

MORTALITY EXPERIENCE OF ANNUITANTS.

Practical Considerations Growing out of Discussion
at Meeting of Actuarial Society of America.

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Mr. Arthur Hunter, associate actuary of the New York Life Insurance Company, read a paper at the fifth International Congress of Actuaries at Berlin, on "Mortality Experience among Annuitants resident in the United States of American and Canada." This paper was subsequently copied in the Transactions of the Actuarial Society of America, and discussed at the meeting held by the Society in Toronto on October 10 and 11, when it was the privilege of the writer to listen to the discussion. But there are some practical considerations resting on the facts presented in the paper, which are recognized rather than satisfied by the conclusions reached by Mr. Hunter in the paper, or which were expressed by those participating in the subsequent discussion; and it is the object of this article to call attention to, and invite discussion of this aspect of the question.

Mr. Hunter opens his treatise with the remark that "Annuities have not been popular in the United States and Canada until recent years, and accordingly the companies of these countries have had no actual experience on which to base their rates," and adds "The price of annuities has therefore been based upon the British Government Annuity Tables, the French Companies' Annuities Experience (R. F.), or the British Offices' Annuities Experience (1863-1893)."

But the above resources for fixing the price of annuities do not exhaust the number of reliable existing tables which are available. On the other hand, the opening remark, and Mr. Hunter's figures, with others quoted herein, conclusively show that it is not to tables based on annuitant life experience that we must turn for adequate data, and further that it is especially hopeless to look for adequate data embracing annuitant experience on the lives of residents of the United States and Canada, and in default of a good table of ample basis of average, based on statistics of mortality in healthy districts of the United States and Canada, which statistics might possibly show more favourable rates of mortality than those gathered elsewhere, it must be to the latter that we must look for guidance. I am aware that this assertion may be a surprising, and perhaps shocking one to many readers, in view of the fact that it now seems to be almost universally assumed by actuaries that tables suitable for fixing the purchase prices of insurance and annuities, must be based on experience derived from the data accumulated in performing these functions. *But the law of mortality is not dependent on, nor can it be altered by the institution of such functions;* and it is well to call attention to the fact that it was simply owing to the then existing difficulties attendant on collecting reliable vital statistics in general, that insured life experience was first resorted to, to serve the practical purposes mentioned; and further remind readers that when it is desired to study carefully the effects of

medical selection, or personal selection on entrance or withdrawal, and unwholesome occupations and surrounding and special diseases, on rates of mortality, the only safe criterion, or basis of measure, is to use a table of mortality involving as little as possible of these special features, and such tables can be formed only from general experience, under circumstances excluding the disturbing elements to be measured.

With this preface, I may venture to assert as the result of my own investigation, that no better table exists at the present time for determining equitable and adequate charges for annuities, if not for insurances, than Dr. Farr's Healthy Districts Male and Female tables of mortality, for English speaking people; and this may well be taken as the universal standard for this use, until a similar table based on lives resident in the United States and Canada is available, for the use of companies operating in those countries.

INADEQUACY OF PRESENT ANNUITY RATES

That there is need of more adequate and equitable charges for annuities, certainly in the United States and Canada, may be gathered from the following figures which I quote from the gain or loss statement appearing in the Fifty-Second Massachusetts Life and Miscellaneous Insurance Report published a few days ago:

Name of Company	Gain or Loss from Annuities.	Name of Company	Gain or Loss from Annuities
Aetna.....	- \$ 2,251	National.....	- \$31,671
Berkshire.....		New England Mutual	
Boston Mutual.....		New York.....	- 142,800
Columbian National.....		Northwestern Mutual -	8,223
Connecticut General.....	- 155	Penn. Mutual	- 31,156
Connecticut Mutual.....	12,246	Phoenix Mutual.....	7,096
Equitable.....	42,324	Provident L & T.....	- 19,161
Fidelity Mutual.....	- 548	Prudential.....	- 3,327
Germania.....	- 4,846	Security Mutual.....	- 79
Home.....	- 7,876	State Mutual.....	- 1,476
John Hancock Mutual		Travelers.....	- 4,784
Manhattan.....	- 5,582	Union Central.....	- 1,831
Mass. Mutual.....		Union Mutual.....	- 655
Metropolitan.....	- 51,326	Washington.....	- 10,763
Mutual Benefit.....	- 14,181		
Mutual.....	11,066	Total.....	\$ - 269,962

CONSIDERATION OF DR. FARR'S TABLE.

That present tables of annuitant experience are inadequate on the one hand, and that Dr. Farr's table is reliably adequate on the other, is shown by the following figures quoted from Mr. Hunter's paper, and from the Joint Mortality Investigation of Combined Experience of Life Annuitants, and from the article on Dr. Farr's tables, appearing on pages 540 and 541 of Walford's Insurance Cyclopedia.

The annuitant experience of residents of the United States and Canada investigated by Mr. Hunter, he says, included "1,933 men and 2,873 women," and that the average duration of the annuities in the experience under investigation was "5 1-10th years for men and 5 7-10th years for women," and exposure under the age of 20 was almost entirely lacking, and that under the age of 50 and over the age of 75 was not 30 p.c. of an entire exposure of only 16,043 years of life for males, and 21,141 for females.