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ADDRESS OF THE PRESIDENT, R. STEPHEN RADCLIFFE

ACTUARIAL SCIENCE—OUR FOUNDATION AND OUR FUTURE

My year as President is drawing to a close, and I would like to reflect upon it and share some perspectives with you. It has been a terrific year, and I can't believe it went by so fast!

I have had the rare privilege to serve as President of the Society of Actuaries. I sincerely thank all of you for this opportunity. It was a very busy year, and at times I didn't think there were enough hours in the day. Carrying out my responsibilities would have been literally impossible without the support of John O'Connor and his extremely capable staff. And John, thank you for being a true friend during this past year. We made a good team.

We accomplished more than I had hoped this year, but much remains to be done. Most significantly, this was a year of new initiatives for the Society of Actuaries. We have witnessed expanding international horizons involving both educational and professional issues. Also, I've had some geography lessons along the way. I learned that events from around the globe are going to dramatically affect our thinking.

Expanding International Horizons

One highlight of this year has been the successful negotiations with Canada and Mexico under the NAFTA agreement. These negotiations will conclude next week in Mexico City. The actuarial profession is one of the first to arrange for international practice among the three countries. During these negotiations, we learned much about our neighbors, especially Mexico. As a result, we have established positive relations with the Mexican actuarial profession that will benefit each of us.

The highlight of my year was a trip to China, where the Society is doing critically important work. I traveled to Nankai University with Past President Harold Ingraham and Dr. Kailin Tuan, Professor Emeritus at

Temple University. We celebrated the graduation of the second class of actuarial students. It was an invaluable experience that expanded my perspectives globally. Over seven years ago, under the leadership of Harold and Dr. Tuan, we helped Nankai start an actuarial science program, and it has been tremendously successful. We also organized financial support so that the Nankai students could afford our exam fees. Their pass ratio has been over 80%, and it is almost twice the pass ratio for all students. We have nine new Associates from this program. Next year, we may have over 20.

From Nankai University, I went on to Beijing to visit Peoples University and Peking University. Harold and Dr. Tuan went south to visit Hunan, Fudan and Shanghai Universities. These represent the top universities in China. A few have already started actuarial programs, and the others are intensely interested in doing so. The Society now has new exam centers in Beijing, Tianjin, Changsha, and Shanghai, all in mainland China. Over 50 students will take exams in those centers this year. Our biggest foreign exam centers are in Hong Kong and Taipei, where over 500 students are taking exams. Clearly, the Society is important to the development of the actuarial profession in China. We are highly respected and much appreciated in that part of the world.

We are also starting an actuarial program with Moscow State University in Russia. This is a joint venture with the British Institute of Actuaries, and it parallels our activity in China. The needs of Russia and other Eastern European countries are comparable to China's. These countries face the tremendous task of converting to a free market economy. Actuaries can play a major role in this conversion. It is important that the Society continue its support of these developing actuarial programs.

International Federation of Actuarial Associations

I also traveled to London last November to meet other leaders of the actuarial profession from around the world. A new section of the International Actuarial Association (IAA) will probably emerge from that meeting. This spring, at a follow-up meeting in Orlando, we approved a proposal to form the International Federation of Actuarial Associations (IFAA), and that proposal was presented to the IAA Council three weeks ago. The Council asked that refinement to this proposal continue under an expanded steering group. SOA Board member Paul McCrossan and Past President Walt Rugland are members of this group. The purpose of

the IFAA is to unite the actuarial profession globally, a position we must achieve if we are to have an impact on the issues of the day.

Let me take a moment to briefly summarize the focus of the Federation. Specifically, the Federation would seek common ground for an international approach to:

(1) A code of conduct
(2) A discipline process
(3) Practice standards
(4) Basic requirements for actuarial education.

Forming this Federation won't be easy. Uniting organizations like the Society of Actuaries, which is the biggest at 16,000 members, with other organizations of less than 250 members, will be challenging. Furthermore, actuaries are fiercely independent. Finding common ground on these four issues will be difficult. Since all actuarial practice is local, the Federation must also accommodate the laws, customs and practices of actuaries in all regions of the world.

The Society of Actuaries is emerging as a global player, and it is a significant and challenging role to play. One step toward implementing our international agenda has been the establishment of a new ambassador program to connect us more effectively to our foreign members. Under this Board-approved program, Society members will serve as liaisons or ambassadors in a designated country. These ambassadors will then convey the needs and interests of members in that country to the SOA for consideration and action.

Commitment to Education

While it's important to recognize our foreign members as customers, we cannot overlook two other major customer groups. The first is people taking exams. For this group, we have emerged as an international organization, especially for Associate level exams. Out of nearly 300 exam centers, over 60 are in foreign countries.

Our second customer group consists of those who have passed exams and are now practicing professionals. For this group, we provide continuing education opportunities like this meeting, seminars and symposia, teleconferences, and other educational opportunities. Our publications are also primarily oriented toward the practicing professional. We try to offer products that appeal to all practicing professionals, but in reality those products and services often address U.S. topics. It has been particularly difficult to serve the Canadian segment of this customer group.

Part of the reason stems from the success of the Canadian Institute of Actuaries (CIA). The CIA has consistently provided high-quality meetings and member support, thus leaving limited opportunities for the SOA to do so. Frankly, we have not tried to serve practicing actuaries in other countries, because we believe such support should be primarily handled in the country of practice. The Society of Actuaries' resources are better utilized internationally on basic education, examination and research.

This international commitment to education, however, raises other issues. For example, because of income differential, particularly in Third World and developing countries, we must consider some accommodation of our examination fees. Under the current structure, our exams are simply not affordable in many parts of the world. The Committee on International Relations is studying this problem and will recommend a policy to the Board.

A bigger issue from an international perspective is the need to fundamentally re-examine the E&E structure. We need to find a way to separate the testing of fundamental actuarial principles from the testing of nation-specific material. Foreign students will not be interested in taking our exams that focus on U.S. and Canadian topics. Raising Associateship from 200 to 300 credits has complicated this issue, because the appeal of the ASA may now be limited for foreign students if the extra 100 credits contains material focused on the U.S. and Canadian systems.

We also have strong competition from the (British) Institute of Actuaries in exporting examinations to other countries. The Institute recently restructured its exam series to test only the fundamental core subjects an actuary needs. The continuing education portion of its certification addresses the nation-specific subjects, such as legislation, taxation, accounting rules, and so forth. This restructuring could ultimately make the Institute's examination process more attractive than ours internationally. We should also look at our exams with this in mind.

We have formed a task force to review our E&E structure from a fundamental perspective. Its charge is to define and articulate the distinctive competencies actuaries must have for the future. It will also review methods for developing and demonstrating those competencies.

Actuarial Science as Our Foundation

With the international scene as a backdrop, let me now address the main theme of my talk. It is also the theme of this meeting: "Actuarial

Science—Our Foundation Is Our Future." I'd like to quote from the program for this meeting:

> "The growth of financial security systems in our economy has provided many opportunities for the actuarial profession. Actuaries have been the scientists, architects and engineers who have helped develop, build and maintain these systems. Our intellectual core—actuarial science—has been the foundation. It is the foundation that is also our future. We must build on it through our education and research to provide practical solutions to issues involving the financial consequence of risk."

Our keynote speaker, Colin Powell, told us that the key to success in the future will be the ability to adapt to fundamental change. The worldwide changes taking place in economic and social structures are almost incomprehensible. We must address this changing global economy. We are up to the task. We have the smarts. We have the initiative, and now we need leadership to provide direction.

If I contributed only one thing during my year as President, I hope it was to guide our profession toward strengthening its foundation by advancing our science. This requires retooling existing paradigms and creating new ones. Most importantly, we must recognize that our past successes will not guarantee our future. As a matter of fact, the future is not clear. Job security will be a major issue for actuaries in the next few years, something new for us. Traditional actuarial work will shrink as industries currently employing actuaries mature and consolidate. What will provide a sound claim on the future? How do we, as a profession, develop the ideas and tools for the financial security systems of the next century?

Society of Actuaries Foundation

We are addressing this issue head on. The most important achievement for the Society this past year, and what I believe is a landmark development for the actuarial profession, is the formation of a Foundation for research and education. Its purpose is to advance actuarial science through innovative research and creative educational initiatives. It will enable the Society to form partnerships, collaborations and affiliations with other organizations to leverage available research dollars. It will also link the profession more closely with universities, an objective we have had for years. But most importantly, I believe this Foundation is also our future.

It will allow us to build professional foresight so that we can reach out and nurture relationships with other specialties. If our profession is to thrive, we must translate our knowledge into a form that other industries can understand. Only then will they realize what we have to offer.

I hope you will join me in supporting the development of the Society of Actuaries Foundation in whatever way you can.

Another significant achievement for the SOA was the establishment of Actuaries Online, our new electronic bulletin board. If you're not plugged in, I urge you to try this new computer network. This will be the most significant communications link for actuaries in the future. To be informed and remain competent, you'll need to be connected with the profession, both nationally and internationally. Don't be left behind.

Actuarial Principles

There is one objective that did not advance as far as I had hoped, that is, the adoption of actuarial principles. This process involves hard work and many political considerations. However, our combined effort on this with the Casualty Actuarial Society (CAS) did achieve important milestones. I'll be patient and wait another year for the adoption of our first actuarial principles. I want to offer special thanks to Arnold Dicke for his leadership on this project. Without his dogged persistence, we would not have accomplished as much as we did.

I know many of you think we don't need principles. Others think that principles don't exist. I believe, however, that without principles, we are without a science. And without a science, we are without a profession. I believe this very deeply. Sometimes I get discouraged and think others are right. Maybe we don't represent a science. Maybe we are only a bunch of bright people who work on insurance and employee benefit problems. Or maybe we are just pricey puzzle-solvers. I can't hold on to that thought too long, though, because there is no future in it.

Principles are just a method of documenting the paradigm. Perhaps the real problem is that we are trying to document the paradigm right in the middle of a paradigm shift. The old paradigm, which is now 150 years old, is based on single point estimates of risk using mean values. This structure worked quite well when the distribution of risk was clustered around the mean. However, this required an environment of low risk and predictable variables. Now the environment requires that the paradigm encompass broader ranges of risk and wider dispersion of risk variables. Instead of just studying the first moment of the distribution function, we

must now focus on the second and maybe the third moments. We have used crude approximations of the deviation from the mean by using scenario testing. We are evolving to more sophisticated models to describe risk, but much remains to be done. As an aside, many of our customers still want single point estimates of risk, even when that doesn't make sense. This makes the job of communicating the consequence of risk even more difficult.

Despite this chaotic environment and the changing paradigms, I still think it is worth the effort to document the paradigms. This defines the uniqueness of our work. It also provides the language and currency upon which to trade the ideas bubbling up in this crazy, changing world.

The Actuary

I would like to close with my view of the true character of the actuary. In many of my speeches and writings, I have characterized actuaries as the scientists, architects and engineers for financial security systems. This makes the definition of an actuary perfectly clear for me. We are scientists—applied scientists who use rigorous mathematical models to describe, analyze and quantify risk. We are architects—financial architects who design financial security systems to provide payment of benefits when needed. We are engineers—social engineers who can build and maintain financial security systems to withstand the stress of economic ups and downs. This is our unique heritage, and it is immensely valuable. Some would like to shed our stereotype as nerdy number-crunchers, and I agree with that objective. But we cannot forsake our core competencies in the process. We must remember that the value we have is the skill and ability to do analyses that no one else can. This will always be our primary strength.

I am left with a poignant memory from my international travels this year. Everywhere I went, I found the Society of Actuaries held in the highest regard. This reputation holds for the entire profession as well. It makes me proud to be an actuary.

Would it be too bold to say that we are one of the most respected professions in the world? We earned this respect by focusing on doing the right thing, as guided by the principles of our science. Yes, I believe actuarial science is the foundation of our future.

Conclusion

I'd like to conclude with some special thank you's—first, thanks to all the Board members and especially the Executive Committee for their work, energy and support to accomplish what we did this year. Finally, thanks to Jerry Semler, my boss at American United Life, and to Janie, my other boss at home, for giving me the time to do this job. Without the support I received from you, I couldn't have made it. And finally, thanks once again to you—the members—for this unique opportunity. It's been one terrific year—and I will never forget it.