



SOCIETY OF ACTUARIES

Article from:

The Actuary

November 1973 – Volume 7, No. 9



The Actuary

The Newsletter of the Society of Actuaries

VOLUME 7, No. 9

NOVEMBER, 1973

ACTUARIAL TRAINING IN SCOTLAND

by L. Blake Fewster

In Scotland there appears to be some activity in the actuarial field that has a familiar ring.

This concerns the establishment of the Chair of Actuarial Mathematics and Statistics—the first of its kind in any United Kingdom university — at Heriot-Watt University in Edinburgh. The Chair has been established through the generosity of life insurance companies whose head offices are in Edinburgh and with the support of the Faculty of Actuaries. At the same time, the Faculty is reviewing the educational syllabus, training methods and examinations.

Professor Gray, who occupies the new Chair at Heriot-Watt, delivered an eloquent inaugural lecture, "How Should Actuaries be Trained?" and this could be repeated, with only very minor editorial changes, and seem relevant to the continuing conversation on educational matters within the Society of Actuaries. The actuarial profession in North America owes much to the earlier development of actuarial ideas as well as actuarial organizations in the United Kingdom. Professor Gray's address leaves no doubt that, at least in educational matters, there continues to be a startling parallelism between developments in North America and the United Kingdom.

Professor Gray is hopeful that a pattern will emerge such that professional fellowship can be attained within two years of university graduation instead of the current four or more years. This would be accomplished by redesigning certain university mathematics and statistics degree courses to include actuarial subjects as options. Students would not lose other career possibilities and university staffs would be taking over more

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IMPORTANT

Manpower Study

Please forward information requested of employers in August for the Manpower Study. Every reply is important. Keep us off your back. For information or forms, get in touch with me.

Russell H. Smith, Jr.

ACTUARIES AND THE ACADEMY

by Jeanne Hooshagen

At the October meeting of the Actuaries Club of Indiana, Kentucky, and Ohio the after dinner speaker was Mr. E. J. Moorhead, Past President of the Society and President-Elect of the American Academy of Actuaries.

Using as his title "Honor & Toil," Mr. Moorhead spoke of the history, the present situation, and the road ahead of the Academy. He described the results of a survey that has been made to determine the present composition of Academy membership and the interests and occupational specialties of its members.

Quoting Humpty-Dumpty, "When I use a word it means just what I choose it to mean," the speaker predicted that the day is passing when the word "actuary" can be used by anybody to mean whatever that person chooses it to mean. Those who apply the word "actuary" to themselves when they are not qualified to do so will find themselves a laughing stock, he said.

Mr. Moorhead spoke enthusiastically about the potentialities of a new organization recently formed at the initiative of Academy President Morton D. Miller, consisting of the Presidents and the Presidents-Elect of the various actuarial organizations on this continent. He said that we are getting to know each other

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IN SEARCH OF CENTENARIANS: ON THE ROAD TO HUNZA

by Frederic Seltzer

It was dawn; black clouds hovered over the surrounding hills as our plane took off from Rawalpindi Airport. At last we were on the flight to Gilgit, often called the most dangerous in the world. Flying over green hills up the Kagan Valley, we approached the Karakoram Range. Clouds obscured the view below. Walled in by 20,000-foot mountains, there was no turning back in the narrow valley; the small plane could fly no higher. Like volcanic islands in the sea, the mountain peaks pierced the cloud barrier; we passed the flanks of Nanga Parbat, more than 26,600 feet tall.

Planning the trip had started seven months earlier in January with correspondence with those authorized to take visitors into the formerly forbidden Hunza, the submission of visa forms and applications for special permits, and the juggling of air schedules and hotel reservations. At the beginning of August, a 20-hour flight on Pakistan International Airlines had taken us to Karachi where connections via Lahore soon brought us to Rawalpindi at the height of the summer monsoon. Pakistan was then experiencing its worst floods in a quarter of a century.

We had arrived at Gilgit, gateway to Hunza, an area with many peaks over 23,000 feet high. Jeeps took us along the Gilgit River, over swaying suspension bridges and winding mountain roads, to meet the Raja of Puniyal. On our return, because of a shortage of rooms at the rest houses and the imminent arrival of Senator Percy with a party of 20, we were informed that we were to leave for Hunza the next morning.

After traveling several hours on precipitous roads strewn with boulders, past

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Actuarial Training in Scotland

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of the burden of examining the earlier parts of the professional examinations. In North America, we call this the alternate route.

While Professor Gray is hoping for a closer link between universities and the actuarial profession in Scotland "such as exists in . . . the United States," it may be that the so-called alternate route in Scotland would be more easily controlled than in North America. The article suggests that there may actually be a stronger joint commitment between universities and the actuarial profession in Scotland than we at present enjoy in North America. While we do have several good actuarial schools in North America, these schools could not currently maintain the full input to the actuarial profession on this continent. Our five-year debate about the alternate route in North America is sufficient evidence to judge this as a very complex problem. However, without intimate knowledge of both situations, it is dangerous to comment on the relevant development in the two areas.

In any event, there are similarities on both sides of the Atlantic. High school and university courses have been extensively revised and increased use is being made of computer techniques, making parts of actuarial mathematics obsolete. Professor Gray does note that less time is now spent on developing manipulative skills, so important in actuarial mathematics, and that the actuarial profession must expect a future intake with a less well developed aptitude for algebraic manipulation. There is an increased need for students to develop a deep and continuing interest in their career rather than studying for the sole purpose of passing examinations. There is a basic need for the examination syllabus to be continuously reviewed, pruned of old material and updated with new techniques. The experience of our own Education and Examination Committee has generally been that pruning of material is done as a practical necessity and that there are more requests to add new material than to delete old.

In North America we have been talking about a common core of actuarial knowledge which, among other things, would include both life and non-life con-

BASICS OF COST COMPARISONS

by James C. Hickman

On Capitol Hill in Washington and in almost every academic, professional, or trade association meeting that relates to life insurance, sessions are being devoted to cost comparisons. It is clear that this intensive activity could have a significant impact on the marketing of life insurance.

The Society of Actuaries has a special committee considering cost comparisons. Each of the recent meetings of the Society has had at least one session directed at some aspect of the problem of how to summarize cost information about life insurance for prospective purchasers.

Considerations for solving problems. The advent of joint sponsorship of the examinations administered by the Casualty Actuarial Society and the Society of Actuaries by the six recognized professional actuarial organizations in Canada and the United States creates the framework for further development.

In Scotland the development of non-life actuaries appears to be non-existent, with the field of non-life insurance being largely in the hands of non-mathematicians. Professor Gray states that this is strangely anomalous because in non-life insurance the problems are more complicated and more interesting than those faced in life insurance. In North America we have a number of non-life actuaries and the problems which they face are of a widely varying nature. Members of the Society of Actuaries also continue to be challenged by new developments in life insurance, health insurance, and pensions requiring the exercise of actuarial skills.

The big lesson for North American actuaries to be drawn from Professor Gray's address is that almost exactly the same forces pushing toward revision of actuarial education in North America are also working in the United Kingdom. What is more, the responses being developed on both sides of the North Atlantic are almost identical. The simultaneous appearance of the same set of problems and the same proposed responses in two different countries should remove any suspicions that the forces are illusory and the proposals for reform worthy only of dismissal. □

Consequently even actuaries not involved in marketing problems for individual life insurance should by now be aware of the outlines of the problem.

This short essay contains no technical suggestions for insurance cost indices. Instead the objective is to state and support two basic propositions:

(1) A highly developed information system is essential for the efficient operation of a market. If one adopts the premise that an open market provides the best mechanism for consumers to maximize the utility derived from their purchases, he is forced to support efforts to develop cost comparisons in life insurance and to make this information freely available.

(2) Because life insurance involves a balance between a stream of premiums and benefits and services extending into the future, any cost summary depends on a model and a set of assumptions about the future. A rational consumer may formulate a view of the future which is consistent with his preferences and state of information. Yet there is no theoretical or practical reason to expect a consensus among potential purchasers on the assumptions by which streams of future premiums and benefits are converted into a present ranking.

In our imperfect world no one has ever observed a realization of the perfectly competitive market of classical economics. This beautiful abstraction is inhabited by hypothetical buyers and sellers supplied with unlimited and reliable market information and controlling the market. Nevertheless, the notion that informed consumers, armed with common sense and a reasonable fund of information, can operate through an open market to regulate and direct an economy, is a powerful one.

Vast information systems have been organized within both the private and public sectors to promote efficiency in securities trading. A major objective of the federal regulation of the securities markets in the United States is to enforce the availability of comparable information. Several agencies within the Department of Agriculture operate to produce and disseminate information concerning the supply and demand for agricultural commodities. Markets in which information is too expensive or unreliable often behave capriciously and fail to fulfill their intended function.

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