



SOCIETY OF ACTUARIES

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# The Actuary

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## EDITORIAL

IT was Sir C. P. Snow, the scientist and novelist, who introduced the expression *The Two Cultures*, referring to the scientific community on the one hand and the literary "intellectual" community on the other. Sir Charles lamented the absence of communication between the two, an absence detrimental not only to the scientists and the intellectuals, but also to the welfare of society.

Reading the *Transactions* and sometimes some of the many items in the Programs for meetings of the Society of Actuaries, might cause some members to wonder if there is not a similar absence of communication between the technical exponents of actuarial science and the practicing actuary. One of the comments in Mr. Bragg's Committee Report (published in this issue) is to the effect that many members consider any paper with formulas as not worth reading and pass it by. (Maybe the same members encourage the widely held myth that actuaries are all first class mathematicians).

Perhaps it is flattering to assume that the two groups within the Society can be compared to the scientific and intellectual communities described by C. P. Snow but, if there is a gap, it should be the function of our educational system to bridge it. Not insignificant in this situation is the introduction of our Theory of Risk experts into the field of annual statements and adjusted earnings. This brings in another community—the accountants—with whom we have to maintain communication for the benefit of the life insurance industry and self-insured pension funds as well as for the benefit of both professionals.

Perhaps the actuary now needs to be more aware of some of the mathematical work which may hitherto have been classified as somewhat esoteric. He may also need to improve his powers of exposition and explanation not only for the benefit of his fellow actuaries and the accountants, but for enlightenment of the many critics, political and other, who are walking about "seeking whom they may devour."

Maybe there is a parallel in what Michael Faraday wrote to James Clerk Maxwell.

"... There is one thing I would be glad to ask you. When a mathematician engaged in investigating physical actions and results has arrived at his conclusions, may they not be expressed in common language as fully, clearly, and definitely as in mathematical formulae? If so, would it not be a great boon to such as I to express them so?—translating them out of their hieroglyphics, that we also might work upon them by experiment. I think it must be so, because I have always found that you could convey to me a perfectly clear idea of your conclusions, which, though they may give me no full understanding of the steps of your process, give me the results neither above nor below the truth, and so clear in character that I can think and work from them. If this be possible, would it not be a good thing if mathematicians, working on these subjects, were to give up the results, in this popular, useful, working state, as well as in that which is their own and proper to them."

A.C.W.

## ACTUARIAL LITERATURE

by John M. Bragg

*Editor's Note: Mr. Bragg is chairman of the Society's Committee dealing with the subject of Actuarial Literature.*

In November of 1972 the Society of Actuaries established a new committee to study the preparation of literature. The committee's full title is descriptive of its charge: *Advisory Committee on Means of Encouraging the Preparation and Distribution of Actuarial Literature and Studies*. The committee is generally representative of the various groups now dealing with publications of the Society, and of the E.&E. and Continuing Education committees. It is representative from a geographical standpoint and by type of employment. It also contains liaison representation from the Casualty Actuarial Society. This article gives a preliminary report of progress to date.

The subject is a most important one for the actuarial profession; it is also controversial. A large file of written commentary has been gathered, all of it emanating from members of the Society. Readers of *The Actuary* may be interested in the gleaning which follows.

### On the Transactions and the Printed Books:

"The decline of the actuarial paper is unfortunate for many reasons."

"The 'literature' is not really current."

"The pension literature is often out of touch with modern consulting practice."

"The literature which the Society publishes tends to be very specialized and academic."

"Many of our members, if they see any formulas, immediately brand a paper as 'technical' and not worth reading."

"Not sufficient material in the literature to research problems adequately."

"Much desirable information is not published at all."

### On the Committee on Papers:

"Are the standards designed to maintain high quality too rigid?"

"We are discouraging submission of good work."

"Excellent papers were published elsewhere because of the difficulty of publishing in the Transactions."

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## Actuarial Literature

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"I was unable to justify to my satisfaction the reasons for the existence of the Committee on Papers. I think that the signature of any member of the Society should be a sufficient requirement for inclusion of an article in the *Transactions*."

"I believe the statistics on the percentage of papers which are accepted indicate that not all actuaries will present papers of high quality. I believe we must maintain at least one publication which is a scholarly one."

"A paper should not be published unless it is well-written, accurate (although not necessarily uncontroversial), and represents a meaningful contribution to the literature."

"The Committee on Papers is charged with evaluating the papers submitted. It can do nothing about papers which are needed but which have not been written."

## On the Concurrent Sessions:

"Times one can find a subject which has been treated properly but is not current. Sometimes current information can be found, typically in the form of minutes from a Concurrent Session, but the information due to its nature is not thorough enough to be of much value."

## On the Examination Study Notes:

"The author of a study note is relatively unknown among the Society membership."

"The Study Notes prepared for students provide an overview of actuarial practice from the standpoint of individuals with five or ten years experience who, having carefully studied the limitations of their mathematical tools, have almost concluded that those tools are worthless and that pure judgment should apply."

"The Society is going at it in the wrong direction in that students are being given material (the Study Notes) that the practicing actuary could be getting but is not, while the practicing actuary is being given a book (the *Transactions*) filled with papers that the student should be required to read but is not."

## On the Encouragement of Authorship:

"There seems to be general agreement that we want and need more and better papers."

"We need a committee that could actively solicit papers."

"Writing research papers must be recognized as having value to the company."

"We feel very provincial about the research and actuarial work that we have done thus far. We feel it would be inappropriate to share this information with others."

"Unwillingness to share the results of research is a phenomenon known as the 'Cotton Curtain'."

Hopefully, the author's friends in the profession will not object to this amalgamation of their views! Collectively, they have outlined the problem in an admirable fashion. There are no magic solutions. However, steps can be taken to improve the preparation of actuarial literature. Here are some ideas being considered by the committee:

(1) A Director of Publications, who will be a new constitutional officer of the Society, will be elected. The Director of Publications will have both authority and responsibility to see that needed material finds its way into the two publication forms (the *Transactions* and printed books) which contain literature of permanent value to the profession. The Director of Publications will be chairman of a Publications Board supervising all publications of the Society. He will also work closely with the many committees of the Society (e.g., E.&E. and Continuing Education) which are in a position to encourage authorship.

(2) A new publication, tentatively called *The Record*, will contain minutes of meetings, concurrent session discussions, lectures, teaching session outlines, etc., and will be published in streamlined form as soon as possible after each meeting.

(3) A Study Note Service, designed for the practicing actuary, will be made available at a nominal charge. The material therein will be organized by subject matter in easily-accessible form, and will be updated automatically as changes occur.

## TONTINE

Robert W. Cooper, *An Historical Analysis of The Tontine Principle*, S.S. Huebner Foundation for Insurance Education, University of Pennsylvania, 1972, pp. 69, \$2.50.

by C. Norman Peacor

This is a monograph that one will find difficult to put down. Not necessarily because it is so interesting, which it is, but because it is so readable and brief. It has a natural appeal to every actuary whose gambling instincts were aroused by the study of cards and dice in order to get through the examinations. It, perhaps, even has an appeal to the instinct for gain that lurks latent in all of us.

Ever since Lorenzo Tonti proposed the scheme in the mid-1700's for the purpose of replenishing depleted French exchequers, the idea has captured people's imaginations. Mr. Cooper traces the early history of the Tontine schemes through their rise and fall as instruments of national policy, particularly for France and England. It was not, however, until the mid-19th century in the United States that the approach effectively and almost universally burst upon the American insurance scene.

There is an ample description of the policy provisions, the actuarial and legal aspects of the plan, and an analysis of the marketing principles (and lack thereof) that characterize Tontine and semi-Tontine policies. The brief description of the sales "Thirty Years War" between the Mutual Life of New York and the Equitable makes one wish for more information. Perhaps the histories of these two companies for this period of time could be read for further background. It must have been an interesting period in American insurance development.

Finally came the Armageddon of the Armstrong Investigation. Rapid and substantial surplus buildups, the lack of annual accounting, and the excessive sal-

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(4) The *Transactions*, which will contain many additional papers of a needed and practical nature, will be divorced from specific meetings of the Society, and will become simply a publication issued at periodic intervals.

(5) A new annual prize will be instituted for the best paper appearing in the *Transactions*.

The Committee invites views from any reader of *The Actuary*. □