	91,754	137	1·493	109,829	213	1·939	121,910	264	2·165	123,910	337	2·719	120,433	364	3·022
Salford	105,335	147	1·395	128,894	231	1·792	181,525	335	1·845	204,522	582	2·845	229,450	718	3·129
*Stockport	17,696	—	—	18,810	18	·959	25,898	23	·888	30,376	65	2·139	35,208	101	2·868
‖Todmorden	9,146	6	·656	9,332	12	1·285	9,236	11	1·190	—	—	—	—	—	—
Toxteth Park	69,284	74	1·068	85,811	145	1·689	117,028	215	1·837	128,387	317	2·469	156,230	484	3·552
Ulverston	35,738	63	1·762	55,032	89	1·617	43,685	105	2·403	43,821	96	2·190	42,793	140	3·271
Warrington	39,821	68	1·707	50,064	72	1·438	64,655	119	1·840	82,725	150	1·813	100,012	195	1·949
West Derby	156,561	140	·894	257,039	313	1·217	359,114	793	2·208	444,365	1,166	2·623	529,684	1,666	3·145
Wigan	94,561	115	1·216	111,947	184	1·643	139,867	236	1·687	166,762	312	1·870	191,259	403	2·107
Townships not in Unions	2,110	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Total chargeable to Unions	2,429,440	3,290	1·354	2,818,904	5,197	1·843	3,454,225	7,010	2·029	3,923,676	9,200	2·344	4,404,169	11,913	2·704

* These Unions are partly in Cheshire, but only the Lancashire portions are here included.
‡ This Union is partly in Yorkshire, but only the Lancashire portion is here included.
† This Union is now in Lunesdale.
§ This Union is now in Westmorland.
‖ This Union is now in Yorkshire.

TABLE IV.

SHOWING THE INCIDENCE OF INSANITY IN THE DIFFERENT UNIONS IN THE COUNTY OF LANCASTER, ARRANGED ACCORDING TO DEGREE.

Unions in which the number of Lunatics per thousand of the population is 2 or less, calculated on the Census of 1901.

Name of Union.	Population in 1891.	Population in 1901.	Increase.	Decrease.	No. of Lunatics per 1,000, 1891.	No. of Lunatics per 1,000, 1901.	Increase.	Decrease.
Ashton-under-Lyne	107,825	111,683	3,858	—	2·040	1·799	—	·241
Barrow-in-Furness	51,712	57,586	5,874	—	1·353	1·736	·383	—
Barton-on Irwell	93,501	114,773	21,272	—	1·679	1·995	·316	—
Chorley	55,058	63,001	7,943	—	1·888	1·936	·048	—
Clitheroe	17,916	18,140	224	—	2·176	1·984	—	·192
Fylde, The	56,299	93,697	37,398	—	1·030	1·291	·261	—
Garstang	12,151	11,860	—	291	1·563	1·855	·292	—
Haslingden	103,408	115,223	11,815	—	1·682	1·944	·262	—
Lancaster	52,024	67,385	15,361	—	1·249	1·929	·680	—
Leigh	70,756	86,254	15,498	—	1·441	1·739	·298	—
Ormskirk	99,207	108,594	9,387	—	1·380	1·740	·360	—
Prestwich	149,537	196,832	47,295	—	1·725	1·646	—	·079
Warrington	82,725	100,012	17,287	—	1·813	1·949	·136	—

Unions in which the number of Lunatics per thousand of the population is above 2 and not exceeding 3, calculated on the Census of 1901.

Name of Union.	Population in 1891.	Population in 1901.	Increase.	Decrease.	No. of Lunatics per 1,000, 1891.	No. of Lunatics per 1,000, 1901.	Increase.	Decrease.
Blackburn	204,903	223,520	18,617	—	1·771	2·594	·823	—
Bolton	226,803	257,587	30,784	—	2·151	2·775	·624	—
Burnley	165,289	196,541	31,252	—	2·099	2·386	·287	—
Bury	137,405	145,569	8,164	—	2·256	2·493	·237	—
Chorlton	299,855	342,643	42,788	—	2·554	2·860	·306	—
Oldham	201,153	215,624	14,471	—	2·048	2·652	·604	—
Prescot	140,927	153,648	12,721	—	2·327	2·674	·347	—
Preston	143,541	152,231	8,690	—	2·772	2·811	·039	—
Stockport	30,376	35,208	4,832	—	2·139	2·868	·729	—
Wigan	166,762	191,239	24,477	—	1·870	2·107	·230	—

Unions in which the number of Lunatics per thousand of the population is above 3 and not exceeding 4, calculated on the Census of 1901.

Name of Union.	Population in 1891.	Population in 1901.	Increase.	Decrease.	No. of Lunatics per 1,000, 1891.	No. of Lunatics per 1,000, 1901.	Increase.	Decrease.
Limesdale - -	7,347	6,948	—	399	2·450	3·598	1·148	—
Rochdale - -	123,910	120,433	—	3,477	2·719	3·022	·303	—
Salford - - -	204,522	229,450	24,928	—	2·845	3·129	·284	—
Toxteth Park -	128,387	136,230	7,843	—	2·469	3·552	1·083	—
Ulverston - -	43,821	42,793	—	1,028	2·190	3·271	1·081	—
West Derby - -	444,365	529,684	85,319	—	2·623	3·145	·522	—

Unions in which the number of Lunatics per thousand of the population is above 4, calculated on the Census of 1901.

Name of Union.	Population in 1891.	Population in 1901.	Increase.	Decrease.	No. of Lunatics per 1,000, 1891.	No. of Lunatics per 1,000, 1901.	Increase.	Decrease.
Liverpool - -	156,991	147,405	—	9,586	4·866	5·997	1·131	—
Manchester - -	145,083	132,316	—	12,767	3·983	4·285	·302	—

TABLE V.

SHOWING THE INCIDENCE OF INSANITY IN THE DIFFERENT UNIONS OF THE COUNTY OF LANCASTER, ARRANGED ACCORDING TO DENSITY OF POPULATION.

Unions in which the Population Aggregated in any one Town does not exceed 50,000.

Name of Union.	
Ashton-under-Lyne - - - -	Mainly urban, but with considerable rural district. Chief industries: cotton factories, iron works, hat mills, and coal mines, especially the first named, in which women are largely employed; factories furnish the chief employment even in the rural district.
Barton-on-Irwell - - - - -	Largely urban and residential with a distinct rural element.
Chorley - - - - - - - -	Largely rural but with considerable industrial element in the shape of cotton manufacture, etc.
Clitheroe - - - - - - -	Almost entirely rural and agricultural, but cotton mills in the borough of Clitheroe, and a few villages.
The Fylde - - - - - - -	Most of the population is at seaside health resorts, where no industries are carried on, the remainder is entirely rural and exclusively agricultural, with the exception of a few cotton mills.
Garstang - - - - - - -	This is purely rural and the population almost entirely employed in agriculture.
Haslingden - - - - - - -	Mainly urban but with a large rural district. Leading industries: cotton factories, felt and slipper manufacturing and engineering, rural population largely employed in cotton mills. Women largely employed.
Lancaster - - - - - - -	Mainly urban but with considerable rural element; the rural parishes are almost entirely agricultural. Chief industries: table baize and linoleum, cotton manufacture, furniture making, wagon building, and ironworks. Women and children employed in factories.
Leigh - - - - - - - -	Mainly urban but with a moderately rural element. Leading industries: coal mining and cotton factories; women largely employed in the latter.
Lunesdale - - - - - - -	Solely rural and mainly agricultural. Table baize and cotton factories employ about 7 per cent. of the population.
Ormskirk - - - - - - -	Rather more than one-half of the population is comprised in the seaside health resorts of Southport and Birkdale; rural population mainly agricultural; there is one small mining town; population, 5,700.
Stockport - - - - - - -	Exclusively urban, mainly industrial, but partly residential. Chief industries: cotton spinning and weaving, engineering trades, and hat manufacturing. Women largely employed in cotton mills and hat manufactures. The major portion of this Union is in Cheshire, and were it not for the artificial division of the Union, partly in Lancashire and partly in Cheshire, the aggregate population would transfer it into the succeeding column of population over 50,000.
Ulverston - - - - - -	Mainly rural and agricultural. Leading occupations: iron mining and iron working, grouped chiefly at Ulverston and Dalton-in-Furness.

Unions in which the Population Aggregated in any one Town is between 50,000 and 100,000.

Name of Union.	
Barrow-in-Furness	Mainly urban but with small rural element in which the population is almost entirely employed in agriculture and fishing. Leading industries: shipbuilding and iron and steel works; there are a few factories.
Burnley	Mainly urban and industrial but with considerable infusion of rural population, which however is engaged more in industrial occupation than in agriculture. Leading industries: cotton weaving, loom making, general engineering works, and coal mines, especially cotton weaving and textile fabrics. Women and children largely employed.
Bury	Mainly urban but with a large rural district. Chief industries: cotton spinning and weaving, iron works, textile machine makers, woollen, paper, bleach works, and calico printing. In nearly all the rural portions there are large works, either bleaching, woollen, or cotton. Women largely engaged in woollen and cotton factories.
Prescot	Mainly urban and industrial but with considerable rural element. Rural population chiefly agricultural and residential, with a few coal mines and copper manufactories. Leading industries: coal mining, glass and bottle manufacturing, chemical and soap manufacture, copper manufacture, iron foundries, brickmaking, watchmaking, and electric cable manufacture. No mills, and women not largely employed, such as are are chiefly in glass works and watchmaking.
Rochdale	Almost entirely urban and industrial. Leading industries: cotton, woollen, engineering, and machine making. Women largely employed. A great centre of the cotton manufacture. The Union has been somewhat reduced in size during the last decade, which accounts for a decrease in population.
Warrington	Mainly urban, contains also a large rural district, which is mainly but not wholly agricultural. Leading industries: iron works, wire works, soap works, wagon works, engine works, collieries, cotton factory, fustian cutting, paper works, breweries, and tanneries. Women and children largely employed in cotton factories and fustian cutting.
Wigan	Largely urban and industrial but with considerable rural element. Chief industries: coal mining and cotton manufacture.

Unions in which the Population Aggregated in any one Town exceeds 100,000.

Name of Union.	
Blackburn	Mainly urban but with a fair rural infusion. A large cotton-spinning district, which is the leading industry. Women very largely employed.
Bolton	Almost entirely urban and engaged in industrial occupations, chief of which are cotton factories, iron works, bleaching, paper making, coal mining, and brick and tile making. Women and children largely employed in cotton factories and bleach works.
Chorlton	Almost exclusively urban. Industries: engineering, cotton factories, printing, paper making, brick works, and rope works. A large portion of the city of Manchester is comprised in this Union.
Liverpool	Exclusively urban, comprising a parallelogram of about three square miles in the heart of the city of Liverpool. The population has undergone a considerable and steady decline owing to demolition of residential property and the substitution of works and public buildings of various kinds, also the opening up of new and wider thoroughfares and the clearing away on sanitary grounds of many of the more densely populated districts. The extension of the dock system towards the north, outside the parish, has also exercised considerable influence. Hence there has been a shifting of large numbers of the labouring classes outwards into the surrounding districts. The most numerous body of labourers is employed at the docks, where the work is to a large extent casual and intermittent. A good many women employed in tobacco manufacture.
Manchester	Exclusively urban. Leading industries, cotton and iron. The population has been steadily declining, mainly due to the demolition of residential property to make room for the erection of warehouses and other places of business, extension of railway stations, and municipal improvements.
Oldham	Almost entirely urban and industrial; one of the chief centres of cotton manufacture in which women are largely employed. Engineering also largely carried on.
Preston	Mainly urban and industrial but with considerable rural element; an important centre of cotton manufacturing. Women largely employed.
Prestwich	Almost entirely urban; the Union is practically a residential one, consisting largely of dwelling-houses and shops, the houses occupied by persons who work in the township of Manchester. Industries, a few factories and bleach works. Much of the property is small, but there are also areas of good class residential houses. A large portion of the city of Manchester is comprised in this Union.
Salford	Almost exclusively urban and industrial. Chief industries: engineering works, cotton factories, printing, dyeing, and bleaching. Considerable number of women employed in cotton factories.
West Derby	Mainly urban with considerable rural suburban element. Comprises a large portion of the city of Liverpool and the county borough of Bootle, both densely populated. Women employed in tobacco works, jam works, rope works, and bobbin works. A large portion of the city of Liverpool is comprised in this Union.
Toxteth Park	Almost exclusively urban; the docks employ the bulk of labour. The population is mostly densely aggregated in small houses, but there is also comprised in this Union a high-class residential district. A large portion of the city of Liverpool is comprised in this township.

APPENDIX XXVII.

SUMMARY OF REPORTS FROM SUPERINTENDENTS OF LUNATIC ASYLUMS.

The Lunacy Commissioners sent a circular letter in December, 1903, to the medical superintendents of all the county and borough asylums in England and Wales, asking for any physical statistics, information, or suggestions as to the lines on which steps to collect such statistics and information should be conducted. Nearly all sent replies, most of them of an inconclusive character. Those which appeared to be useful were forwarded by the Home Office for the use of the Physical Deterioration Committee, and a summary of them here follows.

I. County Asylums.

Brecon and Radnor Asylum, Talgarth.

Dr. Ernest Jones suggested inquiry into the condition of families where the mothers have worked in factories from early youth; such women rarely bear healthy children; domestic work and cookery almost unknown to them; in rural districts all the best men and women go to the towns, and leave the mentally dull to marry and intermarry and "breed dullards and imbeciles worse than themselves."

Cumberland and Westmorland Asylum, Carlisle.

Dr. W. F. Farquharson had no definite statistics, but said it was obvious that of late years the cases admitted had been of a much more unfavourable nature than formerly; the number of pauper patients had been gradually rising for many years; gave table showing average number of pauper patients in each county; the number of lunatics in the workhouses also shows an increase; the larger industrial centres show the greater increase; the increase cannot be accounted for merely by the fact that the population is growing.

Percentage of cases caused by drink has diminished from 20·3 in 1900 to 12·3 in 1903.

Derby County Asylum, Mickleover, Derby.

Dr. Richard Legge had no statistics. Degeneration of dwellers in large towns only temporary, and would disappear in a generation if surroundings were equalised. Standard of health of patients not so good as twenty years ago, but this probably due to greater number of colliery and factory hands. Acute mania now less common; obscurer forms of nervous disease now more common. Deterioration of the race would require centuries to become noticeable, and no materials for trustworthy conclusions exist; still symptoms may appear; the changed views of sexual morality now common, the want of odium attaching to the production of abortion, and the tolerance of the idea of using checks to conception, may be such symptoms.

Dorset County Asylum, near Dorchester.

Dr. P. W. Macdonald said there had been an increase of late years of patients under twenty-three. Degeneration largely due to the emigration from the county of the most fit—as many as 10,000 during the last decade—and the "marrying and breeding like rabbits" of those left behind.

Conducted an inquiry in regard to the large number of young soldiers among the admissions since the outbreak of the Transvaal War. Found this not due to strain on active service, but to the "parental stock or raw material being sapped with hereditary predisposition to one or other of the various phases of nervous and mental disease."

There should be a careful review of the increase of premature dementia among admissions to the asylum during the last ten years.

Durham County Asylum.

Dr. W. St. J. Skeen sent average heights and weights of 100 men admitted in 1883 and 1903 respectively, as follows:—

Year 1883, average height per man, 5 ft. 5¾ in.
Year 1903, average height per man, 5 ft. 5½ in.
Year 1883, average weight per man, 9 st. 1¾ lbs.
Year 1903, average weight per man, 9 st. 2½ lbs.

The decrease of half inch in height in twenty years appears considerable, but then the weight has gone up. It would tend to show that height and weight are not necessarily correlative.

He also sent similar measurements for women, but for 1903 only.

Glamorgan County Asylum, Bridgend.

Dr. H. T. Pringle sent paper by his colleague, Dr. R. S. Stewart, on the relation between wages, intemperance, and crime in South Wales. This paper, accompanied by an illustrative diagram, shows that lunacy increases with the rise of wages and the greater spending power of the operative class; a falling wage-rate is associated with a decrease of drunkenness, crime, and lunacy.

In Glamorganshire there is no real upward progress, but the reverse. The raising of the standard of material comfort, accompanied as it is by great "unwisdom," is productive of the most detrimental consequences. "The people perish for lack of knowledge."

Joint Counties Asylum, Carmarthen.

Dr. Edwin Goodall suggested anthropometric comparison of large numbers of the population with an average standard, obtained by dividing the country into districts; the standard would differ for each district; has been working at a scheme of anthropometric examination, and has begun taking measurements; has by those means proved a man who had undergone imprisonment to have been a physical defective.

Lancaster County Asylum, Whittingham, Preston.

Dr. James F. Gemmel did not attach any great value to any measurements of the cranium which might be undertaken by an Anthropometric Survey. He called attention to the lack of statistics, but stated his opinion that physical deterioration was in progress.

Out of 1,100 admissions to the Asylum in the past two years, "fifty-five were admitted in all stages of pulmonary tuberculosis, 101 were ascertained to have a family history of tuberculosis, and 232 were admitted with well marked organic disease of the heart." Proceeding to a detailed discussion of the measures which have recently been adopted against tuberculosis, he pointed out that these do not at present greatly mitigate the attacks of the disease on the poorest classes.

He also stated his belief that boiled or sterilised milk is scorbutic in its tendency, and is not so good for babies as cow's milk.

Further he suggested the recording of statistics on the following points:—

(1) The number of cases of general paralysis, syphilitic insanity, and other luetic diseases of the nervous system in countries in which Contagious Diseases Acts are enforced, as compared with the number of cases in this country.

(2) The frequency of these affections of the nervous system among soldiers and sailors, a class prone to contract *lues*.

(3) The physical condition of patients on admission into asylums, together with an annual return of the principal diseases noted.

Leicestershire and Rutland Asylum.

Dr. Rothsay C. Stewart had no statistics, but would suggest as subjects for inquiry:—

(1) Mode of feeding the young.

(2) Age of marriage, *i.e.*, before individual is properly developed.

(3) Occupations of female sex.

North Wales Counties Lunatic Asylum, Denbigh.

Dr. L. F. Cox said that an examination of the statistics of this Institution did not indicate any remarkable or exceptional deterioration; in 1903 there were several deaths over eighty, none in 1875; cases of general paralysis about the same in number; causes of insanity much the same.

Three Counties Asylum, near Hitchin.

Dr. J. E. de Lisle had no statistics; thought there was a tendency to degeneration from the inter-marriage of near relatives of weak mind, of epileptics, of consumptives, and of chronic alcoholics; suggested "legislation and segregation."

Wilts County Asylum, Devizes.

Dr. J. Ireland Bowes said that "physical degeneracy has been a growing cause of insanity" in cases admitted. By this he appears to mean that there is an increasingly high percentage of insanity due to bodily disease; this is partly due to the fact that there has been much intermarrying in the past in Wiltshire.

The best people leave the county, while the mentally and physically deficient remain.

Had no statistics, but suggested the submission of a series of questions as to statistics to superintendents of asylums.

II. London County Asylums.

Claybury Asylum.

Dr. Robert Jones sent a paper on "The Development of Insanity in regard to Civilisation," read before the British Medical Association in 1903. This paper is deeply interesting, and the author contends that physical degeneration is in progress, in spite of hygienic improvements; he mentions, among many other points, the pressing necessity of dealing with the ravages of syphilis.

Colney Hatch.

Dr. W. J. Seward's experience covers more than twenty-six years, during which some 17,000 patients have been under his treatment. He referred especially to three causes of insanity:—

1. *Alcoholic Excess*—this covers 20 per cent. of the cases; he advocates that instruction "as to the evils (mental, moral, and physical) resulting from intemperance should be made compulsory in all elementary schools."
2. *Syphilis.*
3. *Density of population* and its attendant evils; he sent figures showing a close correspondence between the proportion of pauper lunacy and the density of population in the various London districts.

Epileptic Colony, Ewell, Surrey.

Dr. C. Hubert Bond regretted the lack of statistics; advocates a uniform form of case-taking in asylums throughout the country, and the collecting of family histories in a systematic manner.

Still more important would be "a well thought out scheme of anthropological examination of children attending Board Schools"; to this should be added an inquiry into the personal and family history of the parents of children who showed any marked departure from the normal.

III. County Borough Asylums.

Croydon Mental Hospital, Warlingham, Surrey.

Dr. E. S. Pasmore thought degeneracy was due to—

1. Drink—25 per cent.
2. Too early marriages.
3. Marriages of convenience.
4. Too long hours of work.
5. Marriages of people who have been insane.
6. Too frequent use of prepared foods.
7. Over-education in schools of subjects which are of no use, to the neglect of cookery, needlework, etc.
8. Scanty underclothing.
9. Defective methods of heating houses.
10. Emigration of the strong to the colonies
11. Low rate of wages in country districts.
12. Prevalence of venereal diseases—80 per cent. of locomotor ataxy and general paralysis is due to syphilis.

Suggested—

Legislation aimed at the following:—

1. Suppression of drink by closing public houses on Sunday; prohibiting confirmed drunkards (or any one suffering from a fatal malady) to marry; less hours of work, but no half-holidays.
2. Suppression of contagious diseases.
3. Institution in all schools of classes of cookery and hygiene.
4. Establishment of educational crèches, etc.

Middlesborough Asylum.

Dr. G. Stevens Tape sent a complete list of all admissions from March, 1898, to December, 1903, with ages, height, and weight.

(He gave the admissions in order of date, but did not specify the exact date, or even the year; and he did not distinguish male from female; so that it was impossible to draw any reliable conclusions for purposes of comparison.)

APPENDIX XXVIII.

I.

A BRIEF STATEMENT OF THE RESULTS OBTAINED BY A COMMITTEE OF THE BRITISH DENTAL ASSOCIATION APPOINTED TO INVESTIGATE THE CONDITION OF THE TEETH OF SCHOOL CHILDREN.

The examination of the teeth of school children in a number of schools (mainly Reformatories, Industrial-Schools, Training Ships, Orphanages, National and Board Schools, and the like) throughout the country was conducted by dental practitioners approved by the Committee of the British Dental Association, in order to obtain statistics for the following purposes:—

1. To acquire a more exact knowledge of the condition of children's teeth at various ages.
2. To show, by means of the facts thus acquired, the disabilities under which children frequently suffer in their growth and development, and the important bearing of those disabilities upon the future health of the individual.

The following table is a brief summary of the results of the examination, and contains merely those figures which are of the greatest importance:—

Table showing the results of an examination of the mouths of 10,517 boys and girls in English and Scotch schools, with an average age of about twelve years:—

Number of children examined - -	10,517	
Temporary teeth requiring filling -	9,573	18,009
Temporary teeth requiring extraction	8,436	
Permanent teeth requiring filling -	13,017	19,096
Permanent teeth requiring extraction	6,079	
Total unsound teeth - -		37,105
Teeth already extracted	2,174	
Sets of teeth free from decay - -	1,508 = 14·2 per cent.	

It is important to note that this statistical information was derived, not from the ordinary practice of dental surgeons or special hospitals, but from the inspection of industrial schools, training ships, and other scholastic institutions, and may thus be taken as typical of the condition of the teeth of the poorer classes both in England and Scotland, since the *healthy* teeth and mouths have been as carefully tabulated as the *unhealthy*.

An excellent comparison was afforded by two Edinburgh schools with a sufficiently large number of pupils, where the examinations were made by the same examiner; the children were all well fed and lived under perfectly sanitary conditions, and the average age in each school was exactly the same, viz., eleven and a half years. It was found that the ratio of defective permanent teeth per 1,000 children was 158·2 in the school for the children of well-to-do working people, and 273·9 in that for the children of a better class, professional men and merchants. This striking contrast was intensified by comparing the relative numbers of sets of teeth free from decay, viz., 11 per cent. in the poorer and 7·5 per cent. in the richer class school.

A fact which merits careful consideration is that out of the 10,517 children's mouths inspected, there were only about 1,508 which required neither fillings nor extractions, a little over 14 per cent., and that in all the others some condition existed which necessitated special attention, in order to procure, as nearly as is possible, a healthy mouth.

In the returns when all the teeth are free from decay and even if irregular, the denture is taken as *good*; if only one to four teeth are decayed or lost, as *fair*; if five to eight, *bad*; and if more than eight, *very bad*.

By grouping three yearly returns from seven onwards together as in Table B, in parallel columns, the early age at which decay begins, the rapid increase from bad to worse in the decayed sets with each year of life, and the inevitable fate of such sets in the course of years, unless controlled by treatment during childhood, are proved to almost mathematical demonstration.

TABLE B. Showing the relative ratio per hundred children having sound teeth, defective temporary teeth, and defective permanent teeth, classified quarternarily, arranged in triennial age periods.

Age Period.	iv.–vi.	vii.–ix.	x.–xii.	xiii.–xv.	xvi.–xviii.	Quality.
No. Examined.	744	1,716	3,071	2,376	268	8,175
Sound (no decay) - -	23·8	14·2	16·1	14·1	6·4	Good
Defective Temporary Teeth only - - - -	67·4	43·3	18·3	5·1	0·1	Uncertain
Defective Permanent Teeth						
1—4	8·8	41·5	55·9	51·9	37·3	Fair
5—8	—	1·9	8·5	22·9	32·6	Bad
9 or more	—	—	1·2	6	23·6	Very Bad
	100	100	100	100	100	

The rise in the ratio of sound dentures until the third period is fully accounted for by the eruption of good permanent teeth in place of, for the most part, decaying temporary teeth, and perhaps by the fact that precocious development is not infrequently attended by exceptional susceptibility to decay. The rapid diminution of cases presenting only defective temporary, is only what might have been expected except in so far as they persist into the third and fourth age groups. The schools influenced in this tabulation comprised two very distinct categories, the poor not yet receiving dental treatment, and the rich with dental officers attached. The undue retention of these temporary teeth only occurred in the former class.

The rise and fall of the ratios in the *fair* class, the abrupt increase of those in the "*bad*" during the third, followed by the serious transition from *bad* to *very bad* during the fourth age period, is more than instructive, and demonstrates the urgency of treatment in the first and second age periods.

In 931 cases (Feltham, Shibden, Walsall) only about 13 per cent. were returned as *clean*, and 42 per cent. as *fairly clean*, while 42 per cent. were classified as *dirty*, and about 3 per cent. as *foul*. The presence of tartar was registered as *little* in over 43 per cent., and *much* in over 9 per cent. of the mouths examined.

(Signed) W. H. DOLAMORE.
Hon. Sec. B.D.A.

II.

REPORT DATED 8TH FEBRUARY, 1904, OF THE HYGIENE COMMITTEE OF THE BRITISH DENTAL ASSOCIATION ON THE ALLEGED INCREASE OF DENTAL CARIES.

The Committee, in submitting the present Report as to the alleged increase of dental caries, beg to point out that after an exhaustive search, no comparative statistics as to the prevalence of dental caries have been found, and they are of opinion that none exist.

Failing the exact proof which statistics alone can give, they beg to present the following evidence for whatever value it may possess.

A circular letter was addressed to certain dental practitioners who were able to speak from an experience extending over fifty years. All agreed that dental caries had increased, though some considered it had not increased to the alarming extent frequently alleged. The Committee have examined the collection of British skulls in the Museum of the Royal College of Surgeons of England. Dental caries, in skulls of ancient date, was almost entirely absent, and, where present, it was trifling in extent. Skulls of modern date showed evidence of dental caries to a considerable extent.

The researches of Mummery, Cartwright, Coleman, and Sir B. W. Richardson, recorded in the transactions of the Odontological Society of Great Britain, show that the teeth of early British skulls correspond in character to those referred to in the above mentioned collection.

An examination was made of 181 jaws at University College, London, exhumed at Whitechapel, presumably from one of the plague pits (circa 1665.) These, despite the number of teeth missing, showed that dental caries was more prevalent than in early British skulls, although not nearly to the extent common at the present day.

With respect to dental caries at the present time the Committee beg to present the following facts:—

More than 3,000 men were invalided home during the Boer War on account of defective teeth. This, however, did not fully represent the extent of dental disease, as the Government sent out several dentists to attend to the troops in the fields, besides employing the services of many local dentists for those at the base.

Hospital statistics show that a largely increasing number of patients require to be referred to the dental departments. There is also a largely increasing number of patients suffering from diseases of the stomach and from other indirect affections due to bad teeth, who require dental treatment.

The Royal College of Surgeons of England in their preliminary report to the Home Secretary points out that rejection of recruits due to bad teeth has increased nearly five-fold in the twelve years, 1891 to 1902.

Statistics have already been supplied to the Privy Council showing that dental caries occurs in the teeth of school children to the extent of at least 86 per cent.

The public press publishes numerous letters from laymen bearing testimony to the prevalence of dental caries.

If further evidence, or more definite statistics, of the increase of dental caries are required, the Committee beg to recommend that Government should undertake the conduct of an inquiry. The Committee, in addition, desire to strongly emphasise the importance of instructing the children of the public elementary schools, in the value and care of their teeth.

Signed on behalf of the Hygiene Committee of the British Dental Association.

WM. RUSHTON.
Hon. Secretary.

III.

REPORT OF THE WAR OFFICE AND ADMIRALTY INTER-DEPARTMENTAL CONFERENCE ON THE TEETH OF RECRUITS, DATED AUGUST 25TH, 1903.

The proposal to have a joint conference between representatives of the Admiralty and the War Office on the subject of the relatively large proportion of recruits for both Navy and Army who have to be rejected on account of the defective state of their teeth, arose out of a reply given in the House of Commons by Sir W. Anson, in answer to a question asked by Mr. Weir, that a large percentage of men were rejected as recruits for the Navy on account of bad teeth, while the Secretary of State for War had also been for some time attracted to the prominent position occupied in recent recruiting statistics for the Army by rejections for this cause.

It was pointed out that the Board of Education are considering the propriety of communicating with local authorities on the subject.

Mr. Brodrick offered to associate himself with Lord Selborne in making a joint representation to the Board of Education, with a view to steps being taken by that Department to check if possible the evil complained of, and to arrest the deterioration of physique among the working classes from which the recruits for both branches of the service are drawn. It was therefore agreed, before any representation on the subject was made to the Board of Education, that Admiralty and War Office representatives should consider the question with the object of reporting as to any steps which may be desirable to take in the matter.

Colonel G. T. Onslow, C.B., Inspector of Marine Recruiting, and Fleet Surgeon T. E. H. Williams, R.N., attached to the Admiralty Recruiting Department in London, were the Admiralty representatives, and Major-General H. C. Borrett, C.B., Inspector-general of Recruiting, and Major T. McCulloch, D.A.D.G., Army Medical Service, represented the War Office.

The meeting was held on the 20th July, and after discussing the general question it was decided to report as follows :—

Examination of the recruiting statistics for the Army for the years 1891 to 1902, shows a progressive increase in the numbers of men rejected for loss or decay of teeth from 10·88 per 1,000 in 1891 to 49·26 per 1,000 in 1902. Rejections for defeective teeth had risen to twenty-six per 1,000 by 1898, and the figures remained fairly steady for the next four years ; then a very large increase is shown for 1902, when about 5 per cent. of the men examined were rejected for bad teeth.

The only statistics available relating to Naval recruiting are those obtained for a period of one year, 1st January to 31st December 1902, from the Admiralty recruiting districts under recruiting staff officers, Royal Marines, dealing with about four-fifths of the total Naval recruiting.

These statistics show about 10 per cent. rejections for defective teeth by medical officers, but do not include rejections by recruiters.

The standard requirements in regard to soundness of teeth is probably higher for the Navy than for the Army.

The recruit for the Navy under 17 years of age is rejected if he has more than seven, or above 17 years ten teeth deficient or decayed, and both classes must possess some opposing molars and incisors.

There is no given number laid down as a guide to the acceptance or a rejection of a recruit for the Army, the rule being that acceptance or rejection will depend more upon the consideration of the relative position of the teeth which are no longer affected. And further, the loss of many teeth in a man of indifferent constitution would point to rejection, while a thoroughly robust recruit who has lost an equal number might be accepted.

The causation of a large prevalence of a defective state of teeth, among the classes whence recruits are mainly drawn, is a complex and difficult problem. It obviously bears a close relation to their general physical condition, a matter which is at present engaging much attention, and in connection with which a comprehensive enquiry has been proposed. But this much is certain, that deterioration of teeth is intimately connected with a variety of intricate causes affecting the general health of the nation.

There seems to be some divergence of opinion as to what the chief factors leading to early decay of teeth really are.

On the one hand, it is stated all are agreed that the great cause of decay of the teeth is improper or insufficient nutrition during infancy and childhood. That the development and growth of the teeth suffer in proportion to the general malnutrition of the body resulting from defective feeding, which may be on account of ignorance on the part of the mothers, food adulteration, or actual inability of the parents to provide proper food. Some observers hold that formerly the children of the agricultural classes, from which recruits for both services were then largely drawn, were nursed by their mothers during infancy and were fed during childhood to a large extent on brown bread and good milk, and that throughout the period of dentition a diet was assimilated which favoured the production of good teeth and bone generally.

With the influx of the population in recent years to urban and suburban life, fewer mothers in all classes of life nurse their own children during infancy, while during childhood the children of the poor are fed to a great degree on watered milk and patent foods from which the husk has been removed.

Apart from this feeding having a poorer nutritive value, less mastication is required and possibly the development of teeth and jaws suffer from being less used. However that may be, we have no exact evidence as to the greater frequency of dental caries in the case of children who have been fed on artificial foods as infants, as compared with infants naturally fed. There can be little doubt that dietetic errors, poverty with insufficient food, inherited disease, and the unhealthy environment which poverty also usually entails, *e.g.*, defective housing, overcrowding and insanitary surroundings, must all be factors powerfully influencing the growth of the body, and actively antagonistic to healthy physical development of all its tissues and organs.

On the other hand, while we must give due weight to the point that soundness of teeth is most to be looked for as an accompaniment of health and vigour, the consensus of opinion amongst the latest authorities on the teeth is distinctly in favour of the view that decay of the teeth is the result of local influences, and that malnutrition plays but a very small part in the production of dental caries, as compared with the more common use of articles of food which readily undergo acid fermentation, and that it is neglect to keep the mouth clean that is chiefly responsible for the decay of teeth.

The Committee hold the latter view and consider the want of cleanliness is the chief cause of dental caries.

We are of opinion that no sufficiently comprehensive data are available which would enable us to compute the degree of dental deterioration existing at the present day. We believe such, however, to have increased.

We consider that the increase in the number of rejections among recruits for the Army during the last few years may be due in some measure to the greater attention now paid by recruiting medical officers to the condition of the teeth when examining candidates for the service than was formerly the case.

The importance of the care of teeth and of systematic cleansing should be impressed on all men serving.

We recommend that any representation which may be made to the Board of Education on the subject should press the following points :—

1. That the teaching of the elements of hygiene should be made compulsory in schools, and in this teaching the care of the teeth should receive special attention.

2. That daily cleansing of the teeth should be enforced by parents and teachers.

3. That systematic examination of the teeth of children by competent dentists, employed by school authorities should be practised where possible, to prevent caries extending, to stop carious teeth, and to remedy defects of the teeth.

A knowledge of the laws of health and the elements of sanitation should be spread abroad amongst the working classes by special lectures and by distribution of leaflets and pamphlets. Here, again, the care of the teeth should be an important part of the instruction. We notice with pleasure that Westminster is setting an example of this kind. Lastly, local authorities should enforce strongly the laws dealing with the adulteration of food, and especially should exercise a strict supervision over milk supplies.

The Committee have not gone into the question of the employment of dentists in the Army and Navy, nor of the provision of dentures for enlisted men, as they considered that these points were outside the scope of their reference.

APPENDIX XXIX.

CORRESPONDENCE BETWEEN THE NATIONAL ANTI-VACCINATION LEAGUE AND THE PHYSICAL DETERIORATION COMMITTEE.

The National Anti-Vaccination League,
50, Parliament Street,
London, S.W.
15th September, 1903.

Almeric Fitz Roy, Esq., C.V.O.

SIR,—In view of the appointment of a Departmental Committee to deal with the subject of Physical Degeneration, I am desired by the Council of this League to respectfully and earnestly ask that the enclosed memorial may receive consideration.

The Council venture to think that the grounds set forth in this Memorial make out a case for inquiry as to the effect vaccination has had upon the national health.

The Council therefore will be obliged by your bringing this matter forward, and I await the favour of your kind reply.—I am, sir, your obedient servant,

CHARLES GANE,
Hon. Secretary.

(ENCLOSURE.)

Physical Deterioration.

In view of the preliminary inquiry about to be conducted into allegations that have been made concerning the physical deterioration of certain classes of the population, it is important to bear in mind that a great many causes have been in operation during the last century, some calculated to raise and others to lower the physique of the people. Whether the net result of the plurality of causes at work has been to elevate or to deteriorate the national stamina is a very complex problem. It may well be that some practices intended to increase the resistant power of the body against certain perils have been productive of unforeseen results, and in the long run have contributed to the deterioration of the physique of the nation in unanticipated ways. Among such practices may be the inoculation of the vaccine disease, intended as a protection against the small-pox.

Mr. Herbert Spencer has called attention to this subject in his latest publication, "Facts and Comments." He says: "You cannot change the constitution in relation to one invading agent, and leave it unchanged with regard to all other invading agents," and he asserts that "the assumption that vaccination changes the constitution in relation to small-pox and does not otherwise change it is sheer folly." The same author, in analysing the causes tending to physical degeneracy, in his work, "Education" (page 157, footnote), suggests vaccination as a part cause in the production of constitutional debility. The view is not a new one and has been supported by many medical men and students of sociology. The late Dr. Felix von Niemeyer, Professor of Clinical Medicine in the University of Tübingen, in his clinical lectures on pulmonary consumption (published by New Sydenham Society, page 22) observed:

> "The injurious influence which diseases have on the constitution, and thereby on the tendency to consumption, manifests itself most frequently and in the most lasting manner in earliest infancy. It is fortunate if children escape disease, particularly in the first years of their life, during which by far the most rapid development of the body takes place, and when by favourable or unfavourable external circumstances the foundation is laid, in a great measure, for a strong and robust, or a weak and delicate health. Even vaccination may, by the febrile disturbance preceding the eruption, as well as by that accompanying the suppuration, both of which are never absent, and according to my numerous thermometrical observations sometimes reach a very high degree, considerably weaken, more especially those children who are not very strong, and may leave behind it the germs of a disposition to consumption."

The hitherto unsuspected or unexplained potentialities of vaccination as paving the way for constitutional injury have recently, to some extent, been elucidated by the researches of Fünck, Pfeiffer, Guarnieri, Wasielewsky, and in this country, Jackson Clarke. These researches indicate that a protozoan is found in the tissue of the vaccinated which presents a close similarity to those found in the constitutional affections of syphilis and in cancers, and the last-named suggests that the development of carcinoma and carcoma may be due to the persistence of protozoan organisms in the tissues even twenty years or more after the original disease has appeared to terminate. (See "Medical Press," 11th March, 1903, "Protozoa and Disease, 1903," by Jackson Clarke.)

In France a relationship between vaccination and physical degeneration was alleged in a work by M. Carnot, "Essai de Mortalité: comparée avant et depuis l'introduction de la vaccine en France, Autun, 1849. . . . . Analyse de l'influence exercé par la variole, ainsi que par la réaction vaccinale"; Autun, 1851; and "Parallèle de l'état sanitaire de Paris avant et depuis la vaccine"; Revue Medical, 1856; and in the sensational writings of M. Verdé de Lisle, "De la Dégénérescence Physique et Morale de l'Espèce Humaine déterminé par la Vaccine," Paris, 1855.

Apart from allegations of a general nature accusing vaccination of exerting a deleterious influence upon the national physique, there is abundant evidence, of unimpeachable character, of death and of the communication of specific diseases directly arising from the practice. No doubt, efforts have been made to controvert these damaging allegations, and the most notable of these is the work of Sir J. Simon, printed in 1857. He maintained that "against this vast gain (by vaccination) there is no loss to count. Of the various alleged drawbacks to such great advantages the present state of medical knowledge recognises no single trace." He especially and scornfully rejected the accusation that properly performed vaccination could communicate syphilitic disease. No medical man with a reputation to lose could maintain this view of Sir John Simon's now. He has abandoned it himself. He has been forced to admit that "it is certain that the vaccine lymph of the syphilitic infant may possibly contain the syphilitic contagion in full vigour, even at moments when the patient, who thus shows himself infective, has not on his own person any outward activity of syphilis." (Quain's Dictionary of Medicine, article "Contagium.") When a witness before the Royal Commission, Sir John was prepared to modify his views of 1857 (Q. 118–122), but his examination on this head was postponed by the Chairman, and though repeated requests were made for his re-appearance, and also for the examination of his successor, Sir George Buchanan, the just and natural curiosity of the public was never gratified.

The majority of the Commission, however, had no difficulty in recording their opinion on one part of this important question. They state, "It was at one time doubted whether syphilis could result (from vaccination), and it was even confidently asserted that it could not," but that "facts which were, not long after the issue of Mr. Simon's report, brought before the profession, and carefully investigated, made it certain that the negative conclusion which had been arrived at was a mistaken one, and from that time no doubt can have been entertained by any that it is possible to convey syphilis in the act of vaccination." In spite of the impossibility of further doubt upon this question it is a subject for the gravest censure that a pamphlet "revised by the Local Government Board and issued with their sanction," should have been widely distributed down to a very recent period in which it was emphatically maintained that "The fear that a foul disease may be implanted by vaccination is an unfounded one. . . . The alleged injury arising from vaccination is, indeed, disproved by all medical experience." In view of this reckless inaccuracy, published with the sanction of the Local Government Board, the failure of Sir George Buchanan to appear as a witness is the more inexcusable, and judgment must go by default against the value of the testimony of the medical depart-

ment of the Local Government Board. A perusal of the Majority and Minority Reports and of the evidence given before the Royal Commission shows that there is an active controversy as to the injuries that may and in some cases do result from vaccination. Thus the Dissentient Commissioners (par. 185, Dissent Report) say "We are deeply impressed with the sad cases of severe illness, suffering and death which the investigations of medical men appointed by the Commission have after rigid scrutiny failed to disconnect from vaccination."

For the foregoing reasons it is of obvious importance that the influence of vaccination on public health should be considered by a body unbiassed by the supposed necessity of upholding that practice.

London, September 15th, 1903.

Privy Council Office,
Whitehall, London, S.W.
9th December, 1904.

SIR,—

Physical Deterioration Committee.

With reference to the memorial sent in September last by the National Anti-Vaccination League for the consideration of the Physical Deterioration Committee, I have the honour to inform you that the views therein expressed have received the careful consideration of the Committee.

In view, however, of the fact that an exhaustive inquiry into the whole question of the effects of vaccination was conducted as recently as 1896, by the Royal Commission appointed for the purpose, the Committee do not feel themselves called upon to discuss axioms of public health which are part and parcel of the law of the land.—I am, sir, your obedient servant,

ALMERIC W. FITZ ROY.

Charles Gane, Esq.

The National Anti-Vaccination League,

50, Parliament Street,
Westminster, S.W.,
19th December, 1903.

SIR,—

Physical Deterioration Committee.

I am directed by the Council of the National Anti-Vaccination League to convey to you their thanks for your communication of the 9th inst., which has had careful consideration.

I am further desired to express regret that your Committee could not acquiesce in the request to receive evidence as to any effect vaccination may have on the health of the community.

The Council respectfully point out that the Report of the Royal Commission of Vaccination was not unanimous, and there was very pronounced dissent from a minority of the Commissioners.

The Council also urge that the scope of the Committee's inquiry is unduly limited if it excludes the consideration of any question supposed to be protected by the law of the land.

In the matter of vaccination the suggested "axioms of public health" go, in practice, far beyond the law of the land which enables conscientious objectors to obtain exemption on the ground of their conscientious belief that the operation will be prejudicial to health.

It has also to be remembered that the Departments violate the principle laid down in the Act of 1898 and force vaccination upon those in the service of the State, although the lymph is not guaranteed and is still the subject of experiment. Many large employers of labour follow the example of the Departments in this matter.

The Council, therefore, suggest that it cannot be maintained that compulsion as now practised is now an axiom of public health and part and parcel of the law of the land.

If, however, the Committee do not see their way to inquire into this subject, I am desired to ask whether it is their intention to publish in full this correspondence so as to indicate to readers of their Blue Book that the subject has been brought to their attention and to show on what grounds it has been excluded.—I am, sir, your obedient servant,

CHARLES GANE.
Hon. Secretary.

Almeric Fitz Roy, Esq., C.V.O.,
Privy Council Office,
Whitehall, S.W.

Privy Council Office.
Whitehall, S.W.,
20th January, 1904.

SIR,—

Physical Deterioration Committee.

Your letter of the 19th ultimo, has been submitted to the above Committee, and I am instructed to inform you that they are quite willing to accede to your request that the correspondence which has taken place between the National Anti-Vaccination League and the Committee shall be published in full.—I am, sir, your obedient servant,

ERNEST H. POOLEY.
Secretary.

The Honorary Secretary,
National Anti-Vaccination League.

The National Anti-Vaccination League,
50, Parliament Street,
Westminster,
London, S.W.,
1st February, 1904.

Almeric Fitz Roy, Esq., C.V.O.

SIR,—

Physical Deterioration Committee.

I am desired by the Council of this League to thank you for your kind favour of the 20th ult., and for your ready acquiescence in our request to instruct that the memorial and correspondence which has passed between us respecting Physical Deterioration and Vaccination shall be printed in the Blue-book of proceedings.—I am, sir, your obedient servant,

CHARLES GANE,
Hon. Secretary.

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