

**THE SUPPLY OF ACTUARIES**

- A. Is the shortage of actuaries a problem, the solution of which is the responsibility of the Society alone, the insurance companies and consultants alone, or a joint responsibility?
- B. What steps have been taken or can be taken to develop actuarial courses in the colleges and universities? Should a list of such courses be given in the *Society Year Book*?
- C. Is the shortage of qualified teachers in actuarial subjects a substantial factor? Have any steps been taken in this connection? What further steps can be taken?
- D. What ties have been or can be developed between the Society or local actuaries' clubs and the universities and colleges to extend the field from which actuarial students can be drawn?

*Atlanta Regional Meeting*

MR. DATON GILBERT presented a discussion which was given at the New York Regional Meeting by Mr. William S. York as a background for the discussion.

MR. ROBERT C. DOWSETT, commenting on section A, said that as employers of future actuaries, insurance companies and consulting actuaries cannot avoid a good share of the responsibility for producing more actuaries. The Society's share of the responsibility should be divided between the central organization and the membership. He felt that the local actuarial clubs could be helpful by publicizing the profession. The individual actuary should take every opportunity to explain the profession to college and secondary school students and also to their parents. Insurance companies and consulting firms should take the long range view by employing larger numbers of students at higher salaries than could be justified by their immediate productivity. Referring to section B, he thought that more actuarial courses would not completely fill the basic need which was to have more students wanting these courses. Under section C, he said that in Canada there appears to be no shortage of teachers of actuarial subjects as cause of the small number of students applying. The need is for more qualified secondary school mathematics teachers.

Under section D, he commented that the Canadian Association of Actuaries had organized a one-day seminar in Toronto for 40 of the top contestants from the province of Ontario in the International Mathematics Contest. He reported that a good deal of favorable publicity developed from the contest and seminar.

MR. BRUCE W. BATHO felt that efforts to increase the supply of actuaries could be more effective through the medium of the Society and

the actuarial clubs than on an individual basis. He cited that the South-eastern Actuaries Club was subsidizing the actuarial course at the Georgia State College of Business Administration.

MR. HARRY M. SARASON spoke on the importance of home and preschool influences with the possibility of reaching students at this level through the medium of television. He also mentioned that the Actuaries Club of Los Angeles was joint sponsor of the Southern California Mathematical Field Day in which students gather for mathematical contests.

#### *San Francisco Regional Meeting*

MR. ALEXANDER MARSHALL felt that there are several reasons for the shortage of actuaries in his own company, the Occidental: (i) isolation from regular actuarial schools, (ii) competition with consulting actuaries, and (iii) competition from other fields which employ persons with mathematical talent. He felt that this third factor is probably the most important. The reasons are twofold: (i) there is considerable glamour to such tasks as running programs for missile tracking, development of trans-continental ballistics systems, etc., (ii) students are hired in other fields at slightly higher salaries.

He pointed out that standards must be maintained. The work we have to meet is not going to get easier if we make the examinations easier. He believed that if we make the financial and other rewards big enough we will get people who can pass the examinations.

Mr. Marshall listed the four factors which are said to influence the choice of a career by college students.

1. *Opportunity for advancement.* He believed that the opportunity for advancement in the actuarial field is well recognized.
2. *Type of business.* He pointed out that there is a "green eye shade" philosophy with respect to actuarial work as compared with a certain kind of glamour in other fields. He stated that he knows no actuaries who actually wear green eyeshades and that there is a certain amount of glamour accruing to the actuary in his contacts with business people within and without the insurance industry.
3. *Salary.* He believed that, after the early examinations, actuaries are paid enough so that it is pretty hard to wean them away from the profession. However, he felt that in the early years we will have to make sure that adequate salaries are paid, or we will not get enough people going into the profession.
4. *Ownership.* He stated that although there is not much chance that actuaries will own their own companies, there are still many satisfactions and gratifications in the actuarial profession.

Both Mr. Marshall and MR. HAROLD J. BROWNLEE felt strongly that unless we go out individually, personally, to help solve the shortage of actuaries, and not just rely on the Society or the insurance companies,

we are still going to be discussing the shortage of actuaries 10 years from now.

Mr. Brownlee pointed out that this is a twofold problem: (i) finding able students who have the mental capacity to absorb the material for passing actuarial examinations and who have had rigorous enough schooling to absorb it rapidly, and (ii) talking students into taking actuarial examinations.

MR. GEOFFREY CROFTS said he believed that one reason for the shortage of actuaries is that actuaries make work for actuaries. For example, as more actuaries are employed, more ideas are developed, with the result that more actuaries are needed.

Mr. Crofts also described the mathematical field day which is held at Occidental College and which is sponsored by the Los Angeles Actuarial Club. The field day comprises a number of different events along mathematical lines. Tremendous interest has been developed.

He thought that a listing of actuarial courses should be given in the *Society Year Book*. He believed that there is not a shortage of qualified teachers, pointing out that he has had several students interested in teaching careers for whom opportunities have not been available.

DR. CECIL J. NESBITT briefly described a fellowship fund at the University of Michigan which has been assisting some students to work on doctoral degrees in preparation for teaching careers in the field of actuarial mathematics. Two men from this program will be actively teaching in this field by the fall of 1959. He estimated that there are about 20 professors in Canada and the United States whose main teaching interest is in the actuarial field. He believed that it would be of value to the Society and to these men if they were called upon to participate more in the educational and research activities of the Society.

MR. JOHN H. BELL felt that one of the reasons for the shortage of actuaries and for the difficulties we are having in increasing the number is that more and more actuaries are being drawn into work that should not require too much time from the professional actuarial staff, but which requires a limited knowledge of actuarial science. He described a program which has been instituted at the Manufacturers Life Insurance Company to provide limited training in actuarial science for several members of their staff. Fifteen individuals have been selected for the training program, which will extend over a period of two years.

MR. HARRY M. SARASON predicted that if we use a rather broad definition of actuaries to include those who are in hospital work, who work with welfare plans and with other related fields, all estimates as to the shortage of actuaries will be ridiculously low.

MR. E. FORREST ESTES reviewed the experience of the Nebraska Actuaries Club in recently promoting a course in Actuarial Science at the University of Nebraska. In establishing such a course it is extremely helpful if financial assistance is available from local companies, since universities may be reluctant to appropriate sufficient funds from their own resources. The professional standing of the instructor selected is important. He will have less difficulty in establishing himself and his courses if he is a Ph.D., while being a member of the Society of Actuaries is also helpful. Having a university course and teacher, the next problem is securing students to take the course. Members of the Nebraska Actuaries Club met this by individually visiting, at their own expense, most of the high schools in the state, interviewing superintendents, principals, teachers of mathematics, and in some cases recommended students. To develop a significant and continuous flow of students will, of course, take time but the response was most encouraging and results are already appearing.