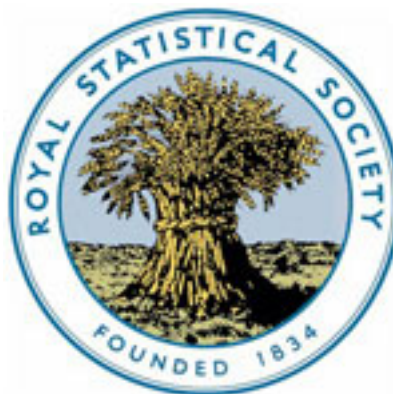


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Review by: A. W. F.

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show a marked gradation according to the social class of the district and the number of rooms occupied: these differences appear most strikingly in the curves of height and weight at different ages, for children in tenements of different numbers of rooms, given in plates at the end of the volume.

Certain figures that were widely cited at the time of issue of the Report are, however, very seriously vitiated by a fallacy so obvious that we are surprised at its having escaped attention. "For all the ages from 5 to 14," it is written, "the numbers examined are so large that comparison between the different groups can legitimately be made If we take all the children of ages from 5 to 18, we find that the average weight of the one-roomed boy is 52·6 lbs.; of the two-roomed, 56·1 lbs.; of the three-roomed, 60·6 lbs.; of the four-roomed and over, 64·3 lbs. The respective heights are 46·6 inches, 48·1 inches, 50·0 inches and 51·3 inches." Similar figures are given for the girls, and the results are enforced in a later paragraph. It does not appear to have occurred to the writers of the report, or to those responsible for its issue, that averages based on children ranging from 5 to 18 years of age are primarily dependent on the age-distributions. Now the percentages of one, two, three and four-roomed boys, respectively, who were 8 years of age and less are, in round numbers, 44, 39, 31 and 27 per cent.; while the percentages aged 12 or more are 20, 26, 33 and 39 per cent.—*i.e.*, the average age of two-roomed boys is greater than that of one-roomed, that of three-roomed greater than two-roomed, and so on. No wonder, then, that the average height and weight are correspondingly greater! There is, it is true, a significant difference between tenement-classes age for age, but—roughly speaking—it is only half that given.

If one other criticism may be made, it is that the tables are too detailed; data should not be published for single schools, as they are practically worthless; 16 out of 32 so-called "averages," in Table 24, for instance, are based on single individuals. Apart from these criticisms on individual points, we have, however, nothing but admiration for the way in which the research has been initiated and carried through by local effort, and with official recognition and support. Scotland has set a good example. G.U.Y.

5.—*Census and Statistics (Canada). Bulletin I. Wage-earners by Occupations.* xxviii + 105 pp., 8vo. Ottawa: S. E. Dawson, 1907.

The first bulletin, supplementary to the reports of the Canadian census of 1901, deals with the numbers and earnings of employees over 16 years of age, except in manufactures, where the limit is 15 years. The data given are classified by occupations for Canada as a whole, and the aggregates are compared by provinces in the chief groups of occupations. The numbers for whom the record obtained was complete were:—661,485 males and 153,445 females, or about 40 per cent. of the male population between 15 and 65 years of age, and 10 per cent. of the female population of like age. Partial returns relating to 75,064 males and 32,597 females were secured, in addition to these complete returns.

We have, it is clear, not a record of all *occupied* persons, and the difference between *occupied* and *employed* in Canada is very important. It would be easy to misinterpret some of the results through neglect of this fundamental point. If the enumeration may be taken as approximately exhaustive, we might conclude that one-half, or thereabouts, of the adult males of Canada are self-employed. Even if a large allowance be made for those under (say) 20 years of age who are not yet at wage-earning employment, but will shortly be so occupied, the proportion of self-employed will remain very high. This is of especial importance in agriculture, and of very considerable moment in the professional class. Manufactures employ more than three times as many male wage-earners as agriculture, and the wages earned by the former are fully six times as great in the aggregate as those earned by the latter. But it would be an error of the first order to permit the impression produced by these figures to serve as the foundation of a judgment as to the relative importance of these two great divisions of industry in the Dominion. The reports of the Census Bureau still fail to provide the data necessary for this comparison.

So far as appears from the bulletin, no estimate of the value of payments in kind, of food or lodging provided in addition to money-wages, has been included in the figures set forth. There results, of necessity, an unfavourable comparison between different groups of occupations, possibly also between different provinces. Thus the earnings of the average male employee in manufactures are \$403 yearly, in agriculture \$207. The contrast between the economic situation of employees in these two great branches of industry is probably a good deal less than these figures imply. Similarly, the average female in domestic or personal service is stated to have earned \$137, while in manufactures the average female earnings are given as \$193, and, in the trade and transportation group, \$238. How the comparison between domestic service and factory or office work would stand were an estimate of the value of board and lodging supplied to be included with earnings, we are at liberty to form our own opinion. It is easy to understand that the matter presents difficulties too great to be readily overcome.

But what is worthy of remark is that neither of the points here selected for comment is referred to in the introductory memorandum, though the low average of female servants' earnings is pointed out, and space is given to tables and remarks on the comparative earnings and working-time in the different groups of industries. Space is found, too, for comment on the way in which the results illustrate the subjects of division of labour and the competition of the sexes in industry. As to these comments, the number of occupations scheduled depends to a considerable extent on the taste of the maker of the schedules. On the first four pages of the detailed list of occupations, of about 130 classes of occupations listed, some 50 were followed by numbers expressed in units, and 36 of these had not more than three persons scheduled as employed in them. In this respect, the pages in question are not by any means exceptional. The exact value of the statement that: "Altogether there

are in the Dominion 1,621 kinds of occupations affording employment to wage-earners at their own trade or occupation, 1,494 of which give employment to males and 487 to females," is, to say the least, problematical. The 1,256 occupations of the manufacturing class and the 23 of the agricultural class present a contrast, indeed, but its force might be modified if a revision of the lists of occupations were made, though it is by no means impossible that the contrast might be made more striking yet. The division of persons employed in various mechanical industries into employees, apprentices, foremen, managers, superintendents, hardly seems to correspond to that separation of tasks at which the use of the results would suggest that the compiler aimed. It makes, moreover, the same number of occupations in industries where the principle of the division of labour is applied in widely different degrees. This point would not have provoked comment here, but for the remarks of the introductory memorandum.

Attention is directed in this introduction to the low level of remuneration secured by teachers in the eastern provinces of the Dominion. The average for female teachers is four times as great in British Columbia as in Quebec, while for male teachers it is but 50 per cent. higher. The fact that the ratio of female to male teachers is nearly four times as great in Quebec as in the Pacific province may be noted as not unrelated to these figures of earnings.

There are some points where the figures supplied are difficult to accept without protest. Thus, the foreman of dyers, cleaners and scourers in a cotton factory who is credited with a salary of \$8,000 must be the result of a mistake in copying, just as the 14 firemen apprentices whose average earnings of \$20.28 result from an aggregate earnings of \$2,818 are clearly the subjects of an error, not the only one of its kind we have noticed. How far the general results may have been subjected to adequate checking, so as to be unaffected by errors such as are here observed in small details, we have no means of knowing, but trust we may assume that due attention has been devoted to so important a matter.

The completeness and accuracy of one portion of the data, or the representative character of that part which is complete, may be doubted. It is that relating to professors, of whom 122 are recorded, while 82 of them supply fuller details. The average earnings of these 82 are returned at \$674.46, or a trifle less than the average of the males in the professional class, some \$63 less than the average of the four authors and literary men working for hire, only \$37 more than the average municipal clerk, and \$171.45 less than the remuneration of the average Government clerk. The average journalist is credited with \$798.38, while even the average lithographer is reported to earn \$672.93. Can it be that the 40 professors whose earnings are not reported include all those earning over (say) \$1,000 per annum, or is the list of professors curiously deficient? The leading universities of Canada could account for the number of professors scheduled, and, though the inadequacy of professorial salaries has formed the subject of no little discussion recently, an average of \$675 per annum is very far below the worst

figures adduced. Even allowing for the cases of medical or legal professors receiving a merely nominal emolument from their universities, the figure is incredible. What is a professor in the view of this bulletin? It is certainly not going too far to assert that the earnings stated are not representative of the class. And if this be so, in how many other of the occupations do the figures supplied fail to be representative? While the motto, *ex pede Herculem*, may not be proper to apply in judging of the tables before us, some hesitation in accepting all they present cannot but be suggested by the occurrence of such figures as those cited.

As is pointed out in the introductory memorandum, the figures of this bulletin relating to employees in manufactures cannot be directly compared with those which were given in the second volume of the Census Report. These latter excluded records of all employees in works where less than five hands were employed, while the new bulletin refers to all wage-earners over 15 years of age, but excludes owners, piece-workers, and children, who were included in the Census Report. Omitting these latter from the census record, there remain 241,976 males, with an average wage of \$365, as against 226,001, with an average wage of \$403, in the present enumeration. For females, the older report similarly dealt with 63,371 with an average wage of \$180, as against 49,662 with an average wage of \$193 recorded in the bulletin before us. The schedules which have served as basis for this bulletin are thus, as is pointed out, less comprehensive than those used in the earlier report, and appear to present a larger proportion of the better-paid workers in manufacturing establishments.

One other feature of importance in the bulletin is a record of extra earnings secured by about 20,000 individuals outside their regular employment. If the earners of these extras secured, in their regular work, as much as the average wage-earner of the same sex, the supplement afforded by their outside work was important, fully 30 per cent. for males and over one-third for females (of whom but 952 are recorded as securing extra earnings). In relation to the aggregate of regular earnings, on the other hand, the extra earnings are almost insignificant, being less than 1 per cent. of their amount.

A.W.F.

6.—*Album graphique de la Statistique générale de la France.* viii + 280 pp., 4to. Paris: Imprimerie Nationale, 1907.

The purpose of this volume, which consists almost entirely of shaded maps and diagrams, is to popularise the results of the Census of 1901 and of the contents of the Statistical Annual. The idea is admirably carried out, and it is possible by turning through these pages to see at a glance the main tendencies of French statistical history, and to pick out those problems which call for further study. To review the volume completely would be to review the whole body of the statistics of France; we can only notice a few points. The centre of gravity of the population has only moved 13 miles (N.N.E.) in a century—a very striking contrast to that of the U.S.A., for example. Since 1851 the age distribution has changed