

Report on the questions, submitted by Dr. Farr to the Council, concerning the classification of epidemic diseases / Epidemiological Society.

Contributors

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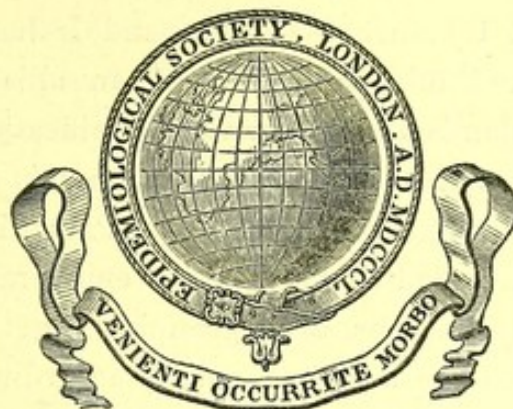
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REPORT ON THE QUESTIONS, SUBMITTED BY DR. FARR TO THE COUNCIL, CON- CERNING THE CLASSIFICATION OF EPIDEMIC DISEASES.

[Adopted 22nd February, 1865.]

AT the close of Session 1862-63, Dr. Farr submitted to the Council certain questions concerning the classification of Epidemic Diseases. The Council, desirous to elicit the opinions of those members of the Society, and a few others, who might be presumed to have given attention to this important subject, prepared and distributed the following circular:—

London, 20th November, 1863.

“SIR,—At a meeting of the Council on the 17th ultimo, a communication was received from Dr. Farr, one of the Vice-Presidents of the Society, relating to the subject of Nosological Arrangement, and with particular reference to the propriety of retaining a special class of diseases which shall include the great group of Epidemic, Endemic, and Contagious maladies, and associating together, not only all the various forms of idiopathic Fevers, whether occasional and sporadic or epidemic and pestilen-

tial, but also such diseases as Cholera, Diarrhœa, and Dysentery—Diphtheria and Cynanche—Catarrh and Influenza—Erysipelas and Anthrax—and other maladies of an allied or congeneric character. This plan is adopted in the Classification of the Registrar-General. The Class of Zymotic diseases is divided into four Orders—Miasmatic, Enthetic, Dietic, and Parasitic. In the Miasmatic Order are included all the diseases enumerated above.

“In other Classifications, after grouping together all forms of Fever, the diseases are arranged mainly according to the part or organ of the body chiefly affected. Thus Cholera, Diarrhœa, and Dysentery stand among diseases of the intestines; Diphtheria, Cynanche, and Catarrh among diseases of the respiratory organs; Erysipelas and Carbuncle among those of the integumentary organs, etc.

“This plan is that which was adopted in the Army Medical Department until within the last three years, when it was replaced by the Classification of the Registrar-General, and it is still followed in the returns of the Medical Department of the Navy.

“The questions submitted to the Council by Dr. Farr are:—

I. ‘Is there a definite group of diseases which can be separately studied in their epidemic form, etc.?’

II. ‘Is it desirable to classify them together in statistical returns either of causes of death, or of forms of sickness, etc.?’

III. ‘Do you think that the Classification which has been in operation for many years, and is now in operation in the returns of the Registrar-General, should be altered at the present time; and if so, what would you substitute for it?’

“As there is still considerable difference of opinion in the Profession as to the most convenient and useful system of Classification for the purposes of Hygienic inquiries, Statistics of Disease, etc., the Council will feel greatly obliged if you will favour them with your views on the subject which Dr. Farr has brought under their consideration.

“We have the honour to be, Sir, your obedient servants,

“B. G. BABINGTON, *President.*

“GAVIN MILROY, } *Secretaries.*”
“J. N. RADCLIFFE, }

The number of replies received to the circular amounts to nineteen. Among the respondents are the President of the College of Physicians, the Directors-General of the Medical Departments of the Army and Navy, the Medical Superintendent of Registration in Scotland, Sir Wm. R. Wilde, and other eminent members of the profession in civil as well as in public life.

The Council of the Epidemiological Society, while tendering their sincere thanks to the several gentlemen who have responded to their appeal, would express their sense of the great value of the communications with which they have been favoured in illustration of a subject of the highest professional interest, and bearing so directly on the efficiency and usefulness of several departments of the public service.

They are of opinion that they will best fulfil their duty to the Society by bringing before the attention of the profession the replies which have been received, thus furnishing valuable materials for the elucidation of a problem in State Medicine, which avowedly involves many topics of controversy and doubt.

With reference to the first two questions submitted to them by Dr. Farr, the Council would for the present confine themselves to quoting the following paragraphs from the paper recently issued by them, explanatory of the Objects of the Society :—

THE EPIDEMIOLOGICAL SOCIETY was instituted, in 1850, for the study of Epidemic and Endemic Diseases, with special reference to the investigation of (*a*) the various external or physical agencies, and the different conditions of life which favour their development or influence their character; and (*b*) the sanitary and hygienic measures best fitted to check, mitigate, or prevent them.

“Under the term ‘Epidemic’ are included almost all the diseases which have of late years been classified under the head sometimes of ‘Zymotic,’ and at other times of ‘Miasmatic,’ diseases. The class comprises not only the complex group of Continued and Periodic Fevers, as well as the genuine Exanthemata, but also

Diarrhœa, Dysentery, and Cholera, Hooping Cough and Influenza, Diphtheria and Cynanche, etc., etc.

“ Many diseases usually occurring in isolated or sporadic cases, and arranged as ‘local diseases’ or ‘diseases of particular organs,’ and ‘constitutional diseases’ or ‘diseases of uncertain seat,’ assume at times an epidemic character; such as ophthalmia and certain diseases of the skin, in workhouses, schools, prisons, etc.; infantile convulsions and tetanus in lying-in hospitals, etc.; erysipelas and pyæmia in infirmaries; scurvy, ulcers, and boils in ships.

“ Special endemic or indigenous diseases, peculiar and limited to certain districts or regions of countries, such as the goître and cretinism of Alpine valleys; the pellagra of Lombardy and other districts of Italy, etc.; the leprosy of the West Indies, Spain, Norway, etc.; the beriberi of some parts of India—come strictly within the province of the Society’s inquiries.

In answer to the third question, they are of opinion that,—considering the sentiments expressed by the principal officers of the Medical Departments of the Army and of the Navy, and by other eminent members of the profession, and considering also the inconvenience of employing different systems of Classification for the Registration of Deaths in the three great divisions of the Kingdom, as well as in some of our Colonies,—it is very desirable that the attention of the Government should be directed to the subject, in order that steps may be taken for its further investigation, in relation to the recording and tabulation of diseases in the public services, and to the registration of the causes of death throughout the empire.

APPENDIX.

*Replies received in answer to the Circular of the
Council respecting Dr. Farr's Questions on the Classi-
fication of Epidemic Diseases.*

From DR. WATSON, F.R.S., President of the Royal College of Physicians.

I have recently received from the Epidemiological Society a circular dated November 20th, 1863.

My reply to that circular must consist in informing the Epidemiological Society, that a committee was long ago appointed by the College of Physicians, upon the very subject of the circular.

The sittings of that Committee were indeed suspended for a considerable length of time, under peculiar circumstances. They have, however, more recently been resumed, and I have reason to hope that at no very distant date the Committee will be able to put forth a report which will include the mature judgment of the Committee upon the questions specified in the circular.

Of the Committee referred to, Dr. Farr is a member.

*From DR. ACLAND, F.R.S., Regius Professor of Medicine in the
University of Oxford.*

In answer to the circular concerning the classification of certain diseases, I have the honour to say that I concur entirely in the opinion that the questions submitted by you are of great importance.

I understand that a Committee of the Royal College of Physicians (of England), has been for long, and is now, engaged in considering the

whole question of the nomenclature, definition, and classification of diseases, and I should not, therefore, at present, deem it desirable to enter apart from the College into the questions now proposed.

From DR. BABINGTON, F.R.S.

To me it seems desirable that there should be as little hypothesis as possible in a system which is to be popular and practical, and I have, therefore, always had my doubts about the propriety of calling a class *zymotic*; because it is assuming the existence of a *fermentation* in the fluids, which is unproved and hypothetical. At the same time, I admit the difficulty of finding an appropriate designation for this class, and one that shall involve no assumption. Were it thought desirable to rename the class, which is questionable, we might call it *general*, as contradistinguished from local, and the order *miasmatic* might be called *exoteric* or *exogenous*, as arising from external causes; but I have thought so little on the subject, which I dislike as dealing more with names than facts and things, that I feel incompetent to give an opinion worth having.

From DR. GIBSON, C.B., *Director General of the Army Medical Department.*

I have the honour to acknowledge the communication of the 20th November, 1863, and, in reply, to state that I am of opinion the Nosological arrangement of diseases, now in operation in the Returns of the Registrar General, is open to serious objections; and that any classification based upon the endemic, epidemic, or contagious character of diseases, as these terms are at present understood, and irrespective of geographical considerations, will fail to meet the requirements of sanitary science, in so far as the British army is concerned.

Whether it is practicable to frame a classification equally applicable, in a sanitary and statistical point of view, to particular countries of limited area, and to the great geographical range over which the British army is scattered, may be doubtful; but there is reason to believe that many alterations in the grouping of recognised idiopathic diseases might be made with advantage.

As I understand this subject is under the consideration of a Committee of the Royal College of Physicians, I do not deem it advisable to propose any substitute for the classification now in use, till the result of the Committee's labours is known.

From DR. LOGAN, Inspector-General of Hospitals, Head of the Sanitary Branch of the Army Medical Department.

In reply to the communication of the President and Secretaries of the Epidemiological Society regarding what may be the most convenient and useful system of classification of diseases, for the purpose of hygienic inquiry, I would, with respectful submission, state that the classification adopted by the Registrar General has not been found wholly satisfactory.

The class of zymotic diseases embraces so many totally dissimilar in their supposed origin, and the preventive measures required, that, while it has been deemed advisable not to introduce different classifications into the statistical and sanitary branches of the Army Medical Department, it has been found necessary to modify the forms of the sanitary returns, by breaking up the class into groups of diseases. This involves considerable labour, which, it is conceived, might be avoided by the adoption of a classification in which the diseases would be grouped more according to their affinities.

From DR. BALFOUR, F.R.S., Deputy Inspector General of Hospitals, Head of the Statistical Branch of the Army Medical Department.

In reply to the communication dated 20th November, 1863, on the subject of the classification of diseases, I have the honour to offer the following observations.

I presume that I may consider the question put by the Epidemiological Society to be, whether, in my opinion, the classification now used in the returns of the Registrar General is one well adapted for the purposes of hygienic inquiries, and recording the statistics of disease; and I have no hesitation in saying that, in my opinion, it is not well suited for these purposes.

1. As regards the class of zymotic diseases, applying that term to all endemic, epidemic, and contagious diseases, it includes within it such a heterogeneous assemblage that the term fails to convey any definite information.

For instance, if it were stated that there was a great prevalence of zymotic disease in any place or barrack, it might mean itch, ague, ophthalmia, yellow fever, rheumatism, sore throat, scurvy, hooping cough, small pox, gonorrhœa, worms, boils, or intemperance.

This is no hypothetical objection, for the remark, or some similar one, is constantly met with in the reports of the medical officers in different stations and colonies, while an examination of the returns shows that very different groups of diseases are meant. A few illustrations may be given from the Army Statistical Reports for 1861.

The great prevalence of zymotic diseases at home—frequently commented on—was chiefly the result of venereal ; in Gibraltar, of venereal and continued fever ; in Malta, of ophthalmia and continued fever ; in the Ionian islands, of continued fever ; in Newfoundland it was the result of sore throat, influenza, and rheumatism ; in the Windward and Leeward Command, among the white troops, of ophthalmia, ague, and remittent fever, among the black, of venereal and rheumatism ; in Jamaica, among the white troops, of continued fever, among the black, of ague and venereal ; in the Bahamas, of ague and measles ; in Honduras, of ague ; at Sierra Leone and the Gambia, of ague and remittent fever ; and on the Gold Coast, of guinea worm. At the Cape of Good Hope, it would mean ophthalmia and venereal ; at the Mauritius, dysentery and diarrhœa ; and at Ceylon, venereal, ophthalmia, dysentery and diarrhœa, and ague.

2. If the term zymotic is to be applied to all diseases which *may* be endemic, epidemic, or contagious, at any time, or in any part of the world, the list at present published would require to be enormously extended, and would, in fact, abolish a classification altogether, for it would include at least nine-tenths of all existing diseases. If it be proposed to avoid this difficulty by including in the class only such cases as are, at the place and time of observation, believed to be of endemic, epidemic, or contagious origin, then diseases would be reported from one barrack or station as zymotic, and from another, as belonging to the class of local diseases. Inflammation of the liver, for example, in England would appear as a disease of the digestive system, and in Ceylon as a zymotic disease—indeed, a very intelligent officer, acting upon this principle, reported a large proportion of the cases of ophthalmia at a foreign station as zymotic, and the remainder under the class of local diseases.

3. But if the zymotic class were given up, and the diseases now comprised in it were sub-divided into classes, which are now considered merely orders, the same objection would apply, though of course to a less extent, to miasmatic diseases.

In preparing the annual report on the health of the army, I have been obliged to redistribute the miasmatic diseases into groups, before venturing to make any comments on their prevalence.

4. But the objection to the classes of zymotic and miasmatic diseases is, not only that they jumble together diseases in almost every respect dissimilar, but they also separate diseases having a close affinity to each other,—for instance, furunculus and phlegmon, bronchitis and tonsillitis (with influenza when not epidemic), dysentery and hepatitis, rheumatism and lumbago.

5. My observations have hitherto been made specially with reference to the statistics of disease, but I may state, as regards hygienic inquiries,

that the gentlemen, to whom the late Lord Herbert, as Secretary of State for War, referred the question of the forms to be used in the Sanitary Branch of the Army Medical Department, did not think the classification under consideration practically a good one for those purposes. Adhering to that which Lord Herbert had ordered to be adopted by the statistical branch, they found it necessary to break up the zymotic class into groups of diseases bearing some affinity to each other.

6. When the Registrar General's classification was adopted in the Army Medical Department, it was stated that it was with a view to its being fairly tested. This has been done to the best of my ability, and the conclusion at which I have arrived is unfavourable to it. I have taken no steps to have it changed, because a Committee of the Royal College of Physicians, in conjunction with several distinguished members of the profession, is at present engaged in preparing a nomenclature, and a classification having special reference to the registration of disease.

That the labours of such a committee are more likely to be accepted than the recommendations of an individual may be deemed a sufficient reason for delay in offering any substitute for the classification now in use, and as I have seen, as a member of that committee, the attention and labour bestowed upon the work, I am content to await their report in the hope that many of the disadvantages of the existing system may be got rid of, and a good practical classification be submitted for the approval of the profession.

From the late MAJOR-GENERAL SIR ALEXANDER TULLOCH, K.C.B.

I regret having so long delayed to answer the letter of the 20th ult., but before doing so I was anxious to refer to a memorandum, which, in July 1858, I caused to be appended to the Report of the Committee on the preparation of Army Medical Statistics, of which I was a member, conjointly with the late Lord Herbert and Dr. William Farr.

From the copy of the memorandum now forwarded, you will observe that, even at that time, I anticipated very considerable inconvenience from the change in the nomenclature and classification of diseases, suggested by the other members of the Committee, and only assented to it out of deference to their views, and particularly to the strong opinion expressed by Lord Herbert of the advantage likely to result from grouping the zymotic diseases in the manner recommended by Dr. Farr.

Those who have since had to consolidate the medical returns of the Army into an annual report, will best be able to point out the difficulties which have arisen in consequence. My share in that work ceased when the change was made, but I have no doubt that Deputy-Inspector General Balfour of the Medical Board, on whom the duty has since

devolved, can afford sufficient information to illustrate that subject. It may be sufficient for me to express my opinion that the new classification has been rendered much too complicated for military readers, and that the former system of grouping the diseases according to the organs affected was much more likely to make the results intelligible to the majority of officers commanding troops. It is seldom that such officers are possessed of the medical knowledge requisite for appreciating the minute divisions and sub-divisions of diseases, insisted upon in the forms of the Registrar-General, or for comprehending distinctly what is meant either by zymotic diseases, or such orders of them as have to be arranged under the heads of miasmatic, enthetic, dietic and parasitic.

Prior to the introduction of these terms, every officer commanding troops had some idea, on looking at the classified table of the diseases among his men, what were the organs chiefly affected, and hence might infer the nature of the precautions he ought to insist on, whether as regarded duty, clothing, diet, exercise, or temperance, in order to aid the efforts of the medical officers, and keep his men in a good state of health; he could also, under the former system, form some idea whether the sickness of his men was more the result of their own vices than attributable to the nature of the service in which they were employed; but since the change in the nomenclature and classification of the diseases these facts are no longer apparent from the returns themselves; a knowledge of them can only be obtained through the interpretation of medical officers, who are not always agreed as to what diseases should under particular circumstances be considered as zymotic, nor under what order of that group they should be classed.

I am glad to find that this subject is engaging attention in a quarter where an appropriate remedy is likely to be suggested, and I can only express my regret that more hesitation was not felt at the time, in altering arrangements, which, whatever might be their defects, had been found practically useful in the medical departments of the army and navy for upwards of a quarter of a century.

MEMORANDUM.

In signing this Report, I think it right to place on record, that I am strongly of opinion the course prescribed in regard to the Returns and Reports referred to should be regarded merely as an indication of the manner in which the statistical duties should be conducted, provided the office establishment and the information attainable from the Returns will readily admit of it, but that those to whom the working of such difficult and intricate machinery is intrusted should have full power to introduce any modifications which their experience may find to be required.

* * * * *

The nomenclature of disease, being purely a professional question, I

do not profess to enter upon ; but in regard to the classification, I conceive it to be of the most vital importance to the practical utility of the Returns and Reports, that all arbitrary or even scientific distinctions should give way to the important object of being able to place before unprofessional persons, in a concise form which all can understand, the chief groups or classes of diseases from which our troops suffer, distinguishing those that may have been caused, or at least influenced, by the climates in which they are, or have been recently, serving, as well as those which may have arisen from their own vices or habits.

The classification which has been in use since 1835 was obtained, not from any theoretical deductions, but from practical observations of the diseases which had affected the British Army in every climate, and under all circumstances, for the previous twenty years. If equally extensive information, for a long period, shows that a better classification for the object in view is attainable, there can be no objections to alteration ; but I wish to guard against the supposition that the fatal diseases of the civil population at home can afford any criterion for the classification of the diseases which come under treatment among troops abroad ; and I should decidedly deprecate any change not founded on experience, as it might not only end in disappointment, but render the result of my own labours, and those of my coadjutors for the last twenty-three years, in some measure valueless as a means of comparison.

ALEX. M. TULLOCH.

War Office, *July 10, 1858.*

LETTER of Right Honourable SIDNEY HERBERT, M.P., to Sir ALEXANDER TULLOCH, in reference to the foregoing Memorandum.

49, Belgrave Square, July 10, 1858.

Dear Sir Alexander,—I have given directions that your Memorandum, which I have just received, shall be appended to our Report.

We were instructed to draw up a Scheme of Statistics to meet certain Army requirements, and to enable the authorities to institute comparisons between the Army and the Civil Population in England, as regards their rates of diseases and mortality, and to compare the rates of the Army itself at different periods, and in different climates and countries.

This we have endeavoured to do ; as you justly say it can be but an indication of what should be done, and there can be no doubt that practical experience in the working will point out modifications which we cannot foresee.

As regards the Classification of Diseases, the old military form, and

the existing civil form in use at the Registrar-General's Office, are perhaps equally intelligible ; but to those who are habituated to them there is an advantage in having one standard classification, and the grouping of the zymotic diseases together seems to me to facilitate the application of the remedial or precautionary measures, which may be necessary from time to time.

Some labour will, no doubt, be requisite in the first instance to recast the tables of any former year or period with which comparison is to be made, but probably it will cost less to do so than annually to recast the future statistics of the army for comparison with the civil population.

Believe me yours sincerely,

(Signed) SIDNEY HERBERT.

Sir Alexander Tulloch, K.C.B.

From DR. BRYSON, F.R.S., *Director General of the Navy Medical Department.*

I am sorry to say my time will not allow me to enter so fully into the question of nosological arrangement as I could wish, but I have no hesitation in saying that I strongly disapprove of the system now adopted by the Registrar General ;—it is cumbersome, difficult to be understood even by professional men, and altogether useless for the non-professional public, from whom it is not right to withhold statistical information by wrapping it up in a kind of *quasi* Greek phraseology.

With regard to Dr. Farr's first question,—I think there are groups of diseases which may be separately studied in their epidemic form,—as, for instance, the exanthemata ;—they are all infectious, but in what respect the infection or virus of one differs from that of another we have yet to learn.

In answer to the second question,—I am of opinion that it is not desirable to classify diseases together in statistical returns, whether as regards the causes of death or forms of sickness, because I do not understand what good can be obtained from a statistical return of the causes of death from any group of, for instance, exanthematous diseases ;—the death rate from specific diseases it is always desirable to ascertain, but it is not possible to educe any sound or useful information from the death rate of a group or class of diseases arising from different and possibly dissimilar causes. For similar reasons, I do not see what advantage would be gained by grouping them together in forms of sickness. For example, in the weekly return issued by the Registrar General, the deaths from zymotic diseases are classed together in one

table, though the class contains diseases which have no natural affinity, either in their origin or form of morbid action, as for instance, small pox, rheumatism, and diarrhœa.

Dr. Farr's third question.—I have no hesitation in saying that the classification which has been in operation "for many years" (for the few last years?), should be altered or abandoned at the present time, and one somewhat analogous to that now used in the Royal Navy, or to that formerly used in the Army, adopted, either of which has the advantage of being easily understood by all classes of the community, and easily applied for statistical purposes. By the form now in use in the Navy, the rates of sickness and mortality from specific diseases can be ascertained with tolerable accuracy; but from the Reports issued by the Registrar General, where diseases of the most opposite character,—morbid changes consequent on primary or previous disease, and symptoms common to different kinds of disease,—are all grouped together in classes and orders, it is impossible to deduce any reliable information relative to the comparative mortality of different diseases arising from unknown or ascertained causes. For instance, in Order I, of Class II, of the Registrar's arrangement, we may find the number of deaths from dropsy and mortification accurately given, but as these so-called diseases are generally but the result or sequelæ of different kinds of morbid action, any numerical statement based on such grounds respecting their mortality is utterly useless in a scientific point of view.

From DR. NISBET, R.N., Inspector General of Fleets and Hospitals.

I would say that there is a definite group of diseases which can be separately studied in their epidemic form; and further, that it is desirable to classify them for all purposes. But I do think the classification of the Registrar General ought to be immediately altered. This classification does not contain all diseases. Miasmata, which might, with a little care, be made a natural order, admits diseases which are neither miasmatic nor epidemic.

In the other sections, which I cannot call orders, closely allied diseases, both in character and treatment, are placed widely apart; even variations of the same disease pass under different sections; while manifestations are classed as diseases without reference to the original lesion.

Imperfect and defective as Dr. Cullen's nosology confessedly is, nothing has been gained by departing from it; and it would be wiser to return to it, with modifications due to our progress, if nothing better should offer. But it appears to me the only true remedy is the creation of a new scientific nosology, more in accordance with the advanced state of medical knowledge than any at present existing; which would not only

be available for the statistician, but also for the student of medicine ; who would, by its means, be able to trace the analogy and relations of allied diseases, and thus lay a foundation for sound reasoning and scientific knowledge.

From DR. HILDITCH, R.N., Inspector General of Fleets and Hospitals.

With reference to your request that I would state my opinion on the subject of Nosological arrangement, I beg to observe that I consider the plan formerly adopted by the Army Medical Department, and at present in vogue in the like Department in the Royal Navy, to be the most useful and convenient classification for all purposes.

From DR. DICKSON, R.N., Medical Inspector of Her Majesty's Customs.

The nosological arrangement now in use for the Registrar General's returns appears to me to be, in most respects, very well adapted for the purposes of state-medicine, inasmuch as by the plan adopted those diseases, which have indisputably the most important bearing on the public health, are placed together in a prominent position at the head of the list. In the group of maladies termed miasmatic, although they have little real or individual affinity, are comprised most of those forms of disease, which in this country are most prevalent, and at the same time (with few exceptions), are least fatal. Useful practical inferences may, therefore, be suggested from the comparative frequency of those diseases in various localities and seasons, and in different classes of the population. Such data are obviously of great value as a basis for sanitary improvements. Were the proposition adopted that has been recently mooted—viz., to procure official returns of all cases of sickness treated by the parochial medical officers, and by those of other charities throughout the kingdom, and by the medical officers of the public services, so great an accession to our knowledge would accrue, that it could not fail to be attended with important results. For it is the amount and duration of sickness, rather than the mortality, that tell on the prosperity of a community ; and the sanitary condition of a state cannot be adequately predicated from a simple enumeration of deaths.

The classification now in use seems to meet the wants of medical police as well as any that can be devised. Besides its intrinsic excellence, it has the advantage of having been in operation many years, and its phraseology has become so familiar to the general public that any alteration of a sweeping character would be of doubtful expediency.

Regarding the question, however, from a purely medical point of view,

I must confess that my predilections, as well as my experience, are in favour of an arrangement founded on semeiology and morbid anatomy, rather than on etiology. The former basis is more certain and durable, and gives less scope to the indulgence of speculations, which, however able and ingenious, may prove in the end erroneous. It should be remembered that we are still at the very threshold of epidemiological science, that many diseases, which are known only as sporadic in Europe, are epidemic in other regions, and that a complete list of epidemic and endemic diseases would reach far beyond the limits of that under consideration, if it included the maladies of this kind which have come under the cognisance of English and American practitioners, only in recent years, in various parts of the globe.

In strictly professional returns, such as the nosological tables of the public services, which necessarily embrace the diseases of many climates, it seems to be more natural that the fevers and exanthemata should be grouped together, and that the affections of the bowels and air passages should be classed together with their local congeners. Rheumatism and syphilis would find a more appropriate place in the second or constitutional class, in company with gout and tuberculosis, while anthrax would be associated with boil, ulcer, and other forms of skin disease, which in some countries and communities are far more generally prevalent than anthrax ever is in ours. A few modifications like these might be advantageously made, without interfering materially with the general harmony and symmetry of the system in vogue, and would, I think, render it more acceptable to those who are employed in drawing up such statistical returns as I have indicated.

The chief desideratum in every nosological arrangement is simplicity. It should be readily intelligible to the great body of medical practitioners, based on practical rather than theoretical data, and not fettered unnecessarily with the current notions of the day. The last century was pre-eminently the age of classification, and some very acute intellects devoted themselves to form systems of nosology. Elaborate and ingenious as they were, they have long fallen into disuse. The main causes of their decay have been over-refinement, complexity, and an undue prominence given to the pathological doctrines which were then in fashion. Even the genius of Cullen did not preserve his Synopsis from sharing in time the fate of others. One feature of his system contributed greatly to maintain it in prolonged vigour, and that was his admirable series of definitions. I cannot help expressing my belief that such a work, as succinct and compendious, but corrected by the light of our actual knowledge, is much wanted at the present day.

All modes of classification must needs be more or less imperfect, and it is enough to possess one which will prove satisfactory to the greatest number. But an authoritative exposition of the data on which all

nosological arrangements must rest—a repertory of clear and accurate definitions of disease—would doubtless be welcomed as a great boon by the profession.

It is with much deference that I submit these views, which, I fear, I have but imperfectly expressed. The subject is one in which I take an interest, and of which I have some practical experience. For, during the twenty-three years I have been in the public service, my opportunities for becoming acquainted with disease in almost every part of the world have been extensive, and no inconsiderable portion of my time has been employed throughout that period, in drawing up statistical reports.

From SIR W. R. WILDE, Assistant Census Commissioner for Ireland.

When I commenced to classify fatal diseases in 1841, I worked hard at the subject and made out what was perhaps as good a classification as could have been effected at the time, especially when I wished to popularise the subject, and make it preliminary to a General Registration of Deaths, which, at that time, Sir Thomas Larcom and I imagined was “nigh at hand,” but which for reasons, which I need not now detail, took twenty-three years to bring about.

Between 1841 and 1851, my friend Farr and others had considerably enlarged and somewhat changed the arrangement as well as the nomenclature of medical nosology. I again, at the latter period, gave the subject my best consideration, and had several communications with Farr thereon. I saw, however, no reason to materially alter my arrangement for 1841, the adoption of which had the advantage of simplicity, and presented a means of comparison, to the general reader, of the deaths in one decade with those of another.—(See Report on Tables of Deaths for 1851, p. 412.)

As you already well know, an Irish nosology, which with the assistance of Irish scholars (no longer living) I drew up with great care, for both fatal and non-fatal diseases, was published in the *Status of Disease* for 1851. With one or two trivial transpositions, I have again for 1861 adhered to the same principles. As to what might occur between this and 1871, I can only say it would require very strong arguments to induce me to alter my opinion.

My statistical labours in connection with Vital Statistics in Ireland are now at an end; I shall, however, be always glad to assist the Epidemiological Society, or any other public body, by every means in my power.

Classification of the Diseases of the Sick at their own homes, and in work-houses, hospitals, prisons, and public institutions in Ireland, on the night of the 7th April, 1861.

1. *Zymotic, or epidemic, endemic, and contagious diseases.*

Smallpox
Measles
Scarlatina
Hooping cough
Croup
Thrush
Pemphigus
Diarrhœa
Dysentery
Cholera
Ague
Influenza
Fever
Erysipelas
Syphilis
Gonorrhœa
Glanders
Hydrophobia
Ophthalmia
Mumps

II. *Sporadic diseases.*

1. *Of the brain, nervous system, and organs of sense.*

Hydrocephalus
Inflammation of the brain
Apoplexy
Convulsions
Paralysis
Lock-jaw
Epilepsy
Delirium tremens
Insanity
Nervous diseases unspecified
Diseases of ear
Deaf-dumbness
Headache
Blindness
Diseases of nose
Idiocy
Results of intemperance

2. *Of the circulating organs.*

Diseases of heart
Aneurism
Vomiting of blood
Spitting of blood
Hæmorrhage, general

3. *Of the respiratory organs.*

Cynanche
Inflammation of Lungs
Bronchitis
Consumption
Asthma
Water on the chest
Emphysema
Empyema
Chest affections, unspecified

4. *Of the digestive organs.*

Teething
Jaundice
Worms
Colic
Gastric fever
Dropsy
Disease of intestines
Hernia
Liver complaint
Peritonitis
Inflammation of bowels
Marasmus
Disease of stomach.
Piles
Dyspepsia

5. *Of the urinary organs.*

Stone
Stricture
Urinary diseases
Diabetes
Disease of bladder
Disease of kidneys

6. *Of the generative organs.*

Childbed
Prolapsus uteri
Ovarian disease
Cancer uteri
Paramenia
Diseases of genital organs

7. *Of the locomotive organs.*

Rheumatism
Disease of the bones and joints
Hip disease
Spine disease
Fracture
Dislocation

Amputation
Lameness

8. *Of the tegumentary organs.*

Onychia and paronychia
Ulceration
Purpura and scurvy
Fistula
Anthrax
Chilblains
Scald head
Itch
Psoriasis, and other skin diseases

9. *Diseases of uncertain seat.*

Inflammation, unspecified
Phlebitis
Mortification

Malignant fungus

Scrofula

Gout

Cancer

Tumour

Abscess

Infirmity, debility, and old age

III. *Accidental causes.*

Wounds

Burns or scalds

Injuries of the head

Poison, accidental

Attempted suicide

Accidental, unspecified

Effects of cold or starvation

IV. *Causes not specified.*

From DR. JAMES STARK, F.R.S.E., *Superintendent of Medical Statistics for Scotland.*

I have received the Society's circular relative to alterations in the English statistical nosology.

I have long made up my mind on the subject, and endeavoured to direct the attention of the medical profession to the subject, when Dr. Farr (most inadvisedly as I thought) altered the old statistical classification, and adopted that faulty one now in use in England in the Registrar General's reports.

I discussed the subject very fully in a paper which I published in the *Edinburgh Medical Journal*, for June, 1860, and I beg you will refer to that paper for my opinions on the subject. Copies of that paper were pretty widely distributed at the time, but now I have not a single copy left me, else I should have had pleasure in sending it to the society.

I am decidedly of opinion that Dr. Farr's present nosological arrangement is on a false principle, and I have consequently refused to adopt it for Scotland; and the paper above referred to gives the special reasons for my decision. I am glad to think that Dr. Farr already feels that his new mode is faulty. Let him return to the old one, which, with a few unimportant alterations, could be made as perfect as a *statistical nosology* need to be.

A *statistical nosology* should not change with the changes of medical opinions; because one great use of statistics is lost, if our nosologies be altered every five or six years, no correct comparison can be made between the mortality of the present classes of disease with the very different classes of former years. *Science* is not forwarded by changing the nosological *classification of deaths for statistical purposes*, because

whatever may be the theory which at the moment may be adopted, relative to the origination or cause of a disease, the scientific inquirer can easily procure for a statistical nosology the information he wants, whether that statistical nosology be drawn up on the English, or on the Scottish principle.

But you must procure my paper, and it will, I think, satisfy you as to the two nosologies. I, for my part, will not adopt the present English nosology for Scotland. In some parts it is science run mad. In others it follows no science at all; but puts down as a leading disease that which is only a symptom of another disease. In others it separates diseases strictly analogous. While it violates the only safe rule for statistical nosologies—viz. “the name of each cause of death must only be once entered on the table”—by entering all the violent causes of death three several times under three several headings.

You ought, at the same time, to see my remarks *on the difference between a scientific and a statistical nosology*, published in the *Fifth detailed Report of the Registrar General of Scotland*, p xxxv—for all these circumstances must be taken into account when you discuss a subject like that before you.

I do not think, however, that any good can follow the making any change in a *statistical classification of deaths*. I think Dr. Farr did great harm by altering the old English statistical classification, and I would strongly urge him to return to it again. These changes can serve no useful purpose, while they quite prevent all accurate comparisons with the returns of former years. After a few years pass, even we who study such matters forget when the change was made, and to what extent it affected the tables of former years, and we frequently fall into serious errors in consequence. This, however, is far more apt to be the case with a man who only looks at these tables at distant intervals, and who never may have been aware that the tables now in use are different from those of former years.

An official statistical table ought therefore to be a stereotype never to be departed from. Utility and easy reference are the first things to be looked for in all statistical tables—not conformity with the medical theories of the day, which, however popular at present, may be exploded before half a dozen years expire.

It is quite otherwise with *scientific nosologies*. These must be altered by the teachers of medicine to suit the prevalent or fashionable theories of the day. But do not let us tamper so with *statistical nosologies*, or fancy that they are in any respect the same things. * * *

The one is a scientific arrangement of DISEASES. The other is essentially a statistical classification of DEATHS. The one is that which ought to vary, and to be altered to suit the prevalent theories of the day. The other is one which ought never to alter, but be always the same—as

only thus can the varied phases of disease be traced, or one year's results be compared with another. * * * *

Dr. Stark's proposed new Classification of Diseases for Statistical Purposes.

(New Scottish Classification.)

RULE I.—The causes of death must be only entered once in the classification.

RULE II.—The diseases must be classified according to the primary cause or affection which led to the death.

RULE III.—So far as practicable, every disease causing death must be tabulated under the Organ of the body which was primarily and chiefly affected.

CLASS I.—*Fevers.*

Ague
Remittent—Yellow Fever
Typhus—all varieties and infantile
Small-pox
Measles
Scarlatina
Diphtheria

CLASS II.—*Diseases of Brain, etc.*

Hydrocephalus
Cephalitis
Apoplexy
Paralysis
Chorea
Epilepsy
Tetanus
Insanity
Convulsions
Brain diseases—indefinite.

CLASS III.—*Diseases of Heart and Organs of Circulation.*

Pericarditis
Aneurism
Disease of Heart, etc.

CLASS IV.—*Diseases of Organs of Respiration.*

Phthisis
Hooping-cough
Croup
Laryngitis
Bronchitis
Influenza
Pleurisy
Pneumonia
Asthma
Disease of Lungs—indefinite.

CLASS V.—*Diseases of Organs of Digestion.*

Thrush
Diarrhœa
Dysentery
Cholera
Teething
Quinsey
Gastritis
Enteritis
Peritonitis
Ascites
Ulceration of Intestinal Canal
Hernia
Worms
Ileus
Intussusception
Tabes Mesenterica
Stricture of Intestinal Canal
Disease of Stomach
Disease of Pancreas
Hepatitis
Jaundice
Disease of Liver
Disease of Spleen

CLASS VI.—*Diseases of Urinary Organs.*

Nephritis
Nephria
Ischuria
Diabetes
Stone
Cystitis
Stricture of Urethra
Disease of Kidney (not defined).

CLASS VII.—*Diseases of Organs of Generation.*

Paramenia, etc.

Ovarian Dropsy	CLASS XI.— <i>Malformations.</i>
Childbirth	Spina-bifida
Metria	Cyanosis
Disease of Uterus and other Organs	Other malformations
Syphilitic diseases	
CLASS VIII.— <i>Diseases of Organs of Locomotion.</i>	CLASS XII.— <i>Debility at birth and premature birth.</i>
Arthritis	CLASS XIII.— <i>Old age.</i>
Diseases of Joints, Bones, etc.	No disease specified
CLASS IX.— <i>Diseases of Skin and Cellular Tissue.</i>	CLASS XIV.— <i>Sudden deaths.</i>
Carbuncle (incl. Boil)	Cause not ascertained
Phlegmon	
Abscess (not scrofulous)	CLASS XV.— <i>Violent or unnatural deaths.</i>
Erysipelas	Poison (taken into Stomach)
Noma	Poisoned Bites, Wounds, Stings
Ulcer	Hydrophobia
Diseases of Skin	Intemperance (alcoholic poison- Delirium Tremens [ing])
	Starvation
CLASS X.— <i>Diseases of Uncertain Seat.</i>	Want of Breast-milk
Hæmorrhage	Neglect
Dropsy	Cold
Fistula (all kinds)	Burns and Scalds
Mortification	Hanging
Cancer	Suffocation
Purpura, Scurvy	Drowning
Scrofula	Fractures and Contusions
Gout	Wounds
Rheumatism	Other violent causes
Atrophy	CLASS XVI.— <i>Causes not specified.</i>

REMARKS.

The statistical classification of diseases adopted a few years ago in the English Registrar General's Reports has proved a failure, as I anticipated (see my remarks regarding it in the *Edinburgh Medical Journal* for June 1860), and already calls loudly for amendment. A movement is, therefore, being made to amend that classification. But as I am fully persuaded that that classification, from being drawn up on no fixed principles, is unimproveable, I venture to offer one which I know from experience will be easily workable, which panders to no medical theory which may be popular to-day and be refuted to-morrow; but is a classification drawn up on fixed, intelligible principles, which can be understood by the mass of mankind, as well as by the medical profession.

As we now have Acts for the Registration of Births, Deaths, and Marriages in England, Scotland, and Ireland, and as the army and navy boards also publish statistics of deaths, it is extremely desirable that all should adopt the same classification. At the present moment, three classifications are in use, because the one now used by the Registrar-General of England will not answer for all purposes. For statistical purposes, however, all should follow the same classification; and when

once a good and intelligible classification is adopted, no change should hereafter be made on it, otherwise all accurate comparison with the results of previous years is lost, and endless confusion generated.

As great misapprehensions exist regarding the difference between a *scientific nosology* and a *statistical classification of deaths*,—most persons imagining them to be the same—a word of explanation seems requisite.

A *scientific nosology* being a purely theoretical classification of diseases, takes it for granted that every disease is with certainty recognised, and can be referred to its exact class and species. Hence, in such a nosology, every disease is arranged under its *primary affection*, and not under the *secondary complications* which may arise in the course of the disease. No vague terms are therefore used in a scientific nosology, nor ought any place be assigned to purely symptomatic or secondary affections.

A *statistical classification of deaths*, on the other hand, must be a practical one; and *it must be so drawn up as to give an accurate abstract of all the causes of death which are entered on the Registers*. It ought therefore to take as its basis the best, the simplest, and the most intelligible nosology on which its framers can lay their hands; and must also adopt as one of its leading principles that every death must, so far as practicable, be tabulated under the *primary disease*, and not under its secondary complications. That is to say, that a case of phthisis proving fatal by an attack of pneumonia, or of bronchitis, is tabulated as phthisis, and not as pneumonia, or bronchitis; while a case of measles proving fatal by a supervening attack of bronchitis is tabulated as measles; and not as bronchitis. To this extent, therefore, there is no difference between a scientific and a statistical nosology.

But as a *statistical classification* has to deal with facts, and not with theories, and as the statistical tables must exhibit the whole deaths in the Registers, else they are of no use, and all these deaths must, as far as practicable, be arranged under their proper heads, *it requires to make additions to almost every class of diseases, in order that all those deaths, whose definitions are given too imperfectly in the Registers to enable them to be assigned to their exact species, may, at all events, be tabulated under their proper class*. Hence, for instance, after exhausting all the great leading species of brain diseases, such as cephalitis, apoplexy, paralysis, etc., the statistical classification requires to add the vague term “brain diseases,” meaning thereby all the diseases of the brain and nervous system, so imperfectly defined in the registers that they were not able to be assigned to their exact species. The same additions require to be made to the lung, stomach, kidney, uterine, and other diseases.

But still further alterations require to be made in every *statistical nosology*. Many deaths are recorded as being caused by *secondary complications*, while the primary cause has not been ascertained, either from there being no medical attendant, or from the medical attendant being himself at a loss as to the primary affection. Dropsy is of this nature. In a *statistical classification of deaths*, therefore, dropsy must have a place; though it would have no place in a scientific nosology, seeing it is but the symptom of an organic lesion. But in the statistical nosology only those deaths are tabulated under dropsy in which the organ primarily affected was not distinguished; otherwise, had the death been entered on the register as “dropsy from heart disease,” or “dropsy from diseased liver,” the death would have been tabulated under heart disease, or under liver disease, and not under dropsy.

The same principle applies to many other diseases, or classes of diseases. Thus atrophy is not a disease, but a symptom—a consequence

of more than one organic lesion in some vital organ, which even the ablest medical men will fail to trace to its primary cause in every case. Yet we must have a place for atrophy. Such is also the case with old age, etc.

For most practical purposes it is only important to know the total number of deaths in a population caused by certain classes of disease ; say, for instance, of the respiratory organs. But were a purely scientific classification followed, a great number of lung diseases, whose names were too vaguely defined in the registers to enable them to be referred to their exact species, would be thrown out, and be altogether lost to science, because they would be thrown into the class termed "causes not ascertained." By following a purely *scientific* classification, therefore, the population would seem to be much more free from lung diseases than they really were ; and an entirely false conclusion would be arrived at, because we were so foolish as to adopt a purely scientific nosology. By converting the *scientific*, however, into a *statistical classification*, and adding these vague terms at the end of every class, the deaths from each class of disease, at all events, are accurately ascertained, and correct conclusions arrived at relative to the comparative freedom from, or susceptibility to, certain classes of disease in certain populations.

But a classification of deaths for statistical purposes ought to be constructed on quite different principles from a scientific nosology. *A scientific nosology should alter with the progress of medical literature*, and be in each age a correct representation of the prevalent theories of the day regarding the origination or supposed causes of disease. But a *statistical nosology* being for an entirely different purpose, ought to be drawn up on a few known and intelligible principles, of which the most important is that given in the new Scottish classification, as Rule III, viz., "So far as practicable, every disease causing death must be tabulated under the organ of the body which was primarily or chiefly affected."

A statistical classification of deaths drawn up on such a clear and intelligible principle never could clash with any scientific nosologies. Whatever were the theories relative to disease, tables drawn up on such a principle could be consulted with advantage, and all the facts deducible from them be easily made applicable to any theoretical nosology of the day. Such a classification would, however, possess the immense advantage over every other, that besides being intelligible and easily worked, it pandered to no medical theory which was fashionable to-day, but refuted and abandoned to-morrow. Once adopted, therefore, such a classification would never hereafter require to be amended or departed from ; so that the most exact comparisons could be made as to the prevalence of any class of diseases in former years with the year under consideration ; changes in the form or prevalence of different diseases ; the circumstance of one disease taking the place of another,—all could be traced ; and then the most important consideration of all would be, that the vital statistics of all the various departments of Government, and the different divisions of this kingdom, would adopt the same classification.

A few words of explanation seem requisite relative to the proposed new classification itself. In every statistical classification of the causes of death, the number of diseases must be limited, in order to come within such limited space as we can afford for printing. All the rare diseases, therefore, have their names left out of the classification, because they are included in the vague terms appended to each class. In the tables

themselves, however, they are all entered as side notes, so that nothing is lost.

In the above classification, it has been attempted to carry out to its fullest extent the third rule, viz., that every disease causing death must be tabulated under the organ of the body which was primarily and chiefly affected. A distinct class of diseases, however, affects every organ of the system simultaneously; but as these are always attended with that morbid affection to which we give the term "fever," all such diseases conveniently arrange themselves under Class I, to which is applied the term "fevers." One disease alone is provisionally put under fevers, viz., diphtheria. This disease chiefly proves fatal through its extension to the respiratory organs; but it is not primarily an affection of these, but of the mucous membrane of the mouth and throat, dependent on a general derangement of the whole system, of a nature entirely similar to that of one of the eruptive fevers. According to the rule laid down, therefore, diphtheria must either be classified under diseases of the organs of digestion, or, where I have provisionally put it, under fevers. It seems to me to be so closely allied to *cynanche maligna* and *cynanche tonsillaris*, both of which are undoubted forms of scarlatina, that it seems to me we have no choice left us but to place it after scarlatina.

For statistical purposes there can be no such class allowed as the tubercular; it would violate all our rules. Every disease now put under that class must be referred to the organ of the body chiefly affected; so phthisis must be referred to diseases of the respiratory organs; hydrocephalus to diseases of the brain; tabes mesenterica to diseases of the organs of digestion.

Hooping-cough and croup are so purely diseases of the respiratory organs, the wonder is they were ever put elsewhere. Diarrhœa, dysentery, and cholera, may be called the leading diseases of the organs of digestion, and that is their undoubted proper place.

Metria, itself a secondary affection, seeing it never can occur but during child-birth, can only stand under diseases of the organs of generation. Were it a primary disease, its proper place would have been under fevers; but being merely one of the modes in which the normal operation of nature, child-birth, proves fatal, it can have no other position than where I have put it.

The above remarks will prove the necessity which exists for having, in a statistical classification of deaths, a class which shall include diseases which occur in various organs, which attack no one unvarying seat or organ, or which are mere symptoms of the existence of other organic affections, whose nature was not satisfactorily ascertained. Class X. includes these diseases. Under the term *hæmorrhage* are only tabulated those deaths said to be caused by hæmorrhage, but in which the organ from which the hæmorrhage proceeded is not mentioned. If the organ is mentioned, the death is not tabulated under hæmorrhage, but under uterine, stomach, heart diseases, etc., as the case may be. I have already remarked as to why *dropsy* is in this class. *Fistula* I also put here; because, in most cases as yet, the Registers only state that the death resulted from fistula, without saying whether it were anal, or urethral, or vesico-vaginal, or what it was. In the abstracting table the cases are distinguished on the margin. *Mortification* is not confined to the skin, nor to one organ, and depends on many different causes; its proper place is therefore here. There is no other place for *cancer*. *Purpura* (with which we tabulate *scurvy*) is in one sense a blood disease; but is equally

a disease of all the tissues, depending on general causes which affect every organ of the body. This is therefore its proper place. The same may be said of *scrofula*. We still know too little regarding the pathology of *gout* and *rheumatism* to refer them with certainty to any one organ. They affect the bursæ, the synovial and the white tissues, the membranous tissues, the muscles, the diaphragm, and even the heart itself. Even when they prove fatal, it is generally through some secondary affection, as pericarditis, of which we take no note in a statistical table of deaths, seeing our rule is to tabulate the death under the primary affection. There is no other place for them, therefore, than in Class X. *Atrophy*, the last of this class, I have already remarked on, and given the reasons for its position here. It has no claim to be made a separate class.

There is both a propriety and a convenience, however, in making separate classes of *malformations*, of *debility at birth and premature birth*, of *old age*, and of *sudden deaths*. None of these can be strictly referred to any class under the three rules laid down for the construction of the table, yet they are causes of death under which many persons are registered, and we must find a place for them in a statistical classification.

Under the *violent and unnatural deaths* are classed *poison*, limiting the term to poisons taken into the stomach; *poisoned bites*, *wounds*, *stings*, and then one of the consequences of a poisoned bite, *hydrophobia*. As this last is not the primary but the secondary cause which led to the death, the bite being the primary, so hydrophobia is most properly arranged here. In like manner, intemperance (which is alcoholic poisoning), and its frequent secondary affection, *delirium tremens*, naturally belong to this group. Delirium tremens, being a secondary affection and not a primary (which is the alcoholic poisoning), has no claim to be arranged under brain diseases; but here it is associated with its primary cause. All the other causes referred to the violent deaths would be so arranged under any classification, so that nothing need be said regarding them.

The *causes not specified* are required to complete the table, and they ought to form a separate class, as well as the sudden deaths.

As there is a pressing necessity for a good and easily workable classification of the causes of death for statistical purposes being adopted by England, by Scotland, by Ireland, and by the Army and Navy Boards, I trust that the superintendents of these different departments, and the medical profession generally, will carefully examine the above proposed classification; and if they cannot suggest a simpler or a better for statistical purposes, let us have a meeting here, or in London, and agree as to the adoption of this as a uniform system for the classification of the deaths, on which all our reports will be founded.

It will be seen that the number of diseases specified in the above table is limited. This is necessary in every statistical table, so as to bring it within moderate dimensions, both for working it and printing it; especially when we have to deal with large numbers, and with numerous districts. To fit it, however, for the tabulation of the diseases which occur in civil, military, or naval hospitals, it only requires to be extended, so as to include every disease. Thus, in the above, and every similar table, under small-pox are included varicella, with vaccinia and its consequences. Under typhus are included typhus proper, synochus, gastric, typhoid and infantile fevers. Under pericarditis, there are carditis and endocarditis. And so on with all diseases. To render the proposed

classification a complete nosology, therefore, it only requires the same extension that every statistical nosology needs, no matter what may be the classification adopted. Specifying every disease would make no difference whatever in the classification.

JAMES STARK.

General Registry of Births, etc.
Edinburgh, April 9th, 1864.

From DR. MOREHEAD, late Principal and Professor of Medicine in the Grant Medical College, and Superintending Surgeon of the Jamssetjee Jejeebhoy Hospital, Bombay.

I have much pleasure in replying to the note of the 24th inst., and its enclosure, on the subject of nosological arrangement. A good classification of disease is not only important from its immediate practical usefulness, but also from its bearing on the progress of medical science. It is well, then, at the outset to establish the principles on which it should be grounded, and it seems to me that they should be of the following nature:—1. As there is, and ever will be, much that is uncertain in the science of medicine, a strictly scientific classification is impossible. 2. Still so much of the science as is universally acknowledged to be certain, should be turned to account in our classification of disease. 3. But, on the other hand, there should be the greatest care that no part of the arrangement can be interpreted as expressing doctrines in etiology or pathology which are not universally acknowledged, or which do not rest on unquestionable truths, otherwise the system may, or rather must, serve to perpetuate error, and to obstruct further unbiassed inquiry. 4. A nosological arrangement should, in its details, not go beyond the diagnostic skill of the average of well educated professional men; in other words, it should rather keep pace with the science of diagnosis than the science of pathology, otherwise in its application it is certain to record error, more or less. 5. It should be so framed as readily to meet the steady progress of science, and the gradual improvement in diagnostic skill, otherwise it does not provide for and favour the advancement of medical science and art; and a classification defective in this particular is very objectionable. 6. As the arrangement cannot be strictly scientific, a condition of convenience must necessarily more or less pervade it; but with advancing knowledge the use of this condition will gradually lessen, a progressive elimination of the principle of convenience, and the substitution of that of science, may be looked for. The classification of the Registrar General, adopted by the Army Medical Department, offends against the third principle, and that chiefly in its class, "Zymotic diseases." The table is not before me, therefore I am unable to enter into much detail; but, in my judgment, the errors and assumptions in etiology and pathology are very numerous. Take for example diarrhoea and dysentery. It may be

very true that some diarrhœas and dysenteries may be *excited* by miasmata ; but my experience in India justifies me in saying that it is a great error to suppose that all diarrhœas and dysenteries are so. The same surely can be said of cynanche and catarrh. If so, can it be a right classification which requires, or may require, a man of science to record what he disbelieves, and what he must feel to be obstructive of further faithful inquiry ?

About a year and a half ago, I pointed out to the professor of pathology in the Army Medical School that they were reduced to the dilemma of using in the hospital of the school a return of disease, which I hoped was at variance with the teaching in pathology and practical medicine.

The explanation of the assumptions and errors which pervade the class "Zymotic diseases," is not, it seems to me, difficult to find. It may be found in the illogical influences on medical science of the very useful and important movement in sanitary art, which is characteristic of the last fifteen years. The error consists in regarding causes of bad general health to be exciting causes of specific forms of disease, and in supposing that thereby the value of sanitary science and art is enhanced. There can be no doubt that the causes of general bad health predispose and favour the action of all the ordinary and specific exciting causes of disease, and that, therefore, the removal or prevention of these causes of bad general health is most important and necessary to the maintenance of the public health, to the diminution of the susceptibility to disease, and of the severity of its types, and thereby to the reduction of the general mortality. But a statement so level to the common sense of mankind, in order to be enforced, does not require that we should deviate from the only path by which science and observation can advance, viz. :—faithful and extended observation and inquiry with logical deductions.

It is about fifteen years since my attention was called to the question of the classification and nomenclature of disease for Hospital Returns. At that time, having to teach medicine in the Grant Medical College at Bombay, I pointed out to the Medical Board of the Presidency that the Returns of disease, periodically sent by me from the Jamsetjee Jejeebhoy Hospital, the practical school of the College, were inconsistent with my teachings in the lecture room of the College and in the clinical wards of the Hospital. The result was that in communication with Dr. McLennan, at that time the President of the Board, and with Dr. Peet, the present Principal of Grant College, a nosological arrangement was framed for the use of the Jamsetjee Hospital, somewhat on the principles stated in this note.

This form of return, so far as I know, is still in use in that Institution. For the purposes of military hospitals of all climates, it would require

extension, and it is very probable that additions to science, since made, might suggest modifications in the placing of some of the diseases.

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In your note you inform me that the Indian Sanitary Report recommends the adoption throughout India of the Registrar General's nosological arrangement. As I had no part in the proceedings of the Committee from which this Report has proceeded, and as I have not yet had an opportunity of perusing the Report, I am not aware of the grounds on which this recommendation rests; but possibly my opinion may be inferred from what I have already written in this letter on the general question of nosological arrangement.*

P.S. Oblige me by noting that my remarks are intended to apply to a nosological arrangement for hospitals and dispensaries, civil and military. It may be that, as the principles rest on the assumption of adequate medical knowledge on the part of the agents using the arrangement, my observations are in part inapplicable to statistical returns, which may have to record information not derived from professional sources. If so, there should clearly be a distinct arrangement for statistical purposes. It must be very injurious to the progress of medical science, and to the tone of mind of medical inquirers, to have the record of their observations pitched at and kept down to the level of that of a less informed agency. The argument that it facilitates comparison between statistical and hospital returns, is of no price in the face of the objection that unity tends to degrade and to retard medical science. Nothing can be easier, for purposes of comparison, than to bring down hospital returns to the level of statistical returns.

Classification and Nomenclature of Diseases, observed in the Jamsetjee Jejeebhoy Hospital, Bombay, 1857.

<p style="text-align: center;">I. <i>Fevers.</i></p> <p>Febricula Intermittent, Quotidian — Tertian — Quartan Remittent Ardent, Continued Puerperal</p> <p style="text-align: center;">II. <i>Eruptive Fevers.</i></p> <p>Small-pox Chicken-pox Measles Scarlatina</p> <p style="text-align: center;">III. <i>Epidemic Diseases.</i></p> <p>Cholera Influenza</p>	<p style="text-align: center;">IV. <i>Diseases of Nervous System.</i></p> <p style="text-align: center;">(1) <i>Brain.</i></p> <p>Encephalitis, to include coma caused by heat Meningitis, to include acute hydrocephalus Apoplexy Narcotic poisoning Ebrietas Concussion Compression from injury, with or without fracture of skull Hemiplegia Insanity Delirium tremens Cephalalgia Hydrocephalus, Chronic</p>
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* In a subsequent communication, Dr. Morehead, having read the Report referred to, expresses the opinion that the classification used by the Registrar-General in this country, is unsuitable for the registration of diseases among either the civil or military population of India.

(2) *Spinal cord.*

Myelitis
Fracture of the vertebræ
Concussion
Paraplegia
Tetanus, Idiopathic
—— Traumatic
Hydrophobia
Spina bifida

(3) *General Nervous System.*

Paralysis, General
—— Partial
Epilepsy
Puerperal convulsions
Chorea
Neuralgia
Hysteria

V. *Diseases of Air Passages & Lungs.*

Laryngitis, Acute
—— Chronic
Croup
Bronchitis, Acute
—— Chronic
Catarrh
Pneumonia
Pleuritis
Hæmoptysis
Phthisis
Asthma
Hooping cough
Asphyxia

VI. *Diseases of Heart, and Vascular System.*

Pericarditis
Endocarditis
Diseases of Valves
—— Cavities, to include hypertrophy, dilatation, and fatty degenerations
—— Cavities and Valves
Angina pectoris
Arteritis
Aneurism of Aorta
—— other arteries
Phlebitis
Varix
Nævus

VII. *Diseases of Liver and Spleen.*(1) *Liver.*

Hepatitis, acute, including hepatic abscess

Hepatitis, Chronic, including cirrhosis
Enlargement from Congestion
—— Degeneration
—— Hydatids
Jaundice

(2) *Spleen.*

Splenitis
Enlargement

VIII. *Diseases of Stomach and Bowels.*

Peritonitis
Enteritis
Ileus
Hernia
Colic
Gastritis
Gastro-enteritis
Irritant poisoning
Dysentery, Acute
—— Chronic
Hæmatemesis
Dyspepsia
Bilious cholera
Diarrhœa
Melæna
Mesenteric tuberculosis

IX. *Diseases of Nose, Ear, Mouth, and Fauces.*

Epistaxis
Polypus nasi
Otitis
Otorrhœa
Glossitis
Stomatitis
Pharyngitis
Tonsillitis
Parotitis
Odontalgia
Ranula
Dysphagia

X. *Diseases of the Eye.*

Conjunctivitis
Sclerotitis
Corneitis
Iritis
Retinitis
Cataract
Glaucoma
Amaurosis
Fistula lacrymalis

Entropium
Ectropium
Trichiasis

XI. *Diseases of the Tegumentary Tissues.*

Erysipelas
Phlegmon and abscess
Gangrene
Carbuncle
Furunculus
Ulcer
Erythema
Roseola
Urticaria
Lichen
Eczema
Herpes
Scabies
Impetigo
Ecthyma
Pemphigus
Psoriasis
Ichthyosis
Elephantiasis, Cochin leg, hypertrophied scrotum
Warty excrescences

XII. *Diseases of Bones and Joints.*

Ostitis
Necrosis
Caries
Rickets
Arthritis
Synovitis
Scrofulous disease of joints

XIII. *Disease of Urinary and Reproductive Organs.*

Nephritis
Bright's disease
Cystitis
Prostatitis
Chylo-serous urine
Hæmaturia
Diuresis
Diabetes
Calculus, Renal
—— Vesical
Gonorrhœa
Retention of urine
Chancre
Stricture of urethra
Extravasation of urine
Phymosis

Orchitis
Hydrocele
Hæmatocele
Varicocele
Pregnancy
Childbirth
Abortion
Metritis, General
—— Partial
Phlegmasia dolens
Polypus uteri
Ovaritis
Ovarian tumours
Menorrhagia
Amenorrhœa
Dysmenorrhœa
Leucorrhœa
Displacement of Uterus

XIV. *Diseases of Rectum and Anus.*

Hæmorrhoids
Prolapsus ani
Fistula ani
Stricture of rectum

XV. *Diseases of the General System.*

Rheumatism, Acute
—— Chronic
Gout
Scrofula
Scurvy
Syphilis, to include all secondary and tertiary affections
Pyæmia
Leprosy, to include tubercular and anæsthetic forms
Cachexia, to include Asthenic and Cachectic states, not referable to preceding heads

XVI. *Dropsies.*

General dropsy, not to include that depending on disease of heart or kidneys; but that on diathesis, as beriberi, etc. The term general dropsy to be understood as anasarca combined with dropsy of a cavity
Anasarca
Ascites

XVII. *Entozoa.*

Intestinal worms
Dracunculus

<p>XVIII. <i>Tumours.</i> Fibrous Osseous and cartilaginous Adipose Encysted Malignant</p> <p>XIX. <i>Fractures, Dislocations, Wounds and Injuries.</i> Fractures, Simple ——— Compound Dislocations, Simple</p>	<p>————— Compound Sprains Wounds, lacerated, and contused, incised, punctuated, poisoned Contusions Burns</p> <p>XX. <i>Congenital Malformations.</i> Club-foot Harelip Imperforate Anus ——— Vagina</p>
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From DR. PARKES, F.R.S., Member of the Medical Council of General Education; Professor of Military Hygiene in the Army Medical School; Examiner in Medicine in the University of London.

The propriety of "retaining a special class of diseases, which shall include the epidemic, endemic, and contagious maladies, and others of an allied or congenerous nature," will no doubt depend on the point of view from which it is regarded. There is evidently a natural connection between many of these diseases, and in a nosological arrangement which aims at establishing a few grand and comprehensive classes, the epidemic and specific diseases must always form a separate order.

But from another point of view, it must be concluded that the employment of such a classification, in statistical returns, must be very restricted.

One great object of statistical returns is to furnish such an identification of the diseases prevalent in any locality, as may lead to a determination of the causes, and may give an immediate clue to the measures which are necessary for prevention. In all cases, especially in the army and navy, this is one great use of statistical returns.

But under the head of miasmatic, more under the head of zymotic, diseases, affections arising from the most different causes are included. The statement of the amount of the zymotic or miasmatic class of diseases among a community gives some but very imperfect information. It tells us very little, and that only in very general terms, of the morbid conditions among such a community. But if instead of such a general term, we state the proportion of the individual diseases, what a light is at once thrown on causes, and the requisite mode of prevention!

Whatever opinions we may hold as to the origin of the specific cause of typhoid fever, the statement of the existence of typhoid indicates that attention must be instantly directed to one point, viz.—the contamination of air and water by fæcal matters. The statement of typhus existing shows us that there will almost certainly be overcrowding,

(which is not at all necessary in typhoid) uncleanliness of clothes and person, and perhaps other conditions, such as want of food, and scurvy, while the question of drainage is subordinate.

The occurrence of small-pox, again, has its obvious inference, and carries with it at once the necessary preventive measures.

So again with malarious disease, scarlet fever, plague, etc.

The progress of inquiry is to show how specific all these diseases are, and how special are the conditions which allow their spread. They are governed by as strict rules as those which regulate the union of chemical substances, or the results of physiology.

I conclude, then, that for the purpose of prevention, and for tracing causes, individual identification and announcement is necessary, and that the mere statement of a group formed by a general classifying character is of very subordinate importance.

With regard to the third question asked by the Society, I consider that the return of the Registrar General is a great improvement over any previous table, but that it requires some amplification and some re-arrangement.

With regard to amplification, a complete statistical table should include all diseases which can be properly identified, and every few years a careful examination should be made by competent authority, to add in the diseases where diagnoses have been made out in the interval.

With regard to rearrangement, it seems to me that the general term does not truly include or cover all the diseases placed under it. In other cases, although the real position of a particular disease may be in a certain group, there may be a convenience in adopting for the time a different arrangement—I select, for example, diarrhœa, which on the whole seems to me to be best placed under diseases of the intestines, etc.

But the general method adopted in the Registrar General's return seems to me a very good one, and as already said, is in my opinion a very great improvement over preceding systems.

From DR. LAYCOCK, F.R.S.E., Professor of the Practice of Medicine and of Clinical Medicine, and Lecturer on Medical Psychology, in the University of Edinburgh.

I can have no hesitation in expressing my entire concurrence with that part of the nosological classification of the Registrar General of England, which includes, under one term, the diseases referred to in paragraph 1; although I think a more appropriate term than that adopted, might be used. 2. I am clearly of opinion that "there is a definite group of diseases, which can be separately studied in their epidemic form, etc." And 3. I am also of opinion that it is desirable to classify these together in statistical returns, as to both "causes of death,

and forms of sickness, etc." 4. I have very lately published, in the second edition of my *Principles and Methods of Medical Observation and Research*, some very carefully constructed nosologies, and used by me in teaching; I venture to refer to them as distinctly indicating what alteration I have thought it expedient to make in the nosology of the Registrar General. 5. Further, in the lecture "on the Naming and Classification of Diseases" in the same book, will be found an exposition of the general principles upon which nosologies should, in my humble judgment, be constructed.

From DR. GAIRDNER, Professor of the Practice of Physic, etc., in the University of Glasgow.

I feel considerable diffidence in offering an opinion on the point you suggest, more especially as my opinion must take the form of one adverse to the system of Dr. Farr, the man who of all others has done most for vital statistics, and for whose character and works I feel so high a respect. However, as I happen to *have* an opinion on the subject, you are fully entitled to call for it in the general interest.

I suppose it will be admitted that the chief use of nosological classifications is to bring the multitudinous names of diseases together, in such a form as is most easily grasped by the mind of the ordinary well informed practitioner, from being most in accordance with the daily current of his thoughts and observations. All attempts to make such classifications the embodiment of a pathological theory, or to encumber them with new and uncouth names, or to *force* (as it were) the progress of science by crystallising out innovations not generally accepted in definite nosological forms, have invariably broken down. Witness the system of Mason Good in the last age, and of Piorry in the present. Witness the ephemeral life of such classifications of skin diseases as those of Alibert, compared with the tenacity and persistence of the comparatively plain system of Plenck, followed by Willan and Bateman, and with certain modifications by Casenave, and even Hebra.

Dr. Farr has avoided many of the errors of nosologists above alluded to. But in pursuit of a very natural and in some respects very desirable end, he has, I think, introduced an undesirable difficulty into the working of his system. What are epidemic diseases? What endemic? What contagious? Round each of these expressions controversies are circulating, which will probably never come altogether to an end. By fusing the three expressions into the designation of one class, you greatly diminish the value of your results, but you do not eliminate from them the controversial element.

But suppose you could do so, there would still remain this objection to their classification apart: you cannot make that classification at all complete without distorting and perverting the natural structure of the

whole nosology. Why should *diarrhœa* be divorced from diseases of the intestinal system, to be thrown in beside small-pox and typhus? Why should influenza be divorced from bronchitis and pneumonia, when every one knows the real record of influenza actually existing is never to be found under its own term, but always under the column of these closely allied diseases, which are totally apart from it in the Registrar General's classification.

The same objection, in perhaps even a stronger form, must be made to the separate classification of the *tubercular* diseases. The aggregate of diseases of respiration is fatally vitiated by the absence of phthisis pulmonalis from that class. The aggregate of diseases of the brain is quite incomplete without hydrocephalus.

I am, therefore, entirely in favour of a simple, practical, and intelligible arrangement, in which diseases should take rank as they naturally occur to the minds of practical men, and not according to any preconceived view of the results to be obtained by working out particular hypotheses. Let the student of contagious diseases make up his own list, and study them statistically in all their various aspects; and so also the student of tubercular disease, etc.; but let the public have before them an arrangement of which every man knows the beginning and the end, and in which the position of a disease is such as would rise to the mind of half the general practitioners in the country.