

On an annual census : with suggestions for annual stocktakings, and reports on them for economical and efficient administration by local authorities / by Sir Edwin Chadwick.

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ON
AN ANNUAL CENSUS:

WITH
SUGGESTIONS FOR ANNUAL STOCKTAKINGS, AND REPORTS
ON THEM FOR ECONOMICAL AND EFFICIENT
ADMINISTRATION BY LOCAL AUTHORITIES.

BY
SIR EDWIN CHADWICK, K.C.B.,

CORRESPONDING MEMBER OF THE INSTITUTE OF FRANCE, ETC.

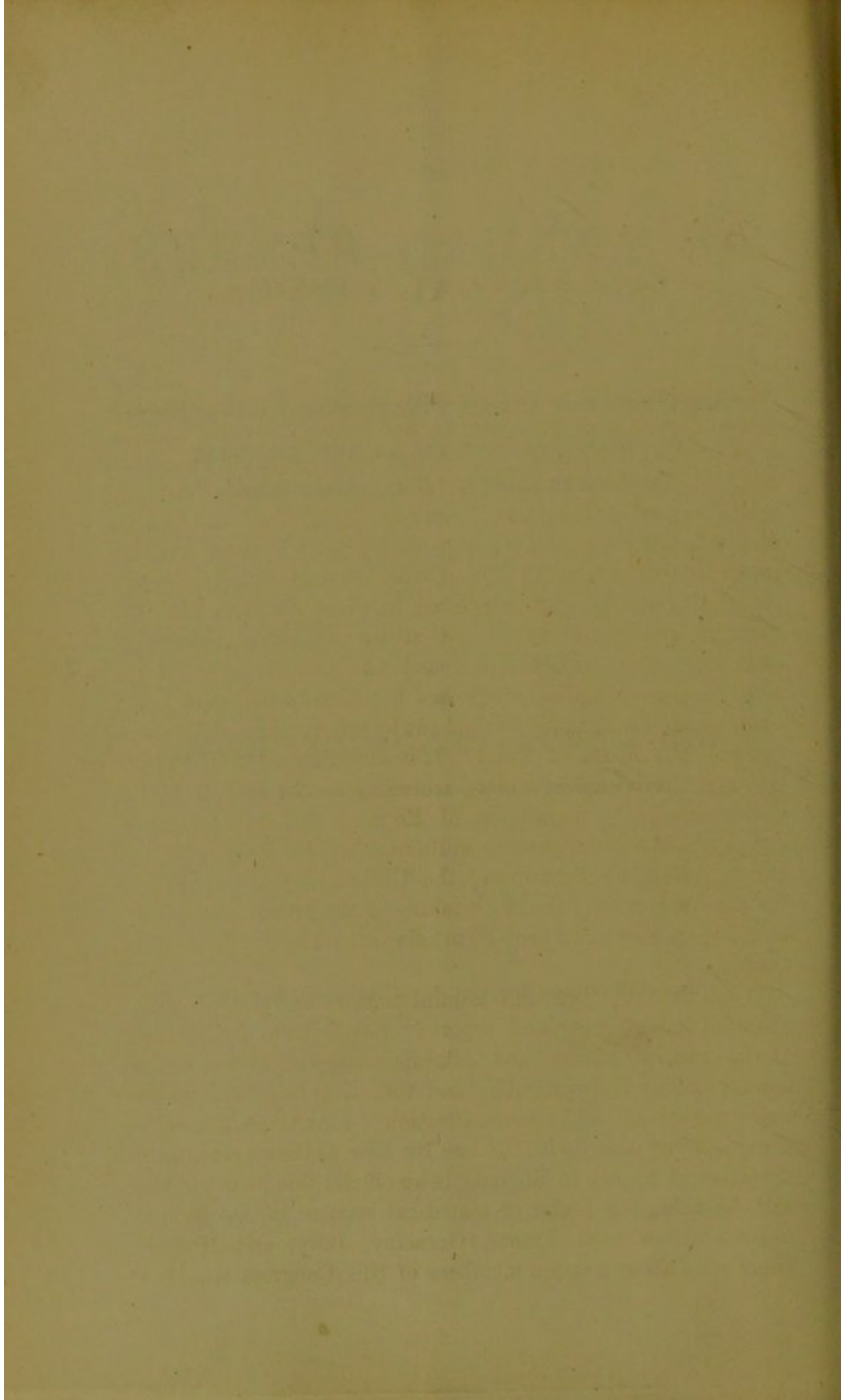


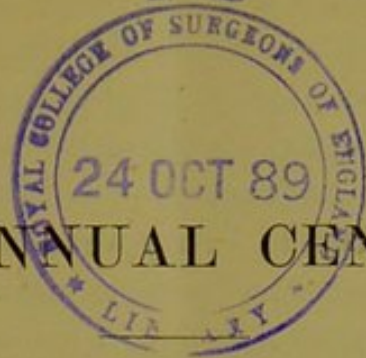
Read at the Health Congress held at Hastings, May 1889.



LONDON:
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1889.





AN ANNUAL CENSUS.

IN commerce and in manufactures, as in every large company, there is an annual stock-taking, and upon that stock-taking a report and declaration of the results is made to the shareholders. But what is the state of the political administration, which has only attained to a stock-taking of the living people, of the healthy and the weakly, on whom the power and the prosperity of the country depend, which is only attempted every ten years, and is only completed in three years, leaving the numbers meanwhile to be got at by estimates, necessarily erroneous, often widely erroneous? An annual census of the more numerous animal stock has been lately striven for and obtained, and is annually worked out by the Agricultural Department of the Board of Trade. It is some forty-five millions of the agricultural stock, whilst, according to the last decennial enumeration, the population of England and Wales was in round numbers twenty-seven millions seven hundred thousand. Other nations, as France and the United States, have halved the inconvenience of the stock-taking of the human population, and some persons now propose to halve it here by a quinquennial census.

What in civil life and administration would be a quinquennial stock-taking and report? But I have the support of the greatest statisticians and administrators in Europe that an annual census is practicable, and that it is important for the improvement of public administration. I had the honour of being selected, along with the late Dr. Farr, as the representative of statistical science in England, in an official Congress, together with Quetelet, the leader of statistical science in Europe, and representatives from France, Germany, Italy, and Holland. There were about a dozen members of this Congress who held

meetings annually in turn at their respective States, where they were received with distinction by their respective Governments. At the Congress held at The Hague I proposed that a census should be taken annually, and as much as possible in one form in all the States. This proposition was strongly supported by Professor Engel of Prussia. They were men who well understood that for facts of importance the recordations should be prompt to secure them for practical working. I was expected to develop the subject more fully at another Congress. But I was prevented attending the other Congresses, and I was remonstrated with seriously by the other members, who were fully prepared for the consideration of the subject, as a most important one. But Quetelet died; and the Congress itself, in that form of selected permanent heads of departments, was interrupted by the tempest of war, and has not been renewed in that State form. The old method of taking the census decennially has prevailed; it is worked in England by one hundred patronage-appointed clerks, at an expense of £100,000, and occupies three years, resulting in a greatly changed population, and much error. My view was that the census, instead of being worked by a hundred extra clerks for three years in London, should be accomplished annually locally by some six hundred and fifty superintendent Registrars, assisted by the Local Health Officer on the sanitary points requiring recordation, including the Poor-law officers, as respects the pauper population. The payment made of £100,000 might be transferred in its proportion to the local officers for the extra work of the Annual Report. The eligible course would be to select for the extra service that local officer, the exercise of whose functions occasions his visits to every house in the district. Should it be the rate-collector, who might leave with his rate-collection forms a slip of a census form to be filled up in part by the householder, and in part by the officer himself on inquiry? But rate-collectors are not popular, and their inquiries are evaded. Should it be the postman, who visits most of the houses, and if not all, may visit all, and who may provide for the local post-office a more complete directory of persons and names than at present exists? Or might it now be the agent of the new local authority, the School Boards, who visits

every house to inquire about the attendance or non-attendance of the children at school, and may make additional inquiries at the same time? These officers, as a rule, are stated to be highly intelligent men. The appointment of the most eligible officers, however, may be left to the Local Registrar and the Clerk of the Union. The officers will have the dates of birth of every living person in a house, and, without troubling the occupier, he may insert of himself the addition of the year, and get answers to his inquiries into other particulars deemed necessary. There is one point I ascertained with respect to the Metropolis, and that is the very large changes in the population by constant removals, even in the most prosperous periods. The electoral agent of the City of London, the late Mr. Sidney Smith, stated that the changes of occupiers of houses on the registration list as voters were at least twenty per cent. per annum. Mr. Kelly stated that the changes for his great Directory for the whole of the Metropolis were fully twenty per cent. For his Suburban registration he only enters occupiers of houses rented at £50 and above, and among these the changes by removals were about the same. But the changes of residence among the wage classes, to follow and be near their work, appeared to be greater than of any other classes, and amount to as much as one-third. These changes as respects children are extremely perplexing to the school teachers. What must they not yet be in their operation on a quinquennial census?

Now the report of the stock-taking for a local administration would be such as to serve for its guidance, and may, I believe be made of great annual interest to the ratepayers. It may serve to direct the efforts of the local authority to the gain in economy from works of sanitation; it would present to them, and to the localities, an interest in the incomings and the outgoings of different classes in their occupations, the proportion of the sick and paupers and dependents leading to the consideration of their causes. I submit the following sketch of a stock-taking of a population, such as was appended to my Report on "The Sanitary Condition of the Labouring Population", in 1842.

Total Population in 1888	-	-	-	-
" " 1889	-	-	-	-
Total incomers and outgoers in 1889	-	-	-	-
Dependents	-	-	-	-
Sick	-	-	-	-
Deaths	-	-	-	-
Paupers	-	-	-	-

The proportion of deaths of children under one, or more completely under five years, to the total deaths, we deem the best index to the sanitary condition of a place, as children are mostly on the spot, are most affected by the local sanitary conditions, and the least affected by occupations, by migration, or emigration. On looking over the Returns for this healthy place, Hastings, and comparing the death-rate of children under five years of age of the higher classes and the visitors, with those of the wage-classes, we see that the deaths of children of the well-to-do are 3.41 to total deaths, whilst the death-rate of children under five years of the wage-classes is as much as 38.72 of the total deaths, and of the children of the fishermen about the same. This denotes how much is yet to be done by sanitation for the wage-classes; moreover, when these children survive the juvenile period, they lose upwards of nine years as compared with the better sanitary conditioned classes. The causes of death are displayed in the further stages.

Let Hastings be subjected to a clinical examination, such as was adopted by Brighton, with much benefit, though as yet but half-used. It would cost less than half the expense of a local Act, which is commonly without science, presenting examples of the wastefulness of ignorance, unreduced death-rates, such as heavily burden the country. I believe that upon a close examination of the schools at Hastings, the means of ventilation and washing, a systematised inspection of workshops, as was provided in our Regulations for the Officers of Health, and the aid of the sanitary inspectors, a further reduction of the death-rate from fourteen to eight in a thousand may be confidently anticipated, and a great pecuniary gain effected. The

value of a single life, according to the late Dr. Farr, is £159. Now a gain of six per thousand would be a gain to Hastings of 300 lives, and the money gain on these lives would amount to £47,700 per annum. Take the case of the wage-classes: what will be the money-value of six years more of painless life and working ability to them? To effect this money-saving there must be some expenditure for the attainment of at least a third room tenement, for which the workman's gains in wages by the gain in health will abundantly pay. Hastings, however, has already gained largely by such imperfect improvements in sanitation as have gone on with little system. In the three years 1847-9, I learn from the Registrar-General's Office that the mean age of all who died here was 30.7 years, but in the three years 1885-7, the mean age of all who died was 37.5 years. There has, therefore, been a gain by sanitation, to all who have been born and lived here since 1847, of seven years. Now referring to the accustomed death-rates as to which I have been challenged. The common death-rate accepted all over Europe at present is the rate per thousand of the population. From what has been shown as to the changes of population in the most crowded districts, it will be seen how defective that must be. It is like taking the mean age of death of the fixed population of a regiment, one fourth or third of which is changed. Nevertheless, this rate, defective as it is, affords some indication of sanitary condition. On observing two districts, one in which the houses were well drained, the other in which they were ill-drained, I have found the variations in this imperfect death-rate correspond largely with their conditions. The examples I have elsewhere cited of changes of sanitary conditions are accompanied by alterations in this death-rate, imperfect as it is. The annexed Table, I may submit, is an advance to greater statistical accuracy, which ought to be required authoritatively. It was made up after much study by Dr. Richardson and myself, and implies separations into classes, the great differences in those classes, one contrasting with another, and displaying differences of condition belonging to each class, and requiring separate sanitary treatment. As the Table stands at present, in the absence of any examination on view of the body, and so far

as may be ascertained as to the causes of death by a competent health officer, as proposed in my Report on Interments, of 1843, it is seriously defective as to the registration of causes, and, as was proved, let pass frequent cases of murder. A stock-taking of the population on the conditions of the separate classes, and of their approximate treatment, would present a subject of great interest to the ratepayers, as well as serve as a guidance to local administrators. Each locality would totalise its own report of the annual stock-taking, and send it to the Central Department, by which the whole of the local totals would be totalised; and the general result would be presented to the Government and the public in a few days.

Giving due precedence to our chief subject, the economy of the public life and force, there would follow next another chapter on the pressure of destitution and of the means taken for its relief—a Report by the Chief Poor-law District Inspector. I might state the fact that the cost of the service of some ten thousand paid officers, with all their defaults of organization, is at least three millions less now than the expenditure under the unpaid parochial officers, and that, on a full return to the principles we first laid down, a reduction of the present expenditure by one-half obtained. Our first principles of amendment set forth were, that the functions left to the unpaid the irresponsible, and the partially informed, should be supervisory only, like those of Visiting Justices to prisons, and that the real responsibility should be left to highly qualified and skilled paid officers, as has been done voluntarily in the districts of Whitechapel and St. George's-in-the-East, in the Metropolis, Manchester, Cambridge, and St. Neots, which should effect a saving of half the present outlay, and improve the quality of the administrations in humanity and efficiency. In the most pauperised districts of the South, wages have been advanced by one-third, and by the improved labour, an equivalent advance was soon effected in the value of landed property. Another chapter would follow in a report by the chief local officer, whether of an imperial or local police force, showing the state of crime and the means of its repression. In this it might be shown, as respects the rural districts, that the cost of the police

service, by night as well as day, in checking fires, saving life, and various services on the occasion of calamities, does not exceed the cost of the unpaid parish constables. Next would follow a chapter by the chief engineer on the expenditure for the maintenance of the roads, bridges, and highways. As to the roads under scientific management, Sir John Burgoyne, referring to the roads in Ireland, stated to me that by an alteration, which would hardly be recognised by a common eye, a saving of one horse out of five would be effected, and this would obtain a saving of seven million pounds in the cost of transit. Another chapter would be on the cost of supplies of provisions and materials, which it is of the highest importance to have consolidated for the whole of a county under a competent intendance. There would be room also for a report on education, including physical training on the half-time principle, by which enormous economies and improvements in the manners, intelligence, and earnings of the future wage-classes might be effected. The whole course of local administration, based on the opinion of highly qualified and competent paid officers, may be a means of the greatest public economy, whilst otherwise it may aggravate enormously the wastefulness of ignorance.

The Address was, on the motion of Earl Fortescue, unanimously adopted, and it was resolved to draw the attention of the Government to the consideration of an Annual Census.



APPENDIX I.



CLASSES OF THE POPULATION.		Proportion per cent. of Total Deaths of each Class.	MEAN A Of all who died—Men, Women and Children
<i>All Classes</i>	Males - - -	49.23	38.2
	Females - - -	50.77	
	Children under 1 yr. -	19.32	
	Children under 5 yrs.	29.44	
<i>Gentry, Professional Men, etc.</i>	Males - - -	43.18	59.4
	Females - - -	56.82	
	Children under 1 yr. -	2.65	
	Children under 5 yrs.	3.41	
<i>Merchants, Commercial Clerks, etc.</i>	Males - - -	54.84	39.1
	Females - - -	45.16	
	Children under 1 yr. -	9.68	
	Children under 5 yrs.	18.28	
<i>Tradesmen, Shopkeepers, etc.</i>	Males - - -	50.23	34.6
	Females - - -	49.77	
	Children under 1 yr. -	22.19	
	Children under 5 yrs.	34.67	
<i>Wage Classes, Artisans, etc.</i>	Males - - -	48.93	30.5
	Females - - -	51.07	
	Children under 1 yr. -	26.60	
	Children under 5 yrs.	38.72	
<i>Fishermen, Boatmen, etc.</i>	Males - - -	57.81	36.4
	Females - - -	42.19	
	Children under 1 yr. -	25.00	
	Children under 5 yrs.	39.06	

Enumerated Population { 1871 = 29,291
 1881 = 42,258
 Estimated Population { 1886 = 51,224
 1887 = 53,137

NOTE.—In the deaths are included those at the Workhouse while deaths at the Sanatorium of patients who were not residents

HASTINGS, 1886-7.

PROPORTION OF DEATHS FROM THE UNDERMENTIONED CAUSES TO 100 DEATHS FROM ALL CAUSES.

Diseases of the Respi- ratory Organs, in- cluding Phthisis.	Principal Zymotic Diseases.			Diseases of the Nervous System.	Senectus.
	Enteric Fever.	Diarrhœa.	Other Principal Zymotic Diseases.		
31.06	0.68	3.81	5.59	10.35	3.68
30.52	0.53	3.83	5.42	11.36	5.55
17.78	—	13.54	10.07	11.46	—
22.78	—	11.62	16.63	10.71	—
24.56	0.88	—	—	7.89	7.02
34.67	—	2.00	1.33	10.67	5.33
28.57	—	28.57	—	—	—
33.33	—	22.22	—	11.11	—
54.90	—	1.96	1.96	3.92	1.96
40.48	—	4.76	2.38	14.29	2.38
11.11	—	33.33	11.11	11.11	—
29.41	—	17.65	11.76	5.88	—
32.21	0.61	3.99	7.36	11.35	2.45
27.55	0.62	5.57	5.57	12.07	4.64
18.75	—	13.19	11.11	11.81	—
22.67	—	12.44	16.89	12.44	—
28.16	0.97	5.83	5.83	10.19	2.91
28.84	0.93	2.79	7.91	10.17	7.44
15.18	—	12.50	8.93	10.71	—
20.25	—	10.43	15.95	8.59	—
24.32	—	5.41	10.81	18.92	10.81
40.74	—	—	11.11	7.41	7.41
25.00	—	6.25	12.50	18.75	—
32.00	—	4.00	28.00	12.00	—

Deaths in the two years, 1886-7 { Males, 734
 Females, 757
 Persons, 1,491
 Average Annual Mortality per 1,000 Estimated
 Population in the two years 1886-7 =14.3.

(outside the Borough) of inmates formerly residents of Hastings,
 are excluded.

THE END OF THE WORLD

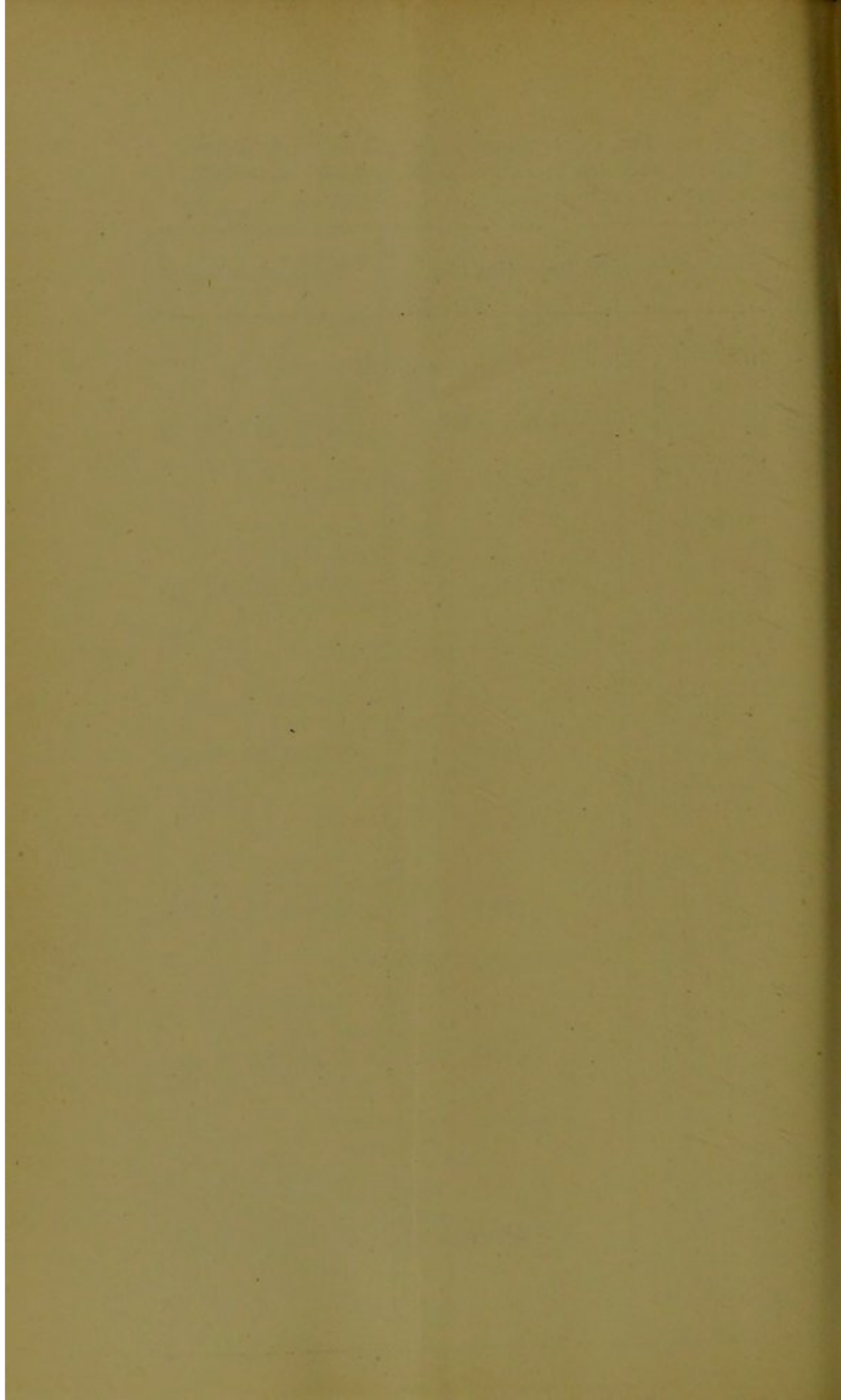
APPENDIX II.

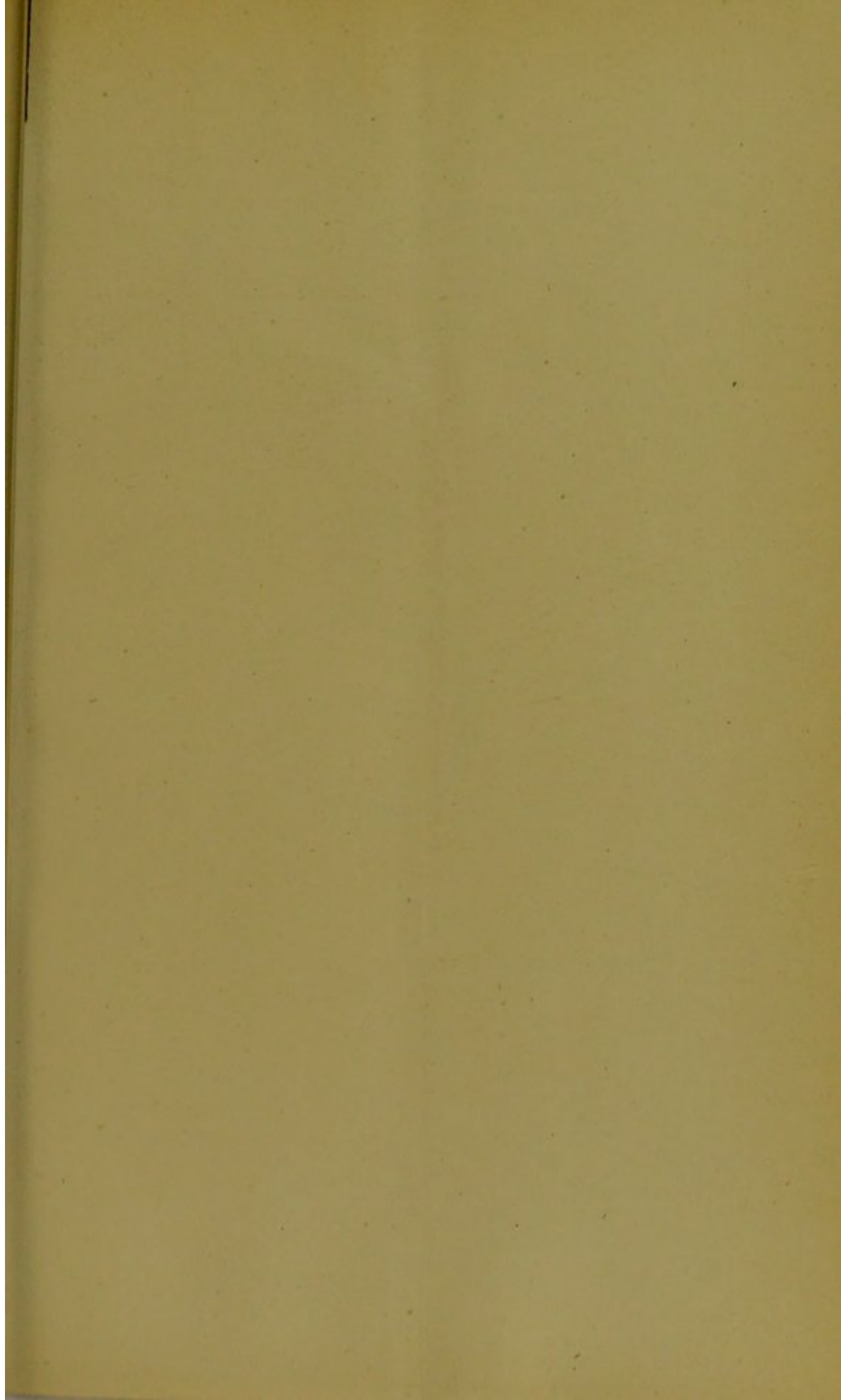
The following Table, displaying the different expenses in considerable time and labour to get made out, and I submit it. It may be submitted as being strictly applicable to other branches

No. of Scholars.	Annual Cost per Head.			
40	Master and Mistress	...	...	...
	Monitor	...	...	...
	Expenses	...	...	...
	House Rent	...	...	...
	Annual Cost per Head	...	...	...
70	Master and Mistress	...	...	...
	One Pupil Teacher	...	...	...
	Expenses	...	...	...
	House Rent	...	...	...
	Annual Cost per Head	...	...	...
120	Master and Mistress	...	...	...
	Two Pupil Teachers	...	...	...
	Expenses	...	...	...
	House Rent	...	...	...
	Annual Cost per Head	...	...	...
200	Master	...	...	...
	Four Pupil Teachers	...	...	...
	Expenses	...	...	...
	Annual Cost per Head	...	...	...
	400	Master
One Assistant		...	...	...
Six Pupil Teachers		...	...	...
Expenses		...	...	...
Annual Cost per Head		...	...	...
700	Master	...	...	...
	First Assistant	...	...	...
	Second Assistant...	...	...	...
	Twelve Pupil Teachers	...	...	...
	Expenses	...	...	...
Annual Cost per Head	...	...	...

... money of small as compared with large schools, took me
 the highest importance on the question of national education.
 administration.

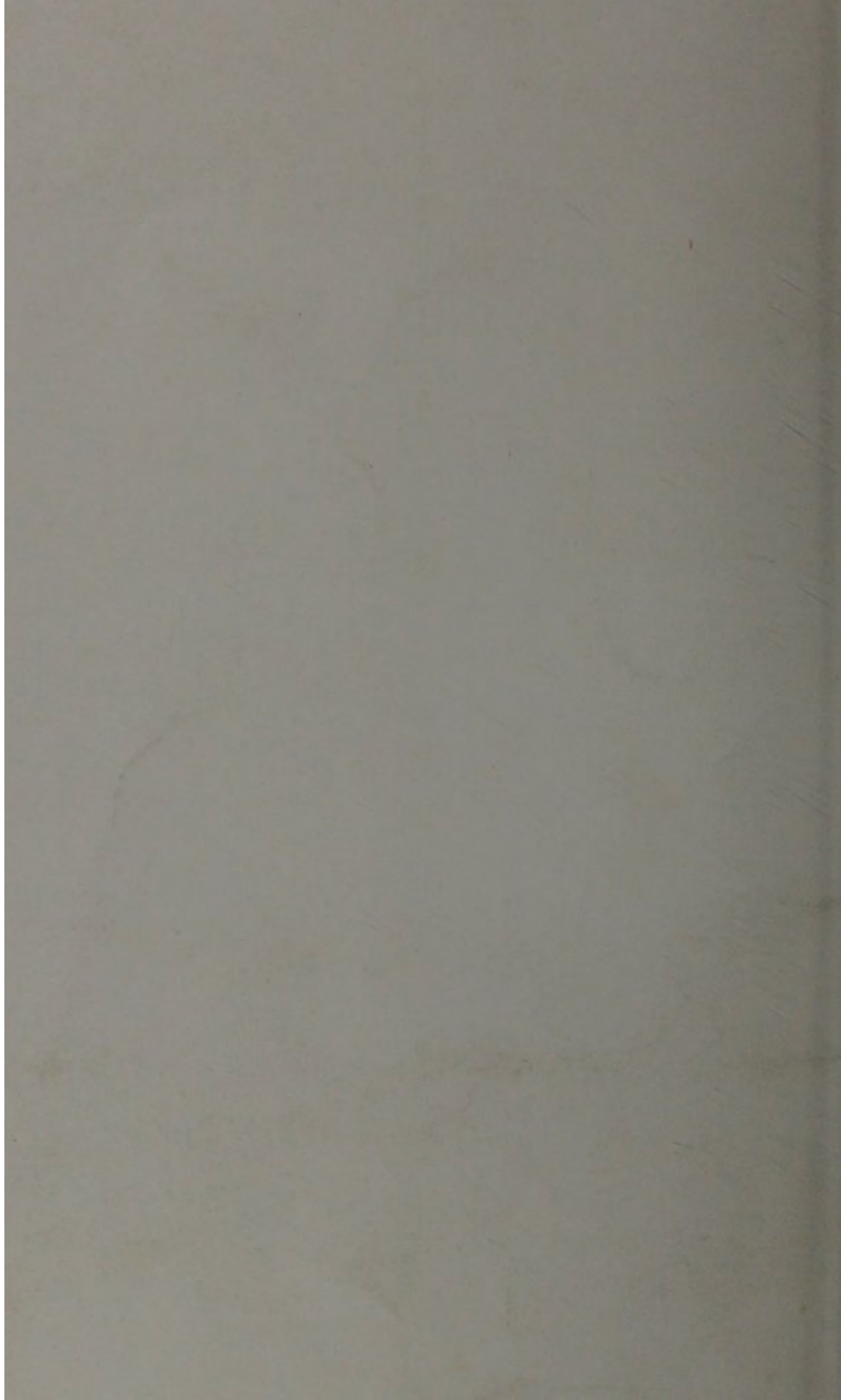
	Time of Teaching.	Total Cost per Head.
$\begin{array}{r} \text{£} \quad \text{s.} \quad \text{d.} \\ 70 \quad 0 \quad 0 \\ 2 \quad 10 \quad 0 \\ 10 \quad 0 \quad 0 \\ 20 \quad 0 \quad 0 \\ \hline \text{£}2 \quad 11 \quad 3 \end{array}$	6 to 7 years	About £16 10 0
$\begin{array}{r} 75 \quad 0 \quad 0 \\ 15 \quad 0 \quad 0 \\ 15 \quad 0 \quad 0 \\ 20 \quad 0 \quad 0 \\ \hline \text{£}1 \quad 15 \quad 6 \end{array}$	7 years	About £12 10 0
$\begin{array}{r} 105 \quad 0 \quad 0 \\ 30 \quad 0 \quad 0 \\ 25 \quad 0 \quad 0 \\ 25 \quad 0 \quad 0 \\ \hline \text{£}1 \quad 10 \quad 10 \end{array}$	6 years	About £9 0 0
$\begin{array}{r} 135 \quad 0 \quad 0 \\ 60 \quad 0 \quad 0 \\ 35 \quad 0 \quad 0 \\ \hline \text{£}1 \quad 3 \quad 0 \end{array}$	5 years	About £6 0 0
$\begin{array}{r} 185 \quad 0 \quad 0 \\ 70 \quad 0 \quad 0 \\ 90 \quad 0 \quad 0 \\ 55 \quad 0 \quad 0 \\ \hline \text{£}1 \quad 0 \quad 0 \end{array}$	4 years	About £4 0 0
$\begin{array}{r} 240 \quad 0 \quad 0 \\ 110 \quad 0 \quad 0 \\ 70 \quad 0 \quad 0 \\ 180 \quad 0 \quad 0 \\ 100 \quad 0 \quad 0 \\ \hline \text{£}1 \quad 0 \quad 0 \end{array}$	3 to 4 years	Nearly £4 0 0







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