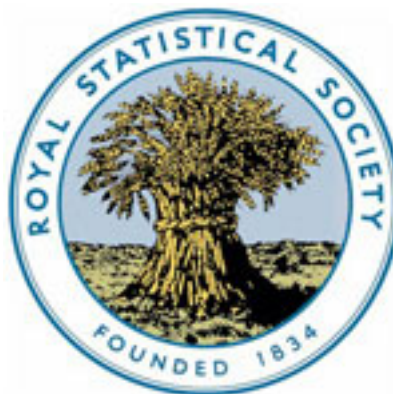


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Medico-Actuarial Mortality Investigation by Association of Life Assurance Medical Directors and the Actuarial Society of America

Review by: M. G.

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3.—*Medico-actuarial mortality investigation*. 3 vols. Compiled and published by the Association of Life Assurance Medical Directors and the Actuarial Society of America. 131, 139, 219 pp., 4to. New York, 1912-13.

This work contains an analysis and tabulation of data respecting the heights and weights of insured persons, the influence of build upon mortality and the rates of mortality experienced among the insured members of certain selected occupations. The data were furnished by several American and Canadian insurance companies, and the analysis was undertaken by a joint committee of the Association of Life Insurance Medical Directors and of the Actuarial Society of America.

In the first volume the height and weight statistics are discussed. The data are based upon 221,819 policies issued on male lives and 136,504 policies issued on the lives of women.

The recorded heights were taken to the nearest inch, in even years of issue half inches were disregarded and in odd years of issue were taken as one inch. Since applicants for insurance are usually in their ordinary street costume when weighed (overcoats, however, and sometimes coats, are removed), there is a difference in weight between summer and winter entries owing to this cause. To obtain fair averages, January and July issues were chosen. This inquiry involved the consideration of three variables—weight, height and age—and the amount of tabulation involved was very considerable. It would, we think, have been of interest to treat the problem by the method of multiple correlation, and the student of that method will find in the volume before us ample data upon which to exercise his ingenuity.

After tabulating the weight and height data, the committee discuss the problem of preparing a standard of expected deaths. The rates ultimately obtained, "M.A. Table," are given in the third volume. In the second volume the influence of height and weight upon mortality are examined. It appears from the study of underweights that, if great care is taken in the selection, underweight, even to a considerable degree, has no detrimental influence on mortality except at the younger ages at entry (males). Overweight to a moderate degree was not found to be a serious impairment at the young ages at entry, but had a material effect at the middle ages. Thus in the age-group 20-24, the mortality among those from 50-80 lbs. overweight was 3 per cent. in excess of the standard, while in the age-group 40-44 it was 75 per cent. in excess. At ages 50-62 it seems that 25-80 lbs. above the average weight is not so serious an impairment as at ages at entry 40-49. In the case of women the statistics were thought to be of less value, but the following conclusions were suggested: (1) The effect of underweight or overweight, particularly at the younger ages, is less than among men, although exhibiting the same general tendencies; (2) at the older ages, underweight to the extent of at least 30 lbs. is an advantage, and overweight a disadvantage increasing with the degree of overweight.

In the concluding volume the mortality, in terms of the standard, experienced in certain selected occupations is described and several interesting results are given. Thus one of the classes dealt with is that of persons employed in hotels where there is a bar. This is subdivided into : (1) Proprietors, superintendents and managers who do not attend the bar ; (2) proprietors, superintendents and managers who attend the bar either occasionally or regularly. The ratio of observed to expected deaths is 135 per cent. in the former and 178 per cent. in the latter group. Taking special diseases, it is found that in the second group the mortality from cirrhosis of the liver was six times the standard and from diabetes three times the standard. In the case of breweries, proprietors, managers and superintendents have a mortality ratio of 135 per cent., clerks 130 per cent., and foremen, maltsters, beer-pump repairers and journeymen 152 per cent. The contrast between the incidence of mortality upon the two former subgroups is curious ; we have :—

	Ages at entry.	
	15—29.	30—49.
Proprietors, &c.	197 per cent.	133 per cent.
Clerks	90 „	176 „

It will be seen that the work contains much interesting information, although a good deal of it is more suitable for detailed examination in the columns of a journal devoted to the technicalities of actuarial science than in one taking for its province the whole of statistics. M.G.

4.—*Production : a Study in Economics.* By P. H. Castberg. xvi + 382 pp., 8vo. London: G. Allen and Co., 1914. Price 5s. net.

This new edition of a work, first published some seven years ago, is interesting on two accounts at least. The author tells us, on page 164, that “it was quite impossible” for him, “before “beginning to write” the book, “to give time to the study of the “literature of political economy, with which he is thus quite “unacquainted.” It may be the case, in consequence, as we can well imagine, that readers possessing such preliminary equipment may have occasion to find some fault with Mr. Castberg’s discursiveness ; or they may experience at any rate a difficulty in discovering evidence of a satisfying scheme of arrangement of the abundance of his informing valuable material, which has been carefully planned and is consistently pursued. The absence of an index to so considerable a volume might confirm them in this suspicion. But, on the other hand, they will acknowledge the compensating advantage, of a refreshing independence of view in the treatment of such familiar topics, for example, as protection. The opinion