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EDITORIAL

GENEALOGICAL QUEST

Whoever wrote the obituary, printed in R.A.I.A. II (1913), of the co-founder and first president of the American Institute of Actuaries, was in no mood to enlighten succeeding generations. That piece was (justifiably) strong on homage, but barren of facts about the gentleman's career. It failed to mention when and where he was born, and was even silent on the date of his death.

After we had nearly abandoned hope of ever discovering much about that eminent professional forebear, the National Underwriter Company's Mr. Price Gaines got us his exact date of death and a short obituary from the files of NU's predecessor, the Western Underwriter; it revealed the key fact that our subject had graduated at some unstated time from the College of the City of New York. An enquiry letter to that institution brought from its Archivist Barbara Dunlap exactly what we needed: no less than a biography in that actuary's own handwriting composed less than two years before he died.

So, we are in a position to place in our records the memorial as we think it might, i.e., should, have been written.

September 14, 1845 LUCIUS McADAM March 31, 1913

Lucius McAdam, the first president (1909-10) of the American Institute of Actuaries, was born in New York City, his father being from Scotland and his mother from Oneida County, N.Y. After attending New York public schools, he graduated from The College of the City of New York, B.S. 1864, M.S. 1867. It is remarkable that both he and David Parks Fackler, who in 1889 became the moving spirit behind organization of the Actuarial Society of America, were educated in one and the same institution.

Mr. McAdam immediately became actuary of the Guardian Life of New York, not the present company that now bears that name but a small company that had been formed in 1859 and lasted only till 1873.

With his personal reputation as an actuary established despite his company's failure, he then left our profession, earned admission to the New York Bar and practiced law from 1877 to 1896. This hiatus doubtless explains why he was not a charter member of, nor ever joined, the Actuarial Society. During the early 1880s he served a term as mayor of East Orange, New Jersey.

Returning to actuarial pursuits in 1896, he became for ten years actuary of the then Hartford Life, and then moved to Chicago as actuary of the United States Annuity and Life Company which he served till his death. It must have been soon after his arrival in Chicago that he and others began to discuss launching the American Institute of Actuaries.

His pastimes, at which he was accomplished, were literary and musical. He took a keen interest in questions of suffrage, publishing in 1898 a pamphlet designed to reveal gross inequalities in representation in Connecticut.

(This from R.A.I.A.): "As a thinker and writer he was distinguished by contributions to the press and especially to the proceedings of this and other kindred organizations, which have been in the highest degree instructive to those engaged in actuarial pursuits and in general life insurance work."

E.J.M.

LETTERS

Cauchy

Sir:

I would like to reply to the letter of Dan Quick Jr. (June issue). He was wondering about some of my earlier comments (March issue) on Cauchy's functional equation and its application to the theory of interest.

Suppose that f is a function satisfying $f(x + y) = f(x + f(y)$, for all x,y, and we know in addition that f is continuous at the point x_0. For any other point x, let $s = x - x_0$. Then for all t,

$$\begin{aligned} f(x+t) - f(x) &= f(x_0+s+t) - f(x_0+s) \\ &= f(x_0+t) + f(s) - [f(x_0) + f(s)] \\ &= f(x_0+t) - f(x_0). \end{aligned}$$

Since $|f(x_0+t) - f(x_0)|$ can be made arbitrarily small by choosing $|t|$ sufficiently small, the same is true for $|f(x+t) - f(x)|$. We have shown therefore that f is in fact continuous at *all* points.

It is true, as Mr. Quick remarks, that there can be infinitely many linearly independent solutions to the Cauchy equation, but this is in the absence of any further requirements. Almost any type of regularity condition is sufficient to imply the unique (up to a constant multiple) continuous solution. For another example, weaker than the requirement of continuity at a single point, we need only stipulate that f is bounded on an arbitrarily small open interval (a,b).

A good reference for the interested reader is "Lectures on functional equations and their applications", by J. Aczel, Academic Press, N.Y., 1966. (In particular see section 2.1).

S. David Promislow

Ed. Note: Discussions of this topic came in also from Messrs. Charles E. Chittenden, Samuel H. Cox, Jr., and Henry S. Lieberman.

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Speed and Mortality

Sir:

David M. Lipkin's piece (February issue) on the quantitative effect of driving speed on "living" explores a concept of great value which, along with other aspects of modern life, merits close attention from us actuaries as experts.

But, without challenging the author's figures, I feel that, just as he allowed for

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