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DIGEST OF DISCUSSION OF SUBJECTS OF SPECIAL INTEREST

TOPICS OF INTEREST TO YOUNGER MEMBERS

1. What steps can be taken to enhance the value of the actuarial profession in the eyes of the younger member,
   a) in the field of public relations, and
   b) in setting the programs of our Society meetings?
2. Are our actuarial examinations preparing us adequately for careers as actuaries? What steps might be taken to further the education of the younger actuary?
3. In what ways can the younger member help to recruit new students to our profession? In the light of modern day opportunities in other fields, are there currently sufficient inducements to a young man to enter our profession?

MR. W. L. GRACE opened the session by indicating the large proportion of the Society who might be termed younger members. Since there is no age information in the Society *Year Book*, he made a rough assumption that a younger member is one who has attained his current status during the past 10 years and found that 888 Fellows and Associates or over 55% of the total membership would be classified as younger members according to this definition.

He stated that the program was divided into three sections which perhaps reflect three different periods of a young man's association with the Society of Actuaries. The first period is the time when the young man decides to enter the profession, the second period involves his education in his early years, and upon completion of his examinations the young man enters into a third phase of his career. He is then a full fledged member of the actuarial profession and takes a more active part in Society affairs.

MR. PETER HONDORP commented that if "Topics of Interest to Younger Members" means that these topics can be of interest *only* to younger members, he certainly should not have been there, since his definition of a younger member is one who is under thirty-five. But if the idea is to get something accomplished on these matters, it is absolutely necessary to interest the older members. He said that the subject of public relations is probably the most important one that has appeared for discussion in many years, not because it is so important in itself, but primarily because there has been practically nothing done in this field by the Society as compared to the Society's marvelous record on examinations of stu-

dents and presentation of papers. Mr. Hondorp stated that although there are probably many ways in which the value of a Fellowship or Associateship in the Society could be enhanced in the eyes of the younger member, most of them involved getting more people to realize what an actuary is and what a membership involves. This is rather difficult to do with the general public and should be confined, at least at the start, to employers, labor unions, pension trustees, insurance companies and others needing actuarial service. He noted that the practice of writing into many negotiated pension agreements the requirement that a Fellow must make the valuations has been helpful in this area.

Mr. Hondorp described the action that Society members have taken in the Chicago area since becoming interested in this subject a year or two ago. In December 1955 they listed thirteen Fellows and Associates in the Chicago classified telephone book as members of the Society of Actuaries. This was started primarily because about 70% of those listed under "Actuaries" in the 1954 listing were not qualified by membership, many so-called actuaries being insurance agents. He noted that F.S.A. should be spelled out in such a listing, not only to avoid ambiguity with other uses (Fellow, Society of Architects, or Fellow, Society of Antiquaries, to mention only a couple) but also to acquaint at least that portion of the public who look up "Actuaries" with the title "Fellow of the Society of Actuaries." In December 1956 they will have seventeen men listed in the classified directory being published as of that date. They have also printed a little booklet listing all the Fellows and Associates in the Chicago and the Chicago suburban area to send out to employers, labor unions, etc., on the back of which they printed the statement that the actuarial profession was the highest average paid profession in the country.

Mr. Hondorp felt that it would be far better for the Society to do something in the public relations field in order to acquaint everyone who may hire an actuary as to what an actuary (a Fellow or an Associate) is, and why and how much he charges for his highly valued service. He suggested a number of things such as telephone listings, a separate listing as in the *Year Book* for wide distribution, permitting suborganizations of the Society to be set up for handling public relations in a manner adaptable to local conditions and, above all, to get started, to have an official statement on the subject of public relations when the Society's Board meets in order that members in different locations will know how to proceed. He felt that no one could predict what would happen in the case of any specific project in the field of public relations before it is actually tried. Therefore, we must be willing to experiment until we find the solution to our problem.

MR. I. S. WOLFSON, in discussing the public relations aspect of

topic 1, stated that the biggest necessity in the field of public relations was a better understanding of the actuarial profession by the general public. He thought that one of the best ways of obtaining such an understanding would be through the Society's sponsoring of high school mathematics contests. These contests have already been used in Massachusetts with a great deal of success. Not only do the students who participate in such a contest discover the actuarial profession, but, of course, their high school friends, parents, parents' friends, and future friends in college also often become familiar with the actuarial profession. He also suggested that it might be desirable to have the Society hire a public relations expert in order to obtain the fastest and perhaps the best results in overcoming the lack of familiarity with the profession.

Mr. Wolfson felt that there are several improvements which could be made in the format of the Society's meetings. He thought that the meetings were quite uninteresting to many of the younger actuaries and went on to say that the same situation could be true for many of the "non-younger" members. Most of today's actuaries are specializing in one of the several different fields, such as Ordinary insurance, Group insurance, consulting work and pensions. Because of the general format of the meetings, the major part of the meetings is devoted to fields outside the particular specialty of a member attending. Whereas most actuaries are naturally interested in fields other than their specialty, it becomes rather tedious to listen to discussions concerning these other fields six or seven hours a day. He thought that an actuary's desire to have at least a general awareness of what is going on in fields other than his specialty could best be fulfilled through the media of local club meetings, trade publications, and the *Transactions*. He felt that the really distressing point was that even when the particular subject under discussion was within a specialized field, too often, because of the general format of the meetings, the remarks made were so general that they were of no particular value to the actuaries in the audience who are in the field under discussion.

He felt that the meetings could be improved if a smaller part of the meetings was devoted to subjects of general interest, such as recruiting and education of actuarial students, Social Security trends and investments. The remainder of the meetings could then be devoted to simultaneous discussions concerning the various actuarial specialties. Each of the simultaneous discussions could have as the basic program two or three current problems in the particular field, with perhaps a panel being set up ahead of time on each question to present individual short prepared discussions, with the rest of the session devoted to a question and answer form of discussion. Mr. Wolfson felt that not only would such a format

permit a higher percentage participation of the membership in the program, but it would also permit discussions involving more detailed or technical points.

Mr. Wolfson also felt that regardless of the format, the meetings should end earlier in the day in order to have more time for actuaries to meet and "socialize" with other members of the Society.

MR. R. J. RANDALL agreed with most of Mr. Wolfson's remarks, but commented that the actuaries in some companies do require a general knowledge. He also suggested that there should be some systematic method of getting young men to serve on Society committees.

MR. H. J. BROWNLEE expressed agreement with Mr. Wolfson's remarks. In commenting upon the problem the younger actuary has in getting to know the other younger actuaries of the Society outside of his own company, he expressed the opinion that a wider acquaintanceship among the members of the Society would make the younger actuaries feel less like outsiders and thus encourage them to take a wider part in the discussions. The committee which plans the Society's meetings could help, especially in places like the Greenbrier, by planning some informal program outside the regular sessions which would enable the younger actuaries to get together and meet each other.

In commenting on topic 2, Mr. Brownlee said the examination structure today gives a very solid foundation of knowledge on which further specialization can be built. It seems to be rather difficult to set up any formal education program which would enable younger actuaries to learn more about specialized fields, since the number of specialized fields is quite large and the number interested in any one specific field at any one time would be quite small. He said that it was an individual's own responsibility to continue his education beyond the Fellowship level. In this respect, Mr. Brownlee felt that it would be very helpful if some of the older and more renowned members of the profession would make themselves available, at actuarial meetings, to younger members of the profession who might like to discuss with them some particular aspects of their specialized fields.

MR. J. M. SUTHERLAND, JR., stated that in his opinion the actuarial examinations are preparing us adequately for careers as actuaries. He felt that everyone must be aware that there are certain shortcomings in any written examinations as bases for judging and selecting actuaries. However, when the studies are complemented by work assignments which systematically broaden the student's experience and training, any student with any business aptitude can emerge from his course of studies reasonably well-equipped for assuming responsibility. Some omissions in the

education program at present, which may or may not be justified, seem to be in the areas of electronics and management.

Mr. Sutherland also mentioned without elaboration the following points:

1. An earlier start would be helpful to most students. Some distribution of information at the high school level and greater distribution at the college level would be desirable. The students could write more examinations before leaving college and thus be that much ahead when they begin working.
2. The study group program sponsored by the various actuarial clubs and others can be very helpful. Perhaps more attention should be given to securing a higher caliber of discussion leadership.
3. Courses in local colleges and universities for actuarial students who have already begun their working careers could be encouraged. Also, more colleges could be urged to offer the necessary mathematics for their undergraduates.
4. One change that might speed the education would be to consider giving split credits for the later examinations. In particular, Part 6 now appears to have an enormous body of material for the student to master. In this connection the continuing work on the study notes has been of invaluable assistance. The body of actuarial science continues to expand with every meeting of the Society and the student is thereby faced with an ever-increasing mass of knowledge to master.

MR. J. H. DOWLING questioned whether the actuarial examinations should be the sole means of preparing us to be actuaries. He felt that there was more to becoming an actuary than merely acquiring technical knowledge and that it was the duty of the individual with the help of his company to supplement the good but limited education required for the examinations. Mr. Dowling gave a brief description of the program that the Prudential has for broadening the experience of their students and younger actuaries.

MR. I. M. CHARLTON reiterated the need for some action in the field of public relations and suggested that wider recognition of the scope and importance of the occupation of actuary will draw new students far more readily than will scholarships. In commenting on the Society's meeting structure, Mr. Charlton suggested the possibility of having microphones on the floor of the meeting room to allow short questions addressed to the speakers. He felt that some oral examination by Fellows, selected by the Examination Committee, in the students' regional Actuarial Clubs (or cities) would be a better preparation for the actuary's varied tasks and would, at the same time, increase the examination's coverage of the syllabus and reduce the written material involved in the present system.

MR. R. H. HOSKINS stated that the actuarial examinations are preparing us more as technicians than as businessmen and suggested that

examination questions require the student to make definite recommendations as well as list advantages and disadvantages. He also suggested that Part 1 be eliminated from the syllabus.

Mr. Hoskins had five comments relative to the further education of the younger actuary. First, he did not favor any additional examinations beyond the Fellowship. Second, he noted that there are several ways in which the younger actuary may further his education: service on the Society's Education and Examination Committee, teaching in local study groups, preparation of discussions for Society and actuarial club meetings and presentation of papers to the Society. Third, although the preparation of papers is somewhat encouraged by the Triennial Prize for the best paper presented within approximately five years after admission to Associateship, Mr. Hoskins felt that a good part of this period is and should be devoted to studying for the Fellowship examinations; he suggested that an additional prize be established for the best paper submitted within a like period after admission to Fellowship, excluding the winners of the Triennial Prize. Fourth, he stated the opinion that there is considerable interest in the Society's informal discussions, which now appear in the *Transactions* only in digest, and in discussions prepared for actuarial club meetings; he suggested that these discussions be reproduced by some relatively inexpensive process and distributed to the Society membership, or at least to the younger members. Finally, drawing attention to the existence of a Committee on Continuing Legal Education of the American Law Institute collaborating with the American Bar Association, he suggested that we inquire if any of its activities would be applicable to our profession, and that perhaps, as a result, we establish a Committee on Continuing Actuarial Education.

MR. J. E. SMITH gave a rebuttal of the frequently expressed view that the actuarial examinations are far more difficult than actuarial work. It has been his experience that those students who have difficulty with the examinations also have difficulty with their work. He felt that the charge that standards are set high to maintain actuarial salaries can and should be honestly denied. The denial should be made because the charge is serious and does damage to the reputation of the profession. Mr. Smith suggested one way to further the education of young actuaries is to hold regular company meetings of students and the younger Associates and Fellows. This practice allows the student to keep abreast of what is going on in the company; it helps the student to relate company practice to the syllabus for the better understanding of both; and finally, it gives the student a better opportunity to question the actuaries on any phase of study or practice.

MR. P. T. ROTTER expressed concern over the remarks of some individuals which indicated they felt it was the responsibility of the Society to move its members through their entire business lives. In answer to Mr. Charlton's suggestion about oral examinations, Mr. Rotter pointed out that at least in his company a student has to pass an oral examination every day. He suggested that each individual ask himself what he should expect from the Society, his company and himself. Mr. Rotter stated that he personally felt the Examination Committee was doing a fine job and doing what we should expect them to do.

MR. F. G. LETWIN made two suggestions, one with respect to the order in which actuarial examinations are taken and the other with respect to the material available to students writing Parts 2 and 3 of the examinations.

He suggested that the actuarial examinations be set up in a manner such that an Associate of the Society would have covered all subjects needed to qualify as a consulting actuary on pension plans. The Fellowship examinations would be confined to subjects of interest mainly to insurance companies. He claimed that such action would increase the supply of consulting actuaries and hence would tend to restrain unqualified people from setting themselves up as consulting actuaries. He also thought that such action would counteract any tendency among consultants to set up their own society and set their own examinations.

Mr. Letwin's second suggestion was that specimen questions and answers to Parts 2 and 3 be sent out to all students intending to write these examinations. He pointed out that many students in actuarial education centers and insurance centers have such questions and answers and that other students should be given an equal opportunity.

MR. J. K. DYER, JR., commented on the difficulty in passing the Fellowship examinations without the benefit of life insurance company experience. Nearly all of the consulting firms have built their actuarial staffs by proselyting from the insurance companies, and the present examination situation practically guarantees that this situation will continue indefinitely. He stated that the members in the consulting field would prefer to educate and train their own actuaries as the insurance companies do, but this is impossible so long as it is obvious from the start to anyone who has the ambition to acquire Fellowship in the Society that he should go to work for a life insurance company and stay there until he has at least acquired the experience and knowledge required for the examinations, and preferably has actually passed them. Therefore, as long as the Society insists, as a prerequisite to full membership, upon a detailed knowledge of certain life insurance subjects which it is almost im-

possible to acquire without experience in a life insurance company, the life insurance industry must accept the inevitable consequence, which is to serve as training schools for practically all actuaries, an increasing proportion of whom will eventually go into consulting work.

Mr. Dyer suggested that at least a part of the solution is to return to the alternate subjects, an idea which was dropped, for reasons that history does not reveal, about the time the present Society of Actuaries was formed. His idea was to deal with practically all of the specialized subjects of the Fellowship examinations on a two-level basis. A certain basic elementary knowledge of all or most of these would be required of all candidates. Advanced knowledge would be covered by a separate set of questions, each candidate electing, say, two specialties in which he would write in the advanced categories.

While admitting the need for more actuaries of all-round executive ability as contrasted with solely technical actuaries, MR. WOLFSON did not feel that changing the nature of the examinations would accomplish the desired result. He felt that the examinations could do nothing to change the personality formation of students, which is probably the most important factor in broad executive ability, assuming basic knowledge and experience are also present. On the other hand, he did not feel that the examinations were so technically difficult that any person capable of becoming a broad executive actuarial officer of a company shouldn't be able to pass them.

Mr. Wolfson summarized by saying he believed the examinations were doing a fine job in preparing the student technically for an actuarial career and that the problem of obtaining "all-round" actuaries was a matter of recruiting emphasis and not a question of examination or syllabus emphasis.

MR. M. D. MILLER expressed appreciation for the ideas which come from this type of sounding board. In response to Mr. Letwin's comments on Parts 2 and 3 of the examinations, Mr. Miller stated that tests have been made of the results and such tests did not prove any advantage to the students in insurance centers. The examination committee does, however, have under consideration a suggestion to release a set of examination questions.

In discussion of topic 1 Mr. Miller felt that the Society should follow through on the sponsorship of national mathematics examinations. He also felt that a description of the profession should be prepared and distributed in some manner, and favored the possibility of hiring a public relations expert to help us with this problem.

MR. P. M. THEXTON discussed the long study hours an actuarial

student must put in in order to pass the examinations. These long study hours fall in a very important period in his life and he may be denied the kind of family and civic life which is so important to the average young man. He felt that a solution to this problem was to shorten the length of each examination to three hours and to give the examinations twice each year. Under this basis a man could have the choice of either proceeding through the examinations at a more leisurely pace than is presently possible or expending even more effort than at present in order to pass the examinations more quickly.

DR. W. D. BERG, in commenting on topic 3, reviewed the Preliminary Examinations as they affect recruiting. He noted that not once in the seven years from 1950 on has the passing percentage exceeded 30% on either of Parts 2 or 3. Furthermore, less than half of those who passed Part 2 and less than 10% of those who passed Part 3 are undergraduates. Since not all of the successful candidates ultimately enter actuarial work, it is clear that the great majority of our recruits are still studying freshman and sophomore mathematics rather than actuarial theory in at least the first year following graduation.

Dr. Berg suggests that our mathematical standards are unnecessarily high and that a much larger percentage consistent with the preliminary nature of the subjects should be passed. The minimum standard might be set, for example, at about the level of a "B" grade in reputable colleges and universities. A panel of mathematics professors could be selected to set the passing mark that would meet such standards. Such a standard would assure that the actuarial student would gain the necessary working knowledge of these subjects and it would put the examinations within the reach of undergraduates. Such new standards would not open the field to Associate status, since the traditional competitive standards with which we are all acquainted would still be maintained for Parts 4 and 5. Dr. Berg pointed out that since the actuary uses mathematics only as a tool and does not pursue the subject as an end in itself, there should be different standards on the Preliminary Examinations.

Dr. Berg pointed out that if such a change were instituted, mathematics majors would be able to start their study of life contingencies immediately after graduation, but even more important, recruiting outside the mathematics department would then be feasible.

In support of this point Dr. Berg described an experimental course he conducted in the mathematics department of a liberal arts college for economics, political science and psychology majors. The two-semester course that was developed introduced those concepts from algebra, calculus and probability necessary to an understanding of the binomial,

Poisson and normal distribution functions, elementary sampling theory and correlation techniques. The text was Professor Wilks' book which is on the Part 3 syllabus. It was thus a mathematics course, but it was designed for and open only to nonmathematicians.

Dr. Berg emphasized that the interesting point was that the course attracted many honor students who had as much mathematical ability as mathematics majors, but who for a variety of reasons did not continue with mathematics in college. His experience with this course has convinced him that if we are willing to accept mathematical aptitude in place of mathematical proficiency we will be able to recruit more honor students outside the mathematics departments than within them. But, of course, this cannot be done if we persist in setting standards on the Preliminary Examinations that even undergraduates in mathematics have difficulty attaining.

Dr. Berg contended that raising the passing percentage of Parts 2 and 3 would raise, not lower, standards, since first, it would permit recruiting in a much wider and less competitive employment market and should therefore produce more select recruits; second, by introducing the trainee to actuarial theory at the commencement of his professional career, it would improve the quality of his performance and increase his value to his employer.

MR. BROWNLEE, in commenting on topic 3, thought there may be some doubt that starting salaries and raises in the early years offered by insurance companies to actuarial students are as favorable as those offered by other industries to college students with sufficient technical background and ability to pass the actuarial examinations. He noted furthermore that such students can get positions with the Government or in other capacities which exempt them from the draft. By choosing actuarial work, they expose themselves to two years with low salary and little opportunity to pass examinations. Mr. Brownlee felt it important that insurance companies offer to the graduating students with the proper technical background enough money to overcome this disadvantage.

Mr. Brownlee also commented on the basic problem of interesting people in the secondary schools and at the freshman and sophomore levels in colleges. He felt that the contests now being sponsored by various actuarial clubs are a step in the right direction. He also advocated that every member, and especially every younger member, of the Society of Actuaries make a personal effort to get around to the schools and colleges in his local area, or wherever he may have contacts, to discuss the actuarial profession with anyone who might be interested in asking questions about it. This would help create, among both faculty and students, an

awareness of the breadth of opportunity available in this field. If it could be arranged for actuaries to give talks to the members of mathematics clubs which exist on almost every college campus, this would prove an excellent opportunity to talk directly to the people who are studying mathematics.

MR. W. J. TAYLOR conducted a statistical study on the opportunities in the actuarial as well as other professions in order to provide some factual answers for the second part of topic 3. He obtained his information on the actuarial profession by canvassing 35 United States life insurance companies and extracting salaries paid to Fellows by examination employed by those companies in the sample that were licensed in the State of Connecticut in the years 1936–55. For information about other professions he canvassed colleges, universities and graduate schools, professional societies, other industries, the United States Government, and made the usual perusal of periodical articles.

Mr. Taylor pointed out that starting salaries not only vary by profession, geographical location, size and type of company, but may also vary within the company by military status, family status, academic rank within the employee's graduating class, prior business experience, degrees held or actuarial examinations passed. The variations in salary offered by a particular company by the variables mentioned above are commonly called "additives." Although he did not canvass this point, Mr. Taylor thought that the use of additives by United States life insurance companies is not so prevalent nor so extreme as is the case in other industries. In order to get a candidate who will be able to complete our series of examinations, we must get the men from near the top of their classes. Also, the starting salary spread in other fields is often greater because of the use of additives, with the top salaries going to the top men. Mr. Taylor cautioned that when we compare average salaries we are, in effect, comparing the starting salary of the average actuarial student with a starting salary of the average entrant in the other field. If the selection standards are lower in the other field, then the average salary for actuarial students would have to be somewhat higher in order to have actual starting salary levels equivalent.

The table on page 577 summarizes the starting salaries (average) offered to actuarial students with no previous business experience.

Mr. Taylor stated that the salaries paid in 1956 to students with no examinations are near or below similar figures for graduates of undergraduate colleges of business administration and colleges of liberal arts and sciences. He thought that this was definitely not competitive for the type of individual we supposedly want to attract. He stated that the

salaries offered to students with the first two examinations is approximately on the level reported by the better undergraduate colleges of business administration and liberal arts and sciences, and the salaries shown for students with four examinations are slightly better than those for engineers. In order to compete with engineers with masters' degrees, we would presumably have to move to the Associateship level. He also noted that salaries with four examinations completed are competitive with

Year of Employment	No. of Companies Replying	Range	Average	Median	Range of Middle 50%
	Examinations Completed—None				
1946.....	28	$2,100–$3,000	$2,429	$2,400	$2,200–$2,600
1951.....	32	2,400– 3,732	3,146	3,110	3,000– 3,380
1956.....	34	3,900– 4,810	4,250	4,200	4,025– 4,500
	Examinations Completed—1-2				
1946.....	24	$2,280–$3,300	$2,749	$2,700	$2,600–$3,000
1951.....	31	3,000– 4,200	3,504	3,480	3,294– 3,675
1956.....	33	4,200– 5,200	4,619	4,608	4,479– 4,800
	Examinations Completed—1-4				
1946.....	22	$2,760–$4,200	$3,348	$3,300	$3,025–$3,600
1951.....	27	3,400– 5,300	4,154	4,000	3,821– 4,455
1956.....	29	4,900– 6,500	5,479	5,400	5,205– 5,600

some of the graduate schools of business administration, but one such school reported salaries competitive with those of graduate engineers.

Mr. Taylor compared the trend in starting salaries of actuarial students with the trend in starting salaries of engineers, noting that the engineers made some gains relative to the actuarial students between 1946 and 1951, but dramatic gains have been made by the engineers between the years 1951 and 1956.

He stated that after compiling all of these salary figures, he found considerable evidence to the effect that starting salaries are really not the most important inducement any more, so long as they are reasonably competitive. Although different surveys have ranked inducements in different orders, five factors always appear to be quite significant. They are, in

what may be the inverse order of their importance, training program, location of company, reputation of company, long range opportunity of job potential, and type of work offered or initial job assignments.

Mr. Taylor summarized the information on actuarial study or training programs obtained from the questionnaire. Some of the particularly significant findings were that the percentage of companies reporting such an actuarial study or training program increased from 71% in 1946 to 94% in 1951 and 100% in 1956. Of those indicating that they had a program, the proportion providing office time for study increased from 79% in 1946 to 94% in 1956 with the median number of hours allowed increasing from 47.5 hours in 1946 to 93 hours in 1956. The expenses of local lecture and discussion groups were paid by 38% of the companies in 1946 while 65% covered such expenses in 1956. The increasing use of correspondence courses was indicated by the increase in companies paying the expense of such courses from 17% in 1946 to 32% in 1956. There is an increasing trend in the practice of conducting a formal program of hiring summer students designed to give them a realistic impression of the nature of the work of an actuary. Only 25% had such a program in 1946, whereas 56% had a program in 1951 and 82% had a program in 1956. Mr. Taylor emphasized that this is precisely the type of thing that we must do to acquaint students with the profession in their early days of college.

In order to measure the potential of the profession Mr. Taylor made the Schedule G study referred to earlier. This portion of the study supported the contention that the actuarial profession is well paid and undoubtedly would impress the prospective recruit even if he made a mental adjustment for the selection process employed by our eight examinations. Mr. Taylor pointed out, however, that the picture is not as bright as it has been in the past.

Mr. Taylor attempted to compare the salaries of actuaries at similar stages of their careers by tabulating the salaries paid in each of these years by the number of years since attaining Fellowship. All such salaries were adjusted for changes in the cost of living index. The result of this comparison indicated that the salary level was highest in 1936, lowest in 1946, and had improved somewhat by 1955. He stated that the corrected salary levels were closest for the newest Fellows and diverged rapidly as the years since attaining Fellowship increased. This induced him to look into the question of executive compensation and what information he could gather on this subject indicated that actuaries in executive positions have suffered more from inflation and increasingly progressive income taxation than executives in industry.

Mr. Taylor stated that if we can interest students at the high school

level and revise our examinations so that the graduating college senior has some knowledge of actuarial science (not necessarily the proficiency of the successful Part 4 candidate), not only will the student be of greater value to his employer and hence worth a higher starting salary, but he will also be prepared to take on more interesting first job assignments, which, according to various surveys, is a very important inducement to the college graduate of today.

MR. K. D. MITCHEM, in commenting on topic 1, suggested that each employer of actuarial talent might contribute to the job of enhancing the actuarial profession in the eyes of the younger members by giving greater public recognition to these employees in trade journals or other publications upon their attainment of professional stature, first as an Associate, then as a Fellow of the Society of Actuaries.

With respect to topic 2, Mr. Mitchem thought that the actuarial examinations give adequate preparation in the technical phases of actuarial work, but this technical knowledge should be supplemented by other training programs as follows: (1) formal training sessions during the first six months of employment to acquaint the students with the various aspects of actuarial work, (2) job rotation to provide a broader base of practical experience, and (3) management or executive training conferences or forums whereby the young actuary may be exposed to the problems and techniques of good business management.

In commenting on topic 3, Mr. Mitchem suggested a number of ways that the young actuary can help alleviate the current shortage of actuarial trainees and build a foundation for improving the situation on a long range basis: (1) maintain close contacts with the mathematics department of his college so that the educational requirements and opportunities of an actuarial career are constantly kept before the professors and students, (2) be willing to make recruiting trips to his college and to participate in mathematical club programs or similar functions upon invitation so that potential actuarial students may be kept abreast of all the facts of our profession, (3) be willing to participate in career conferences, orientation programs or similar projects which are becoming more and more a part of the vocational guidance programs for seniors in high school and freshmen in college, and (4) participate in any project sponsored by the Society of Actuaries and local actuaries clubs to publicize the actuarial profession and the opportunities it provides.

Although the current starting salaries of actuarial students tend to be below those of competing industries, Mr. Mitchem thought our strongest inducement to the young graduate today lies in the excellent job and promotional opportunities that exist. He noted that inadequate quotas of new

actuarial personnel over the past five or ten years will tend to accelerate the rate of progress over the next few years above what might be expected under normal conditions.

MR. C. B. H. WATSON reiterated that examinations do not develop executive procedures and decision-making abilities. He stated that recruiting for mathematicians was difficult because most of them are interested in research or computers. He felt that if business administration students with mathematical ability could be induced to study mathematics, they would make excellent actuaries. He also thought there was a need for some type of executive training in the universities.

MR. R. G. ESPIE was not in favor of reducing the standards on the preliminary actuarial examinations. Commenting on topic 3 he pointed out that insurance companies are in part creating their own shortage by the extensive use of actuaries in other than actuarial departments.

MR. J. J. BAGSHAW briefly described the program that Towers, Perrin, Forster and Crosby, Inc., has had for the past six years. They have a program of recruiting in the sophomore year in college, combined with provision of summer employment and scholarships. Their results have been personally discouraging because of students using the program as a subsidy to their college education and then going to work for insurance companies to extend their actuarial education. Mr. Bagshaw felt that contacting students in their sophomore year of college was too late and either sophomore or junior year of high school would be preferable.