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ADDRESS OF THE PRESIDENT, JOHN H. MILLER

PROBLEMS OF A GROWING SOCIETY

THE Society enters its fifteenth year with a record of success in meeting the problems and challenges continually presented. The accomplishments of the Society and its predecessor organizations may be credited primarily, in my opinion, to the willingness of the members to accept innovations and to adapt the organization and procedures to changing needs and circumstances. I will cite a few examples.

Recognition of the need of fundamental changes in the educational program led to the formation of the Beers's Committee, whose accomplishments are set forth in Mr. Charles Spoerl's paper in *TSA*, I, an important record in our history. To assure continuous rather than sporadic review and reappraisal of our educational program, the Advisory Committee on Education and Examinations was created as a standing committee. It has fulfilled its purpose with great effectiveness.

The architects of the Society wisely recommended a periodic review of its structure and functioning. Following this recommendation, three special Committees on Organization and Procedure have been appointed: the first, chaired by Mr. Reinhard Hohaus, made its report in 1952; the second, with Mr. Dennis Warters as chairman, reported its recommendations in 1956. Yesterday the Board received from Mr. Henry Rood, chairman of the third of these committees, its final report.

Concern for the need for more actuaries and actuarial students and a recognition of the Society's responsibility to stimulate the recruiting of actuarial students led to the authorization in 1955 of a Public Relations Committee, the principal function of which has been to publicize the opportunities afforded by an actuarial career. Concern about the time required to complete our educational program and its suitability under current conditions caused Mr. Malvin Davis to appoint a Committee To Review Membership Requirements which, under the able guidance of Mr. Gilbert Fitzhugh and working closely with both the Advisory Committee and the Education and Examination Committee, made recommendations which have resulted in the adoption of the revised syllabus announced earlier this year.

In developing and adopting the recent changes in procedures and in the educational curriculum the Society was also recognizing its responsibilities to the rapidly increasing number of actuaries in public practice and in government service. To assure that our programs do not lose sight of the interests and needs of any specialized branch of the ever broadening scope of actuarial practice, the Fields of Activity Committee was established. For several years we have enjoyed its guidance and counsel in the formulation of the programs for meetings.

Another outgrowth of our continuous self-analysis and frequent reappraisal is the current effort to achieve some practical means of accreditation. Since there will be a report on this subject, I will say nothing more than to emphasize its importance and to thank those who have given and are giving the project so much thought and effort.

The character of the Society and its accomplishments as a professional organization are not unrelated to its relatively small membership. The activities of our Public Relations Committee and of the actuarial clubs and the individual efforts of our members in stimulating interest in actuarial careers are definitely bearing fruit, and even though the shortage of actuaries persists, the increasing number of successful students gives promise that the closing of the gap between supply and demand may not be far distant. The trends in student enrollment and examination results indicate that our numbers will be doubled in the relatively near future. Whether this takes eight years or fifteen, it is not too soon to ask ourselves whether the Society, as presently structured, can function effectively and give its members the benefits which they expect and desire, as its membership grows to 4,000 or 5,000 and the student body approaches 10,000. If not, what changes can be adopted so that the Society may preserve the characteristics which we most value and may continue to perform effectively the functions which seem to us most essential?

The Organization and Procedure Committee has, of course, considered these trends and made recommendations which will serve us well for several years. What I am now suggesting is a look a little further into the future.

Those of us who have been attending Society meetings for twenty-five years or more cannot help but note a change in the character of the meetings and in the discussions, a natural result of an increase from a typical attendance of less than 400 at the annual meetings in the late 1930's to over 700 last year. When attendance rises to 1,500, further change seems inevitable.

When any organization encounters problems arising from a marked increase in its size it usually looks to either or both of two types of organizational subdivision, departmentalization or regionalization. Some steps toward departmentalization have already been taken, as may be seen in the establishment of additional committees, the holding of simultaneous sessions at our meetings, and the adoption of the E and I branches in our fellowship examinations, but the valuable unity of our organization might begin to suffer if we were to carry departmentalization still further. Greater promise, it seems to me, lies in the regionalization of some of our activities. Our regional spring meetings have served the very useful purpose of permitting more of our members to attend meetings and to participate in discussions. However, there are obvious practical limitations to the extension of this device.

Another approach might be to retain the unity of the Society and the simplicity of its organization by limiting its activities to those which it can effectively carry on without any substantial change in its structure, and, with emphasis on our primary responsibility of maintaining professional standards in the face of a rapidly growing membership, to concentrate on the functions of policymaking and control. By so doing it is to be hoped that we can avoid becoming overburdened with the administrative details which—without a conscious countereffort—will inevitably expand at least in proportion to our growth in membership and student body. Avenues which might be explored will be discussed under two topical divisions, membership activities and education.

Membership Activities

Without some other outlet the continued growth of the Society will result in lessening the individual member's opportunity of speaking at meetings, presenting papers, and serving on committees. Further regionalization could be a solution, but rather than subdivide our membership in any way, could we not look to the existing actuarial clubs to shape their programs so as to restore the opportunity for broad participation in meetings that was so much more available a generation ago in our Society meetings?

I am not suggesting that the clubs should become segments of the Society or in any way lessen their autonomy. Instead, it is my thought that as the need and opportunity are recognized, many of the clubs will make an effort to modify the pattern of their meetings and other activities so as to encourage their members to present scholarly papers, with copies distributed in advance of the meeting, to prepare discussions of such papers, to take part in panel discussions, to lead workshops or seminars, to share in statistical or actuarial research projects, and thus to imbue the meetings with a greater sense of professional significance.

While the Society has maintained the position that it should not attempt to guide or in any way influence the clubs, and I hope it will never do so, it seems to me that it would be altogether proper for it to encourage this kind of development of club activity by printing in the *Transactions* for each year the outstanding paper presented at the various club meetings. Also, some method might be devised by which a synopsis of all such papers could be published in bulletin form for the benefit of Society members, and a few copies of all papers might be catalogued in the Society's library for reference purposes. Over the past decade the number of pages in the *Transactions* has roughly paralleled the size of our membership. If this relationship continues, the size of the *Transactions* may increase beyond practical limits. A solution may lie in the development of an auxiliary outlet of this kind which could perhaps benefit our membership in other ways as well.

The suggestion that the Society should actively encourage or sponsor research activities has been made, but the prevailing view is that such efforts should be left to the initiative of individual members. However, without involving the Society in an additional activity, several members within a club might well join together to engage in co-operative studies or research into some problem in which they have a common interest.

Education

Last May, 78 members successfully completed their fellowship examinations and 124 students became associates. In 1962, 4,541 examinations were written. When we note that the average graduating class of the medical schools in North America is about 90 students and that of the law schools about 70, we realize that the Society is conducting a professional graduate school approximating in size the typical school of law or medicine. It might be mentioned, as an aside, that this course is probably the greatest bargain in advanced education. Apart from the small cost of books, the only expense to most students is the very modest outlay for examination fees.

The Society's accomplishment in operating an educational program for a rapidly growing student body while maintaining high professional standards and responding to the changing and expanding body of professional knowledge currently required is a great tribute to our organization and particularly to those members who have been and to those who are currently providing the leadership and the effort. Many hours of work are required in the development of curriculums and the setting and marking of examinations. The fact that we are using eleven textbooks and fifty sets of study notes written by members attests to the tremendous amount of time and effort devoted to the preparation and selection of study material.

The Society and its students are deeply indebted to the members of the Education and Examination Committee and the Advisory Committee, but it is not a completely one-sided exchange. Members who have participated in any phase of this work usually agree that the experience added appreciably to their professional education, sharpening their technical skills, bringing them up to date on current developments, training them in co-operative work at a professional level, and bringing them into closer association with their colleagues. For these reasons I hope that our educational system will always depend upon the extensive participation of our membership. Moreover, the active engagement in the educational program by practicing members of the profession is the best assurance that our curriculum and the examinations will at all times be kept attuned to the knowledge and skills currently required of the actuary. The number of members appointed to the Education and Examination Committee and the Advisory Committee for the current year, including consultants, is 122, or about 10 per cent of all Fellows. In addition, no less than 20 of our members, not on the Education and Examination Committee, have made substantial contributions to our study material in the past year.

Aside from the actual guidance of our examination program, the determination of the body of knowledge and skills and the comprehension which should be required of the candidate for an actuarial degree and the setting and marking of examinations, a formidable amount of administrative and organizational work is involved. The burden of this work grows at least in proportion to the number of students. Also, the problem of producing adequate study material in the form of textbooks and study notes becomes increasingly difficult. A number of our members have responded magnificently to requests that they create needed texts or notes, but since this writing must, in most cases, be worked into a busy schedule of actuarial or executive duties, there tends to be quite naturally a gap between the needs of our students and the best output that these volunteer authors can achieve.

Looking into the future it is therefore rather obvious that the Education and Examination Committee will need help from some new source, possibly an auxiliary organization with a paid professional staff. I am happy to say that the leaders of our Education and Examination and Advisory Committees have foreseen these developing problems and needs and that a subcommittee of the Advisory Committee, comprising William Schmidt, Daniel Lyons, and Charles Rickards, has been actively at work, assessing the problems and exploring various approaches, including an examination of methods used in other systems of professional education.

While the most obvious changes in our new educational syllabus are to be found in the Fellowship parts, other changes of great significance have occurred in the earlier parts. Whereas previously our curriculum has tended to follow chronologically the development of the life insurance business, adding such subjects as disability and double indemnity to the course of study as these benefits were put on the market and treating each rather independently of the approach to the basic life insurance calculations, the study notes for Part 4 will include new and additional material on multiple decrement theory as applied to pension funds, disability benefits, and accidental death benefits.

Through this broader and more generalized approach the student may learn, at an earlier point in his training, that there is a fundamental kinship among nearly all lines of insurance. He will see the universality of the pension fund cost formula by which the value of almost any insurance or annuity contract may be represented as the discounted value of the products of rates of occurrence and average claim costs or, to use the terminology of our friends in casualty insurance, frequency and severity rates.

As we move toward the teaching of a generalized premium formula applicable to pensions and to most forms of insurance including many property and casualty insurance lines, the following advantages should accrue. The pension fund formula clearly delineates the application of mathematics to the theory of probability as used in the evaluation of insurance risks and the discounting of future payments, and for this reason seems preferable, for the purposes of basic actuarial education, to the use of formulas expressed in commutation functions. This more generalized approach may also be expected to enhance the status of actuarial studies as a branch of applied mathematics in the eyes of the college professor. Furthermore, the common core of actuarial studies of significance to life and health insurance, pensions, and property and casualty insurance could be extended to a higher level, an aid in furthering the development of joint examinations applicable to the fundamental training of all actuaries, regardless of their eventual field of specialization. Doubtless, the recommendations of our Professional Status Committee relative to plans for accreditation or certification will have some bearing on the evolution of our education program.

Of course, major changes in our course of education are undesirable and completely impractical unless taken in steps or phases. For this reason it is important to have long-range objectives, thus permitting minor changes to be made in a manner that will facilitate the achievement of more distant goals.

My comments on the problems which could arise from the Society's future growth may seem a bit incongruous when, for several years, we have been so concerned with the problem of the shortage of actuaries and have been making every effort to attract suitable candidates to our profession, and at a time when many actuarial positions remain to be filled. Let me therefore emphasize that I am talking not so much of problems which face us at this moment but mainly of those five, ten, or more years away. And yet this may be scarcely enough lead time for the task of shaping our organization and procedures to serve a much larger membership and the more immediate project of assembling the cadre of professional assistants which the Education and Examination Committee may require to carry on the growing volume of work and to continue to improve our syllabus and study material. Many statistics could be quoted to underscore the problem facing us, but suffice it to mention that we have 465 registrants for the Part 5 examinations to be given in November. This compares with 277 candidates who sat for this part last May and 251 in 1962 when it was given only in the spring. Five years ago 187 students took Part 5.

This consideration of ways and means of preparing for a greatly enlarged membership must not diminish in the slightest the pleasure we will soon take in welcoming the largest number of members ever to become Fellows in one year, nor can we relax our efforts to help the students and Associates to achieve their F.S.A. degrees. The large number of students passing the Associateship examinations is not a full measure of success unless the wave carries through to the Fellowship level. We must continue to give them every encouragement so that they will rapidly complete their academic work and at the same time we should afford them the best possible opportunities to acquire professional competence through the practical application of their specialized education.

The Society has, in my opinion, achieved a real measure of success as a professional organization, not through the efforts of a few, but because the members, as a whole, place a high value on their membership and respond so generously when invited to give their time, effort, and thought to any of our programs or activities. So long as this attitude continues the future of the Society is well secured.