

TRANSACTIONS

ADDRESS OF THE PRESIDENT, ROBIN B. LECKIE

ACTUARIAL SOUNDNESS

HAVE you thought lately about why you became an actuary? What did you hope to accomplish as you entered this profession? And what did you have to contribute?

Many of us stumble on our careers accidentally. We were rather young and unknowing when we first found an interest in an actuarial career and started to write examinations. At least this was true in my case. But even though I was led into an actuarial career, I have had no regrets. I believe we are a profession with a mission—a profession that provides a unique and challenging opportunity. It offers both the challenge of technical analysis and innovation and the opportunity to contribute to society's welfare, while providing reasonable remuneration. And it is a profession that is generally admired.

The actuarial profession is small. There are approximately ten thousand members in North America. Because of our small numbers and the complexity of what we do, we sometimes have trouble developing an identity. In fact, most actuaries have trouble explaining what they are or what they do.

About a year ago something happened that triggered for me a new appreciation of the actuarial mission. The event was the United States presidential election debate. The challenger, now President Reagan, used the term "actuarial soundness" or "actuarially sound" three or four times. I do not suppose that Mr. Reagan's election could be attributed entirely to this statement. I do recall wondering how Mr. Reagan interpreted the term, and how he expected the audience to interpret it. I cannot answer. But the question should convey a sense of mission and purpose for us and for what we do.

Earlier this year I asked the Society's Board to define actuarial soundness. The responses included the following:

1. Actuarially sound means based on realistic assumptions; implying the ability to meet all future expected commitments.
2. A proposition is actuarially sound if it proves financially secure when tested by (or developed by) techniques of actuarial science using appropriate parameters.

3. A program is actuarially sound if the funding for the program in question is such that the present value of future benefits is fully covered by existing funds and by the present value of future revenues—and where there is a reasonable expectation that the future revenues will, in fact, be available.
4. “Actuarially sound” is a convenient way of begging the question within actuarial circles and a useful means of frightening laymen.

I too have a definition for actuarial soundness, which I will defer for a moment. Before stating it, I would like to discuss an almost equally perplexing problem: defining an actuary.

Most of us have trouble developing a satisfactory definition of an actuary. I can recall years back trying to give my daughter a definition she could use at school. I tried “engineer of a life insurance company,” and the “mathematics of risk and money management,” but no matter how simple my definition was, she could not understand it, much less explain it to others. Finally I told her “we count dead people,” and that seemed to satisfy her.

A few years ago at a joint meeting with the Casualty Actuarial Society, Fred Kilbourne used a definition that Paul Barnhart subsequently adapted for his presidential address and that I will adopt this morning. If the definition is used often enough, perhaps it will be printed in the *Year Book*, saving all future actuaries untold agony in defining who they are:

An actuary is a professional expert who deals scientifically with the financial implications and consequences, both present and future, of contingent events or risks.

The definition is excellent, since it incorporates our scientific discipline, a time dimension, public trust, and uncertain contingencies.

Thus our profession, founded on contingent risks, embraces three elements: first, a mathematical structure; second, a long time horizon; and third, programs for the public, which usually involve insurance and/or pensions. The three elements are bound together by judgment—professional judgment.

When these three elements of mathematics, time, and public interest are in harmony, we have actuarial soundness, that is to say, the programs are structurally and functionally sound. Our work therefore requires us to apply our mathematical discipline and our understanding of insurance and pension programs, and how economics, psychology, and politics may affect these. And then, with the added implications of the time value of money, we are required to ensure—collectively and to the best of our ability—that what we say and do is actuarially sound.

But we live in an imperfect world. This lends credence to the actuary’s

theology, which states that the universe was dictated but not signed. Our environment, or some elements within the environment in themselves, may not be structurally sound. In some cases we cannot do anything but recognize this and either accommodate ourselves to it or else build compensating factors into our recommendations. In other cases we can and should speak out or take action.

Let me illustrate with the circumstances surrounding risk classification. Actuaries generally prefer to control the classification or groupings used for pricing and provisions. Many factors determine these choices, from soundly designed experience studies to practical considerations. The decisions are usually based primarily on principles of equity—that is, what is fair and free from personal antiselection.

Recently another consideration has arisen—a social factor, generally based on principles of equality—most recently sex, health conditions, and even age.

To what extent should the actuarial profession speak out on equality and equity considerations in risk classification? We must, of course, be socially responsible. On the other hand, the legislators and the public are entitled to understand the implications of socially motivated tampering with natural classification factors.

In this instance, the actuarial profession, many of its members, and the insurance and pension business have responded to the implications of current social change. But have we responded in time? And have we responded duly recognizing the need for social change and with an open mind not directed to preserving the status quo? Have we been perceived as professional? Do we have adequate documented evidence to support our contentions? Or did we wait too long, and then react rather than promulgate?

The actuarial profession can live with unisex. We can live with changes in classification designed to attain social ends that are perceived as desirable. The question then is not whether the public really needs or wants these changes. The question is whether the public actually can live with these changes once they are made, and whether it is aware of implications for the design of plans that are offered and for the relative balance between private and public schemes.

A second illustration of structural unsoundness is inflation. Inflation arises because of our inability to reconcile the demands for the fruits of our efforts. To maintain balance between supply and demand, we assume benefits now from future effort. One generation takes something from the next.

This is structurally unsound, and ultimately a reckoning must come. In the meantime, many difficulties arise because of this structural imbalance:

a disincentive to save, distortions in current equity, the creation of compensating or protective mechanisms (themselves inflationary), and the many other by-products we are all too familiar with.

What can we do about inflation? For one thing, the actuarial profession should speak out against inflation. Individual actuaries have already done so and should continue to. However, the message this morning is not to mount a crusade, much as I would like to. Rather, it is to strike an accommodation in an imperfect world, much as I would prefer not to. We operate in the public and private arenas, and we cannot, and must not, close our eyes to the environment in which we function and the factors that are part of our programs. If inflation exists, and we structure and manage our programs as though it did not, then our work becomes actuarially unsound. If we ignore social, political, and economic characteristics, our programs will be actuarially unsound. And mathematical precision applied to an unsound system produces unsound products.

I do not wish to dwell on inflation and its ultimate implications. However, the inflation experienced in the past, and the uncertain economic conditions to emerge in the future, do affect actuarial principles and characteristics. There is a need to reexamine some of those basic principles, to develop new actuarial tools, to redesign the plans we offer to the public, and to reexamine how those plans are managed.

For example, it was inevitable that inflation would test our principles of equity, particularly in our dividend distributions. In fact, the impact of inflation, together with consumerism and disclosure, led to the formation of the Dividend Philosophy Committee four years ago. Since then, a set of new principles and recommendations to guide us through this period has been developed.

More recently, another committee, on valuation and related problems, was formed to study basic valuation and solvency principles and how to cope in these uncertain times while maintaining and ensuring future rights. The committee is working to develop new concepts to help actuaries manage in the future. At the same time, dynamic changes are literally taking place in valuation procedures, in Canada, the United States, and elsewhere.

I said earlier that actuarial soundness implies a definable relationship between the past, present, and future. It is based not only on principles of equity but also on reasonable expectations and due recognition of external factors. Within this context, then, can it be said that current legislation and regulations governing the insurance business are actuarially sound? They have been built up over the years to ensure performance and equity based on factors appropriate at the time of issue. The system, however, assumes economic stability, something we have not had during the past decade. Our

regulatory system therefore is not actuarially sound now. The signals are there, if you think about the liquidity problems of 1980 and 1981: the unduly favorable policy loan provisions and increasing inequity between borrowers and nonborrowers, cash values considerably exceeding actual values, and the increasingly inappropriate "ten-for-one" rule. It is no wonder that a spate of new approaches has surfaced both in altering provisions in existing policies and in developing products such as universal life.

The actuarial profession faces a great challenge. We must work with the life insurance industry and legislators and regulators to ensure a system which is actuarially sound and is sufficient to meet the current and reasonable expectations of existing and new policyholders and still permit companies to manage their operations in the overall interest of all policyholders. This requires flexibility and actuarial judgment. And it is also part of our mission. Many Society committees have already assumed this challenge, and the Academy and the Institute are also doing so.

There is a third area where actuarial soundness is of the utmost importance, and it is another benefit area in which citizens of our two countries have a vital interest: our pension systems and the retirement benefits we expect from them.

A complete review of both the public and the private pension scene in North America was completed this past year. The President's Commission on Pensions in the United States and similar studies in Canada have both tried to accommodate public and private sector pensions in harmony with general public needs. This is not easy. In fact, having a total system that could be considered actuarially sound in the narrowest sense may not be possible. For example, social security plans are usually funded partly on a pay-as-you-go basis, and do not meet the same rigorous definition of actuarial soundness as do private plans. As a result, public pension costs sometimes seem like a bargain compared with private pension costs. Public pensions can also adjust more readily to indexed supplements.

Most of us think some combination of individual, private, and public plans would serve the public, but we believe the design and cost should be explained and should be structurally sound.

I have talked about our important role of maintaining structural soundness in three key areas. I have said that it is more than a role—it is a challenge and a mission. I would now like to discuss another area involving structural soundness: the organization of the actuarial profession and the role and work of the Society of Actuaries.

What should we expect from our profession? And what should members expect of their own organization? Are we structurally sound?

The Society of Actuaries' stated purpose appears in Article II of the

Constitution. Unfortunately, that wording should be elaborated to reflect more clearly what we are, what we do, what the Society must preserve at any cost, and what we can relinquish in the spirit of compromise and for the public good. A few years ago, at the Board of Governors' request, a Statement of Planning Objectives was developed. The Board approved these objectives, covering education, research, professionalism, planning, public trust, and cooperation. These objectives have been used by the Board in considering the role the Society can play and is expected to play for the public good and its members' interest. The Statement is currently being rewritten and hopefully will soon be published in the *Year Book*.

Perhaps the best way to look at the Society is to consider what we, the members, can expect from the Society. Certainly it is reasonable to expect that our organization is structurally sound and functioning effectively and that, in turn, the profession is not at odds with itself. Each of us has made a significant investment to obtain the one tangible, personal product from the Society, our F.S.A. We depend on that F.S.A. for our livelihood. We expect the Society to "walk with us" as we travel through our professional career. We depend on the Society, first, to define and maintain the standards of admission into our profession; second, to provide the means for qualified members to maintain professional competence; and, third, to build continuously on the body of knowledge that makes up our profession.

I personally believe that the Society of Actuaries' current structure and fabric are sound, although not without problems. The Society is a democratic organization, functioning primarily through volunteer efforts, but with no lack of cooperation from thousands of members who contribute to the Society's work. A good balance also exists between the Board, the committees, and the staff, with flexibility to meet changing circumstances as these develop.

Let me go back to our three dependencies for a moment, and discuss each one individually. The first—defining and maintaining standards of admission—refers, of course, to our educational system. The system attempts to balance professional standards, consistency, flexibility, adaptability, and practicality. The Fellowship examinations have been restructured recently within the framework described in the educational policy statement approved by the 1980 Board. We expect that major restructuring will not be required in the foreseeable future, and that the system can be modified and fine-tuned as needed.

The structure and content of the Associateship examinations are being assessed now to ensure that they provide proper preparation both for later examinations and for the actuarial career, while at the same time screening actuarial membership. The total education and examination system is ac-

tuarily sound only if it prepares approximately the right number of new actuaries for the actuarial needs of the future. Therefore, the supply and demand of actuaries are also being carefully reviewed at the current time, to see what the facts are and what the Society can do for career promotion, training, and the extension of actuarial opportunities. One thing that will *not* be done is to alter our standards.

The second area in which we depend upon the Society involves helping us maintain professional competence through various membership services. Many improvements have been made over the past few years. Seminars, specialty meetings, and special interest sections are three new developments that have contributed to the continuing educational requirements of qualified actuaries. The Society's continuing education role, particularly the membership meetings, is highly visible, and many actuaries are devoting time and effort to make it effective. At the same time, however, we all have a continuing education role. For the F.S.A. to continue to mean what it does today, it is imperative that all actuaries keep their actuarial education and techniques current. It is in our interest to take continuing education seriously.

We also depend on the Society of Actuaries to build on the body of knowledge on which our profession depends, and this involves actuarial research. I would like to express appreciation to all those who, over the years, have contributed papers, projects, and ideas, have participated in experience studies and committee reports, have taught at universities, or have contributed to seminars for their efforts in extending actuarial research. However, the Society probably should be faulted for not organizing a sufficiently sound and effective research function. Fortunately, we have improved considerably in this area by forming the Research Policy Committee, hiring Jim Cowen as Director of Research, and participating in the Actuarial Education and Research Fund.

In summary, I think the Society is meeting its members' expectations. We are bringing in new members, servicing existing members and developing actuarial science. In addition to meeting our members' expectations, however, we recognize that we also must have a structure that helps to define their professional responsibility. We must have a structure to deal with situations where that responsibility is breached. This year, a high-level task force has reviewed the Society's Guides to Professional Conduct and their application for our members. This review has resulted in a proposal, approved by the Board earlier this week, that we feel will make our professional guidance more effective, or structurally sound, for the Society of Actuaries.

On the other side of the professional conduct issue, I am pleased to report

that we have had no serious disciplinary actions in the past few years, although the Committee on Discipline has actively investigated situations brought to its attention.

This past year our public relations effort has also been revitalized. We have a Public Relations Committee, and we are participating with the other organizations in a joint committee charged with developing a public relations plan for the profession. There are many publics to educate, including the general public, the press, the industries in which we work, our employers, and other professionals. And, in addition, one of the most important publics we will not ignore is our own members.

Still a contentious issue for the Society of Actuaries is whether or not, and in what situations, the Society should speak out on matters involving actuarial issues. The Constitution provides a mechanism for the Society to make a public statement. However, for practical purposes, it is unlikely that the Society could or would make major public pronouncements. Instead, we leave this to the other actuarial organizations. Of course, our most effective spokespersons are our members, speaking either on their own behalf or on behalf of their employers' organizations.

I believe the Society of Actuaries' position on public statements is correct. On the other hand, the profession and our organization must always justify the trust placed in us regardless of whether or not the public understands the characteristics of our profession. To be sure, there are times when we cannot wait to be called. In such cases we must make our publics aware of conditions leading to situations that are not actuarially sound. This can be done through the work of our committees. It can also be supported through the work of individual actuaries. The important point is that, while our own Society is not likely to take a public position, we must be prepared to supply the facts, analyze the issues, and generally carry out our public responsibility proudly and professionally. In doing so, we will function effectively and soundly. However, there is a further requirement for a profession. That is its own professionalism, including public interface. In North America, the Society shares this role with other actuarial organizations.

A few years ago, the major issue involving the senior members of our profession was reorganization. Concern centered on the number of actuarial organizations, the significance and role of each, the overlapping functions, and the cross-purposes of organizations. There was certainly confusion among our membership and some ineffectiveness by the profession in meeting both professional and public issues. I do not believe there was much doubt that the organization of the profession in North America at that time was not structurally sound.

Reorganization is not a front-burner issue today. The profession and each actuarial organization are functioning reasonably well. Certainly cooperation and coordination between organizations have improved. Visible examples of success include oversight by the Council of Presidents, achievements of the Actuarial Education and Research Fund, and the work of joint committees. Highlighting joint committee efforts is the work of the Joint Committee on Pension Terminology, which made a major breakthrough this year in developing a common standard of pension terminology that could be endorsed by all actuarial organizations. The priorities of our profession have strengthened each organization within a cooperative interorganizational framework.

The profession seems to be working. But I would like to strike a note of caution. None of the fundamentals have changed. If the organization of the profession was structurally unsound a few years ago, it is still unsound. We are getting along and moving ahead, not because we are working within a sound system, but because we are willing to knock heads together and address the issues rather than our differences. We can continue in this mode for a while, but ultimately we must deal with the issue of the overall organization of our profession in North America. I believe this will evolve out of necessity rather than through the mechanism of merger and reorganization. Perhaps it will evolve through the Council of Presidents, or perhaps someone will design a superstructure that leaves our organizations more or less intact but brings more commonality into the critical functions of public interface, public issues, professional conduct, and public relations.

The actuarial profession is structured on the mathematics of uncertainty—and we do live in a world, and at a time, of grave uncertainties that require all our skills and judgments. We can be proud to be part of a profession which in its adverb form conveys the responsibility and integrity implied in the term “actuarially sound.” We must continue to warrant the high level of trust placed in us, and to meet the uncompromising expectations set for us in our continued pursuit of actuarial soundness. It is, after all, our mission.

