



SOCIETY OF ACTUARIES

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## ACTUARIAL DEMOGRAPHICS I

By Dwight K. Bartlett, III

Since 1985 was the silver anniversary of the class of 1960 FSA's, it seems appropriate to review what has happened in the past 25 years to these 60 men and one woman who were members of that class. The following is based on information largely determined from the 1961 and 1985 Society of Actuaries' *Yearbook*.

In 1961 and in 1985 the distribution by type of employer is as shown in the following table:

|                      | 1961 | 1985 |
|----------------------|------|------|
| Academia             | 1    | 1    |
| Consulting Actuaries | 8    | 23   |
| Government           | 0    | 1    |
| Life Insurance       | 52   | 28   |
| Retirees             | 0    | 4    |
| Resignations         | 0    | 2    |
| Deaths               | 0    | 2    |
|                      | 61   | 61   |

Noteworthy are the following: Eighteen still work for the same employer, a high degree of employment stability; paralleling what is happening in the profession generally, the shift to the consulting sector is quite strong; normal mortality expectations would call for three or four deaths, so we have apparently been a healthy bunch; the 53 of us still in active employment can only envy the four retirees; during the next decade, presumably most of us will move into that category.

The following table shows the distribution of those employed by life insurance companies according to title.

|                           |    |
|---------------------------|----|
| Presidents                | 4  |
| Executive Vice Presidents | 4  |
| Senior Vice Presidents    | 4  |
| Vice Presidents           | 9  |
| Assistant Vice Presidents | 2  |
| Other                     | 5  |
|                           | 28 |

Apparently we are a talented and hard-working bunch. It is more difficult to determine status by title in the consulting industry, but it should be noted that ten of the 23 employed as consultants work for firms whose name incorporates their own name. Obviously we have our share of entrepreneurial types who dislike working for other people.

The following table indicates the geographical distribution of class members of 1961 and 1985:

|           | 1961 | 1985 |
|-----------|------|------|
| Canada    | 8    | 9    |
| Central   | 11   | 6    |
| Northeast | 32   | 27   |
| South     | 7    | 10   |
| West      | 3    | 5    |

Actuaries, like the rest of our population, have been attracted by the comforts of life in the sunbelt regions of the South and West. On the other hand the strong pattern of net migration from Canada to the United States, which took place in the years following the Second World War, apparently had pretty much died out by 1961.

Normally 50% of a normal American population have an initial of their last name falling in the range A through K and the balance L through Z. For some strange reason, in our class 40 of the 61 fall in the range of A through K. Does anyone have a theory explaining that statistical oddity? □

## ACTUARIAL DEMOGRAPHICS II

By—Preston Bassett '36

Stanley Olds '42

Linden Cole '51

Bob Hardin '59

Gary Dahlman '60

Forrest Richen '62

Kathleen Burt '69

Can you imagine a large U.S. city more remote from the major centers of the insurance business than Portland, Ore.? Yet, Grant High School, just one of the several high schools in that city, has produced at least seven actuaries since 1936.

Grant is not a technical school; neither its curriculum nor its middle class neighborhood suggests a fruitful source of actuaries. Nevertheless, given at most 500 graduates a year on the average from 1936 to 1975 (a reasonable cutoff year considering the "travel time" from high school graduation to FSA), the production rate exceeds 0.35 FSA's per 1,000 graduates. The comparable figure for the nation is surely less than 0.06 FSA's per 1,000 graduates, (5,208 FSA's on 11/1/84 divided by a conservative estimate of surviving high school graduates from that period of about 91 million).

While we don't think our group is large enough to form an SOA section, we are proud of our high school and would like other Grant High School

## SHORT COURSE ON

### ACTUARIAL MATHEMATICS

By Abdul Hoque

The American Mathematical Society (AMS), in conjunction with its eighty-ninth summer meeting, presented a one-and-one-half day short course entitled "Actuarial Mathematics" on Aug. 10 and 11, at the University of Wyoming, Laramie. The course was one of a series given by the Society on the recommendation of its Committee on Employment and Educational Policy (CEEP). As a student participant, I think it was a successful short course for a research oriented actuary. Also, it was a good opportunity for professional actuaries to exchange research ideas with the academic actuary doing teaching and research. I am writing this report for those members who were unable to attend the course, and to give an outline of the materials presented in the meeting.

In the introduction, James C. Hickman (University of Wisconsin) introduced himself and all other guest speakers. His lecture introduced actuarial mathematics as a branch of applied mathematics devoted to building models of insurance systems. It is an old and successful application of mathematics in business and social sciences. He explained how actuarial models incorporate mathematics of life contingencies, which is the study of models used in life insurance and annuities. He also explained how expense and compensating premium loading can be added to the loss variable, and how the equivalence principle, that is, the expected present value of future losses, defines current liability, yields premiums and reserves. Indexed benefit and random interest concepts were explained with examples.

After Professor Hickman, Harry H. Panjer (University of Waterloo) presented his lecture on Models in Risk

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graduates to identify themselves. Moreover, we challenge other high schools to match our record. Can we learn something from Grant and other productive high schools about how to recruit future actuaries? □