THE COMING CENSUS.*

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WITHOUT denying the many economic services of a carefully made census of the people, it may be fairly contended that none is of greater importance than the ascertaining of correct data for health purposes. Every district council throughout the country nowadays receives from its medical officer of health some statistical account of the progress of the locality, and some computation of the success or otherwise of the action taken by the authority, measured in terms of the ratio between the deaths in the district and its population. As one of the terms of the ratio is the population, any important error here renders the comparison useless. The population of many districts calculated on a dead reckoning, from the beginning of April, 1891, to the end of June, 1899, would differ considerably from what they would prove to be were an enumeration now made. To show that this is not an imaginary danger, let me mention some errors of this kind that came under my own observation in 1891. In preparing my report for 1890, the death-rates for the several Leeds sub-districts were calculated in the usual way from estimated populations. Just before striking off the report, the figures for the new census were obtained, and a new estimate of the 1890 populations made from them. Passing over one small district where the error amounted to nearly 39 per cent., in two districts, with census populations approaching 15,000 and 14,000 respectively, the death-rates at first calculated were found to have been 10 and 15 per cent. too high. In another and much larger district, whose enumerated population in 1891 was 29,911, the error amounted to one of 13 per cent., the population having been underestimated to that amount. Evidently any conclusions as to these districts based on these death-rates would have been misleading. These errors occurred in nine years. Next year they would have been still greater. They were, it will be understood, errors for sub-districts, some of them for sub-districts of considerable size. The variation for the whole city was slight, amounting only to 0.29 per cent. Were it needful, I could quote similar disparities between estimated and re-estimated populations at the previous census. There will probably, however, be no

* Read before the Yorkshire Branch of the Incorporated Society of Medical Officers of Health July, 1899.

difference of opinion amongst us as to the desirability of having an enumeration of the population at intervals shorter than once in ten years. How complete such a census should be is another matter, to which I may, perhaps, be allowed to refer later.

While the risk of a wrong estimate of the entire population is not a slight one, there are fallacies in regard to age populations in large towns of no little importance. In the valuable volume of the last census returns, dealing with ages and occupations, is a most useful table, giving for every sanitary district the number of persons of each sex at certain ages. For even comparatively small sanitary districts this information was quite rightly furnished. But the health officer of a large town has often within his administrative area a great number of smaller districts, each of them far larger than some of the small districts so liberally treated. But about the age and sex distribution in these comparatively large areas he knows nothing. The conditions of the suburbs and the slums of a big town differ much as to age and sex distribution, yet he has not the data for framing his standard death-rates for these often very large districts within his greater one.

Recently the writer had occasion to investigate the death-rate of an unhealthy area with a population of about 4,000. After getting out for a period of three years the deaths from all and certain groups of causes, and after pigeon-holing the latter in certain age groups, it was necessary to estimate the number of persons living at these various ages by supposing that the sex and age proportions in the area were the same as in the whole city at the time of the census. On this supposition, while the death-rate of the area from all causes was about twice that of the whole city, the rate between the ages of twenty-five and sixty was about three times that of the whole town. In another but smaller area, whose mean death-rate from all causes and at all ages during five years had been nearly half as great again as that of the whole town, those over sixty died at the rate of seventy per thousand against a rate in the city for the same five years of eighty-four, of course, on the supposition that the age distribution in the area corresponded to that of the whole town at the time of the census, in this case a most unlikely one.

Certain large towns had certain very useful information given them as to the employment of their inhabitants, and similar information was afforded for counties. The information given to these favoured towns would have been ten times more valuable, both to their own officers and eventually to statisticians generally, had it been given also for the sub-districts which make up the larger areas. To illustrate again from my own town: Smoky Hunslet

has its full share of foundries, Meanwood has, perhaps, more than its share of tanneries, whilst Chapel Allertown is almost entirely residential. Then, again, in certain parts of Leeds women take a larger share in the work of the town. Naturally one would like some exact figures throwing light on this matter. Is there no chance of getting them?

On the desirability of letting the health officer have some say in the arrangement of the smaller enumeration areas into which, for convenience of working, his district is subdivided, I do not need to dwell. Granted, however, that he can in some way obtain for each such area the number of persons and houses, I should strongly deprecate much alteration in these smaller statistical areas from census to census. I well remember my own disgust, on examining the highly-paid-for information obtained from the local registrars for Leeds at the last census, to find how much its value had been lessened by alterations made in the old areas at the new census. Units of area should so far as possible remain the same from census to census, and their boundaries should be accurately marked out on the 1 in 2,500 Ordnance map.

To come now to practical suggestions. I should strongly urge our not asking for the impossible. The last census was an immense improvement on any of its predecessors. The question is not of reorganizing the whole thing so much as of getting the greatest amount of good out of the facts and figures that are actually collected. It seems to me that, as the papers have to be dealt with in groups, it would be a comparatively small thing to ask that the particulars we require as to ages and occupations should be given us at least for every sub-district within our several administrative areas. Where only a part of a sub-district enters into the area of an authority, that part is already for most purposes separated. It should, of course, form an enumeration area to itself, and generally does so. The information as to age and sex distribution should, I think, be furnished free to every authority. I should like to say the same as to occupations. This information might certainly be furnished, as to sub-districts, to those larger authorities for whom it is already in part prepared. It might be thought too expensive to print it in detail, but at least those councils might be furnished with it who are willing to pay the extra cost of copying. It is chiefly a matter of copying, for the figures must be got out for the sub-districts in any case.

Another point I feel inclined to mention. In 1891 the number of dwellings with one, two, three and four rooms was given. There seemed to be, however, a difficulty in the minds of some at least

of the enumerators as to what constituted a room. Some excluded coal-cellars, sculleries, box-rooms, as I think properly; some did not.

In pressing for a quinquennial census, I should not be inclined to insist on more than such general figures as would enable us to correct our district populations at all ages. The age variation from census to census would not, perhaps, justify us in asking for much more. Even an authoritative house enumeration would be a great gain. If it can be done in London, why not elsewhere?

INFANTILE MORTALITY.—In the town of Atherstone the figure of infant mortality in 1898 was the appalling one of 315, chiefly to be accounted for by deaths in the month of August. Mr. Mears says: "In this month fifteen deaths occurred in children under one year, and of these eleven are due to gastro-intestinal diseases and four to marasmus." This is indeed a veritable slaughter of the innocents, and one is compelled to cast about and see if something more cannot be done than to merely record and remark upon the condition of affairs. When more than three out of ten children born die in a township before reaching the age of twelve months, it seems to me certainly time to consider whether, on the score of humanity, as well as of national interests, something cannot be done to reduce the figure to the proportion of other contiguous districts. As a result of much inquiry and of many years' experience, I have long come to the conclusion that if anything is to be done to prevent this appalling waste of human life, it must be by letting the people themselves see that such deaths are easily preventable. The bulk of them are due, as I have shown, to ignorance on the part of mothers as to the necessity of proper tending and feeding of their infants, and in casting about for a remedy for the present condition of affairs, I feel compelled to make the suggestion that the time has arrived when, as is done in some of the larger cities of the country, health missionaries or health visitors should be sent round, particularly into those districts of the country where this high death-rate is observed, to endeavour, not only by precept but by example, to stimulate that knowledge which is necessary for the protection of infant life. Lectures given in public buildings, however earnest be the lecturers, do not reach the people who have most need of them, and it is only by visiting the homes of the people who need the advice that progress can be made and work of real value be accomplished. I therefore throw out the suggestion whether it is not in the early future desirable and possible to utilize funds allocated to technical education for the purpose of appointing two or more lady visitors, whose duty it would be to endeavour to improve the state of things existing, more particularly in certain districts.—*Dr. Bostock Hill, Warwickshire C.C., A.R., 1898.*