

ACTUARIAL SOCIETY OF AMERICA.

HALF-YEARLY MEETING AT BOSTON IMPORTANT PAPERS READ.

The semi-annual meeting of the Actuarial Society of America was held recently at Boston, and there was a large attendance of members, although owing to illness, the President, Mr. W. C. Macdonald, of Toronto, was unable to be present. The papers were of an important character, especially that of Prof. A. W. Whitney, associate actuary of the New York Insurance Department, who discussed the workmen's compensation situation. Reference to this paper will appear subsequently in our columns.

A paper was given by Mr. E. E. Rhodes, vice-president of the Mutual Benefit Life of Newark, in which he described the provisions of the income tax and their effect upon life insurance companies. Mr. Rhodes' views coincide with those of Mr. Alfred E. Hurrell, of the Association of Life Insurance Presidents, in a brief submitted to the Federal Government.

Actuary Emory McClintock presented a second paper on the life of Charles Gill, the first American actuary. In this paper Mr. McClintock takes up particularly Gill's early life in England and the first few years of his life after coming to the United States. He was able to pick up facts which have, to some extent, brought the history of Gill's early life out of the obscurity which has heretofore enveloped it.

MEDICAL RE-EXAMINATION.

The members took special interest in the paper by Actuary C. W. Jackson, of the Postal Life, on "The Influence of Medical Re-examination on Insured Lives. The experiment of giving information to the insured in regard to sanitation, hygiene, prevention of avoidable disease, etc., and at the same time furnishing to the insured without expense a medical examination once a year is being tried by the Postal Life. The object of this is in all cases, and particularly where an impairment is found, to give the insured the necessary information to help him conserve his health. In the case where impairment is found he is referred to his regular physician, who is notified of the impairment. Thus, in a large number of cases the insured by means of this examination learn of the impairments much earlier than they otherwise would, and in consequence are able to take the necessary precautionary measures. Mr. Jackson has examined the results of this system as regards the experience of the Company, and while it is very difficult to determine just what effect upon the mortality the measures adopted for conservation have had, he comes to the conclusion that a considerable saving beyond the cost to the Company of the medical examination and other expenses of the system is effected. He finds apparently that the advice given to those whose lives do not show any impairment is of great help, as well as the advice in the cases where an impairment exists.

A paper on "Graduation by the Summation Method" was given by Mr. Joseph B. Maclean. He said that the graduation of a mortality table consists, theoretically at least, in smoothing out the irregularities due to the fact that the number of lives observed was not sufficient to prevent accidental irregularities. It is important that such smoothing out shall be done so as to eliminate only accidental irregularities and not change the real facts of the observations or pro-

duce a table not really true to them. The subject of graduation has consequently been one of the important ones in actuarial science. One of the important classes of methods is that which is known as "graduation by summation," and this is treated by Mr. Maclean in a comprehensive way, which is something not before done with the subject, papers regarding it having been devoted to some particular method rather than to the subject as a whole.

SUB-STANDARD LIVES.

Professor Whitney also gave a second paper on "A Theory of Sub-Standard Lives," he having discussed the subject at the meeting of the Society last year. In this paper he shows that it is possible in the case of any sub-standard life to find an equivalent standard life, provided the age and the rate of interest are changed in a certain way. It is, therefore, possible to extend to sub-standard lives the formulas, tables and methods for standard lives. The method was applied in the present paper to the calculation of premiums for an excess mortality of 25 per cent., 50 per cent., 75 per cent., and 100 per cent., and for one of the overweight groups for which statistics have been given in Volume II of the recent medico-actuarial mortality investigation. The method of least squares and an alternative graphical method were proposed for the quantitative determination of the particular sub-standard features of the lives to be treated. It is believed that the method, in addition to its use in treating sub-standard lives, will be valuable in the case of group insurance.

A paper on "Life, Term and Endowment Mortality Experience of the Provident Life and Trust Company of Philadelphia; with Especial Reference to Relative Vitality According to Age at Entry," was given by Mr. Morris A. Linton. While in part this paper is highly technical, the results with respect to the relative vitality are of interest to all. The experience is based on a large number of exposures, so that its results are entitled to considerable weight. A comparison of the different vitalities was obtained by taking the mortality at a given age sufficiently removed from the age at entry so that the effect of selection could have been considered to have passed; thus if at age 50 the mortality among those becoming insured at 27 was compared with the mortality of those becoming insured at age 22, the lower mortality would be taken as showing the greater vitality. The results are somewhat mixed; for instance, under endowments it is found that ages at entry below 35 have distinctly lower vitality than those from 35 to 50, but that those below 25 have been most inferior of all. On the other hand, the experience under life policies is quite different. For early ages at entry vitality has been high, and the results indicate that until the late '30s and '40s are reached there has been a general tendency toward lower vitality as the age at entry increases. After middle life an improvement sets in, and we find that ages at entry 45 to 55 have made a good showing.

At the old ages, both life and endowment, evidence of low vitality which reaches its worst among entrants above age 60, is found.

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