



The Actuary

SOCIETY OF ACTUARIES 1996-97 YEAR IN REVIEW

The Actuary

The Newsletter of the
Society of Actuaries

Vol. 31, No. 10 • December 1997



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for this issue

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The Actuary is published monthly
(except July and August).

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Nonmember subscriptions: students, \$10; others, \$25. Send subscriptions to: Society of Actuaries, P.O. Box 95668, Chicago, IL 60694.



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Printed on recycled paper in the U.S.A.

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Membership Statistics Nov. 1, 1997

Membership, Nov. 1, 1996

Fellows	7,987
Associates	8,571
Total	16,558

Increase through:

Examination	57
*Election	26
Reinstatement.....	42

Decrease through:

Death	41
Withdrawal	231

Membership, Nov. 1, 1997

Fellows	8,222
Associates	8,189
Total	16,411

**Fellows of the Institute of Actuaries (England), the Faculty of Actuaries (Scotland), and the Institute of Actuaries of Australia may be elected Associate members of the Society of Actuaries upon review of their applications.*

January board meeting open to all members

Interested Society members are welcome to attend the SOA Board of Governors meeting Jan. 30, 1998, at the O'Hare Hilton, Chicago. Minutes of board meetings are available by request and on the SOA Web site (under General Libraries at www.soa.org). For more information, call the SOA office at 847/706-3500.

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PRESIDENTIAL ADDRESS

The once & future actuary



by David M. Holland
Address at the Annual Meeting
Oct. 27, 1997
Washington, D.C.

In his 1949 address as the first president of the Society of Actuaries, Edmund M. McConney asked: "What are actuaries?" We are still struggling with this question today. Perhaps this is the sign of an identity crisis.

Maybe it's a response to changing times. In keeping with the retrospective mentality ascribed to actuaries, to help figure out where we're going, we should first know where we've come from. Accordingly, let's focus on the "Once and Future Actuary": the one who was, the one who is, and the one who is to come.

The one who was ...

People have been interested in actuarial concepts for ages. Moses said in Psalms 90:10 that the length of our days is 70 years or 80 if we have the strength. In Ecclesiastes 9:11, Solomon observed that our fate is a function of "time and chance." This was long before Benjamin Gompertz stated in "On the value of Life Contingencies, &c." in 1825:

It is possible that death may be the consequence of two generally coexisting causes; the one chance, without previous disposition to death or deterioration; the other, a deterioration, or an increased inability to withstand destruction.

The concepts of risk transfer and insurance predate actuaries. The code of Hammurabi, circa 1750 B.C., discusses sharing the risk of robbery among businessmen. In the times of the Roman Caesars, there were death benefit funds (*Collegia funeratica*). Ulpian's Table, dating from around 220 A.D., was intended for valuing annuities relating to legacies.

In the 1530s, churches in England started collecting records of deaths as an early warning system for outbreaks of the bubonic plague. John Graunt, who was a merchant of buttons and needles, became fascinated with what could be learned by studying these records and in 1662 wrote *Natural and Political Observations Made upon the Bills of Mortality*. This work has been called the first example of the analysis of statistical data in modern times. It is noteworthy for actuaries, because it set the stage for the development of a mathematical model for mortality.

In 1693, Edmund Halley of comet fame published mortality tables based on the more complete information from records of the city of Breslau. *Actuarial Mathematics* (Society of Actuaries, 1986) says that some scholars date the beginning of actuarial science from this time.

While statistics were being collected and analyzed in Great Britain, much early correspondence on the origins of probability theory took place in Europe. In the 1600s, correspondence regarding questions on gambling between Pascal and Fermat led to the foundation of probability theory. Haberman and Sibbett's 10-volume *History of Actuarial Science* (William Pickering, London, 1995) contains copies of seminal papers on the founding of actuarial science. In discussing the scientific origins, they say:

Some of the pioneers in the 1700s and 1800s were eminent scientists and mathematicians who became

(continued on page 4)



Three "generations" at the Presidential Luncheon take an international view: (L-R) 1996-97 SOA President Holland; Duncan Ferguson, president of the United Kingdom's Institute of Actuaries; 1997-98 SOA President Anna M. Rappaport; and SOA President-Elect Howard J. Bolnick, SOA president in 1998-99.

Presidential address (continued)

interested in actuarial problems. Thus, we find Leonhard Euler, James and Daniel Bernoulli, Carl Friedrich Gauss, Abraham de Moivre, Benjamin Gompertz becoming involved in the science and making significant contributions.

The practical and theoretical lines merged in England in 1762 with James Dodson and the founding of the Society for Equitable Assurances on Lives and Survivorship. Dodson showed how premiums and reserves could be set up for permanent insurance, and the Equitable is said to be the first life insurance company founded on scientific principles.

Following Dodson's premature death, Edward Rowe Mores took over as the promoter of the Equitable. Mores picked the term "actuary" to refer to its chief administrative officer. The term had been used for clerks who recorded acts of the court, but it actually dates back to the time of Julius Caesar when the actuary recorded the acts of the Roman Senate. As Robert Mitchell said in *From Actuary to Actuary* (SOA, 1974):

Whatever qualifications Mores may have had in mind in choosing the designation, it is evident that mathematical ability was not one of them.

In fact, none of the Equitable's first four actuaries had the technical ability to function as actuaries in today's understanding of the designation; when the directors who made all the major decisions thought computations were needed, they had an outside mathematician make them.

Dr. Richard Price was the Equitable's consultant, and some consider his *Observations on Reversionary Payments* the first major work on actuarial science in general. Price managed to get a job for his nephew, William Morgan, as assistant actuary. Morgan eventually became the chief administrative officer with the title "actuary." It is said Morgan disliked the title of actuary. Nevertheless, his skills and mathematical abilities led to the title of actuary having its present-day meaning.

With this evolution of the modern actuary, is it any wonder that the general public is confused about this obscure but influential profession? At times, even actuaries have tunnel vision about what is a truly broad and multifaceted profession.

The one who is ...

Today is a great day to be an actuary. Actuaries are respected and rewarded for their intellectual capacity and

technical ability. Over the past several years, *The Jobs Rated Almanac* has twice ranked actuary the number-one profession.

You should also be proud to be a member of the Society of Actuaries, the largest actuarial organization in the world.

You have an outstanding staff at the SOA, and I very much want to say what a pleasure it has been working with them over the past year.

Implementing the SOA's mission

The actuary of today is often defined in terms of practice areas: investment, pensions, life, and health. In fact, the SOA organizational structure focuses on staff support by practice areas.

The SOA mission statement, however, states:

The Society of Actuaries is an educational, research, and professional organization dedicated to serving the public and Society members. Its mission is to advance actuarial knowledge and to enhance the ability of actuaries to provide expert advice and relevant solutions for financial, business, and societal problems involving uncertain future events.

Note that the SOA mission is defined in terms of actuaries; the SOA seeks to advance actuarial knowledge and enhance the abilities of actuaries regardless of current or future practice area.

As a professional organization, the SOA also has a responsibility for the conduct of its members. We have adopted a Code of Professional Conduct and By-Laws dealing with discipline. The SOA aspires to meet the following definition of "profession":

A calling requiring specialized knowledge and often long and intensive preparation including instruction in skills and methods as well as in the scientific, historical, or scholarly principles underlying such skills and methods, maintaining by force of organization or concerted opinion high standards of achievement and conduct, and committing its members to continued study and



John Holland performs Prokofiev's Violin Concerto no. 2 in G Minor at the Board of Governors Dinner. The son of President Holland played before the distinguished gathering at Washington's restored Union Station on Oct. 25.

to a kind of work which has for its prime purpose the rendering of a public service.

Today's changing environment

Even though today's actuarial profession is vigorous, "the times they are a-changing," to quote the singer/poet, Bob Dylan.

- Twenty years ago, the top two sources of income for life insurance companies were life and health premiums. Today, the leading sources of income are annuity considerations and investment income.
- Bancassurance is well established outside the United States. Banks are already in the insurance business in Canada and are pushing hard for insurance powers in the United States. Last year witnessed a record year number of mergers and acquisitions in the life insurance industry.
- Insurance companies in recent years have suffered a one-two punch from well-publicized company failures and market conduct problems.
- Managed care has resulted in a revolution in health care and health care financing.
- Pension legislation is more complex, and government policy is still favoring defined contribution plans over defined benefit plans.

Such changes must be frightening indeed, if the future is a simple extrapolation of the past. Thus, the SOA faces the same challenges as modern management: it must meet the needs of current members and their employers while simultaneously preparing to meet the changing needs of future actuaries. And it must have a vision.

The one who is to come ...

Proverbs 29:18 says, "Where there is no vision, the people perish"

The vision of the SOA is:

... for actuaries to be recognized as the leading professionals in the modeling and management of financial risk and contingent events.

Note that the SOA vision is not expressed in terms of practice areas. An actuary — one who is grounded in the principles of actuarial science



David and Faye Holland say farewell and thanks as Holland ends his presidency at the Presidential Luncheon on Oct. 28.

— should be able to master the time-, nation-, and practice-specific materials that comprise the science of compliance.

In focusing on the actuary of the future, we must think of actuaries as the heirs of Morgan, Price, Dodson, Halley, Graunt, and others. These people long predated the qualification requirements of the Institute of Actuaries or the Actuarial Society of America; yet the consulting mathematician, the model builders, the collectors and interpreters of data are our real spiritual ancestors.

When President McConney answered his rhetorical question, "What are actuaries?", he said:

The actuary in reality is a sound, practical rather than too theoretical mathematician applying simple principles of probabilities to human affairs in the unknown future.

This is not a bad definition for 1949, or even for 1997.

Challenges of a brave new world

A glimpse into the future shows that the general public will be facing increasing financial uncertainty. Who better than actuaries can design and manage programs that will provide for financial security in such uncertain times?

In addition to the many efforts underway by the SOA, we need to look to the contributions that are being made to the actuarial profession by actuaries all over the world. The Institute of Actuaries of Australia has developed the concept of "The Actuarial Control Cycle." The Control Cycle can be applied to traditional areas such as health, investments, life, and pensions, but a much wider range of problems may also be brought under the rubric of this paradigm. For its 150th anniversary celebration next year, the Institute of Actuaries has chosen as its theme, "Actuaries Make Financial Sense of the Future." This is a most appropriate description of the true talents of actuaries.

Actuaries are not mere mortals. They are wizards who can make uncertainty certain. Examples abound.

- You can't be certain how long you'll live, but actuaries can design plans to care for your loved ones in the event of untimely death and plans to provide income if you live long beyond your working lifetime.

(continued on page 6)

Did you know...

- The SOA's annual budget is over \$15 million.
- Of the SOA's membership in some 50 countries, U.S. members comprise 72% of the membership, 19% live in Canada, and 9% live outside Canada and the United States. Today there are more SOA members outside North America than there were total members when the SOA was founded in 1949.
- Seventy-five percent of our members belong to at least one of 13 special interest Sections. The largest are Investment, Pensions, Product Development, Financial Reporting, and Health.
- In a year, the SOA administers 57,000 examinations at more than 300 centers worldwide.
- The SOA produces almost 700 study notes and materials for the examinations.
- Some 550 volunteers serve in the SOA's education and examination process.
- Over 800 speakers are recruited annually for four major meetings serving 4,000 attendees.
- The SOA organizes about 25 seminars, university programs, and video conferences per year.
- The SOA manages some 85 research projects and experience studies involving 350 volunteers and a budget of almost \$2 million.
- The SOA publishes the *North American Actuarial Journal*, *The Actuary*, *The Future Actuary*, *Actuarial Mathematics*, the *Yearbook*, *Directory of Actuarial Memberships*, *ARCH*, numerous monographs, and newsletters for the 13 special interest Sections. This year, the *Record* became the first SOA publication available only on the SOA's Web site.
- The SOA staff consists of 85 people, including actuaries, Ph.D.s, and other association professionals.

Presidential Address (continued from page 5)

- You can't be certain whether or not you will get sick, but actuaries can design plans so that you will have medical care and even income if this happens.
- You can't be certain when or where a tornado, hurricane, or earthquake will strike, but actuaries can design programs to provide financial relief from such events.
- You can't be certain of the default risk on a single loan, but actuaries can transform a portfolio of such loans into a new type of security. Actuarial science is not smoke and mirrors. It is built on the solid foundations of mathematics, probability, statistics, and finance. And while actuaries cannot predict the future, we can build models to project the future assuming various actions.

As actuaries, we must never lose confidence in our ability to make a difference. The "Once and Future Actuary" is the

model builder and manager, the financial architect and engineer, who can lay the foundation for a secure financial future. It is ours to invent.

A cheer for actuaries

Finally, the future of the profession depends on the students we recruit. One thing we are doing to attract students is developing actuarial cheers that can be used at football and basketball games. Contributions of cheers are welcome, but for now, the SOA cheer selected is:

e to the x dx dy

Radical transcendental pi

Secant cosine tangent sine

3.14159...

2.71828...

Actuaries, actuaries, you are great!

Go-o-o-o-o ... actuaries!



President Holland passes the gavel to Anna M. Rappaport, the 1997-98 president, during the Presidential Luncheon on Oct. 28 at this year's annual meeting.

Annual treasurer's report



by Donna R. Claire
SOA Vice President/Secretary/Treasurer

The results for the 1997 fiscal year are in, and the year has been positive. In 1997, the SOA showed an increase in net assets, but a good portion of this was due to the increase in the market value of one category of assets, SPDRs (S&P Indexed Depository Receipts).

The SOA board approved the 1998 budget, which includes some increases in dues and fees. The board and various committees are monitoring expenses to ensure that the right amount of money is being spent on the right things, with an eye to reducing expenses where possible.

Details on the numbers

The results on the SOA's Unrestricted Fund Available for Operations on the management basis of accounting for the fiscal year ending July 31, 1997, were as follows:

	Amounts (In \$1000's)
Income	\$ 15,900
Operating Expenses	15,157
Change in Net Assets	\$ 743
Net Assets as of July 31, 1997	\$ 6,431

Of the positive change in net assets of \$743,000, \$527,000 arose from the gains in the investment portfolio. Much of this was due to the increased market values of the SPDRs. Since market

values (especially those linked to equity markets) are quite volatile, some of these "paper gains" could just as quickly turn into losses.

The net assets of \$6,431,000 is about 40% of the annualized expenses. In 1998, the target net assets ratio will be reexamined by the Finance Committee, which expects to recommend a reasonable net assets ratio for the future.

Not included in the Unrestricted Fund Available for Operations' net assets is the \$1,193,000 of net assets of the special interest Sections and other restricted funds. These moneys benefit the membership but are not considered part of the SOA's operating budget.

The complete GAAP financial statements and the report of the independent auditors, Selden, Fox, and Associates, Ltd., will be published in the *TSA Reports*. These have been reviewed by the Finance and Audit Committees and approved by the SOA Board of Governors. The SOA management financial statements differ from the GAAP statements; the SOA management accounts for research projects on an "as committed" basis rather than the "paid or accrued" GAAP basis, so the management statements are more conservative than the GAAP statements. The GAAP basis statements also consider the special interest Sections' net assets as part of unrestricted net assets.

More details

For financial management and budget purposes, the operations of the SOA are broken down into four service segments:

1. Basic Education (examinations)
2. Continuing Education (meetings and seminars)
3. Research
4. Member Services, which also includes general overhead and other activities

There is a revenue-sharing plan, and each area is expected to stand on its own after the revenue sharing.

Research is credited with 25% of the dues and 10% of the basic education income. The Member Services area receives 75% of the dues and 5% of all education income. Of the increase in net assets in 1997, some came from the Basic Education area, some from Continuing Education, and some from Member Services, with Research reporting a small loss. The Finance Committee and the board will continue to monitor the contributions to net assets from the various areas.

Special programs

On occasion, the SOA board votes to fund special programs or initiatives. In 1997, the board voted to establish a technology fund from a \$200,000 profit generated from the sale of one-third of the SPDRs in the SOA portfolio (see "Picking up the pace with technology," page 14.)

In addition, the board voted to fund a satellite office in Hong Kong to assist in the educational and professional needs of students and actuaries in Asia (see, "Circling the globe" page 10).

The future

The five-year plan beginning in 1998 projects some losses due in part to the extensive revamping of the education and examination system. It also recognizes that we cannot count on the continued growth in the number of students taking exams. To offset the expected losses, certain dues and fees will be increased. For 1998, dues for Fellows and Associates who became Associates prior to 1995 will increase by \$10 and the dues for Associates who become Associates after 1994 will increase by \$5. Also, the amount waived for retired members between the ages of 55 and 69 has been changed to the amount equal to the current year's dues less \$50.

In closing, the SOA board is working to assure that SOA dollars are wisely managed for the near term and the years ahead.

U.S. capital hosts a magical annual meeting

The grandeur of Washington, D.C., and Arthurian legend set a powerful tone for the 1997 annual meeting. Taking as its theme “The Once & Future Actuary,” the meeting looked to the history, present, and future of the profession. Keynote speaker Robert Reich, former U.S. Secretary of Labor, launched the meeting’s general session on Oct. 27. Following Reich was a dramatic presentation by King Arthur’s wizard, Merlin the Magician, who reminded actuaries of their forerunners’ struggles and successes and urged the audience to “lead us to tomorrow.” More than 1,500 participants attended three days of continuing education sessions along with special events, including a tour of the FBI offices.



Robert Reich (left), former U.S. Secretary of Labor, talks with reporters, members, and others after his speech, “The New Social Contract,” in the general session. (L-R) Journalists Dennis Doris and Martha Gold finish their interviews while Robert Myers, former chief actuary of the U.S. Social Security Administration, looks on. In the background is Ronald Gebhardtbauer, senior pension fellow, American Academy of Actuaries.



Richard Ullman asks a question after Reich’s speech.



Merlin the Magician reminds the general session audience that the predecessors of today’s actuaries “challenged conventional thinking. They drew from the past and present to create a better future — just as you do today.”



The Joint Armed Services Color Guard opens the general session of the SOA’s 48th annual meeting on Oct. 27.



SOA President Holland hosts "Clive Donner from a London actuarial firm" — actor Richard Henzel who also played Merlin. Here the actor performs a parody written by Holland, "The Modern Actuary-General," based on Gilbert & Sullivan's famous "Modern Major General" tune. Holland's version included the stanza:

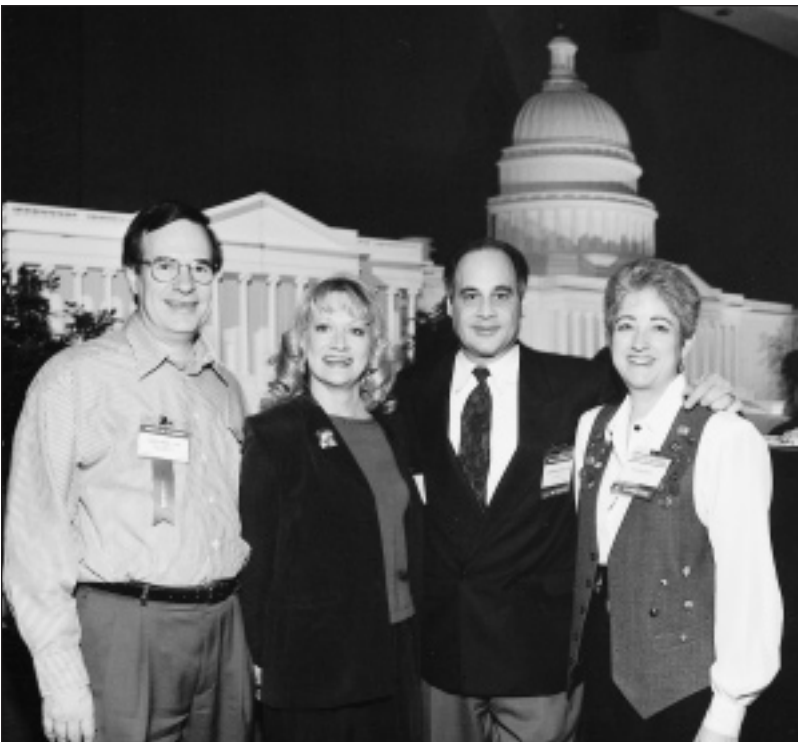
When I have learnt what progress has been made in modern E.D.P.;
When I know more statistics than a novice in a nunnery;
In short, when I've a smattering of basic Life Contingencies
You'll say there's never been a better actuarial V.P.



The members' reception on Oct. 27 hosted 1,600 people in a setting of American symbols, primarily Washington, D.C., monuments.



Shown at the members' reception are (L-R) Curtis Huntington, executive director, Actuarial Education and Research Fund; Linden Cole, SOA managing director; and Harry Panjer, president, Canadian Institute of Actuaries.



Above left, a model of the U.S. Capitol sets the stage for (L-R) Bruce and Jane Moore; 1997-98 SOA President-Elect Howard Bolnick; and his wife, Kay. Above right, the flag serves as a backdrop for (L-R) Sam Gutterman, SOA 1996-97 immediate past president, actively involved in the Society's international outreach; Avi Bar-Or, president, Israel Association of Actuaries; Allan Kaufman, president, American Association of Actuaries; and Christopher Daykin, past president, Institute of Actuaries.



1996-97 year in review

Striding toward the next century

The Society of Actuaries has embarked on several major initiatives to assure that actuarial science and actuaries will be highly valued in the next century. Often called the “redesign of the actuary,” this process has at its center the development of a new educational and examination system. In 1996-97, this major project continued while other forward-looking programs, also focused on the changing world for actuaries, went into effect or were approved for pending action.

President Holland leads the way

In his major addresses and articles in 1996-97, SOA President David M. Holland focused on this transition from the old world to the new. He looked to the near and the distant past for examples to help actuaries think of new ways in which their participation could add value to the financial security systems of business and society.

His work during the previous year as 1995-96 president-elect centered on developing the SOA Mission and Vision Statement. As he assumed the presidency, Holland reminded the audience at the 1996 annual meeting, “Actuaries cannot assume that their world will not change. ... The SOA vision ... seeks to broaden our role from advisers and problem solvers to modelers and managers.”

Throughout 1997, Holland urged actuaries to think more broadly about how their abilities can be applied in a world growing more conscious of managing risks. In his speech at this year’s annual meeting, Holland noted, “The consulting mathematician, the model builders, the collectors and interpreters of data are our real spiritual ancestors. ... Who better than actuaries can design and manage programs that will provide for financial security in uncertain times?”

Circling the globe

Globalization of business and other sectors continues, and the Society responded in several ways over the past year.

To help meet the needs of the 1,420 SOA members who reside outside North America, the SOA Ambassadors in more than 25 countries provide an important resource to local members and a link between the SOA and actuarial organizations around the world.

In addition, this year the SOA launched a new Asia Committee. Its charge is to promote the actuarial profession in Asia and strengthen support and services to Asia’s growing SOA membership, currently about 600. The SOA board and the committee’s leadership, including Chairperson Yuan Chang, see both a need and an opportunity for the Society in China’s position as a potential economic powerhouse.



Among the 292 new Fellows admitted this year were, above left, Lawrence and Eleanor Golden, husband and wife. Here, SOA President David M. Holland (center) presents their certificates as they “graduate” from the Fellowship Admissions Course. Above right, Charles Allegro and daughter Hailey get ready to spend more time together now that Dad’s examinations are over.

Because of the increased interest in actuarial science in the Pacific Rim, the SOA opened a satellite office in Hong Kong in November 1997. A full-time SOA staff member housed in the MetLife building will help the Asia Committee meet its charge to promote actuarial education, the development of research, and the profession in general. An article in the November 1997 *Actuary* gives more details of the functions of this satellite office.

An important milestone in the SOA's work in Asia was celebrated this year when the actuarial science program at Nankai University, Tianjin, marked its 10th anniversary. The Society has provided about 30 North American actuaries as teachers of month-long courses and has underwritten some book and examination expenses. An SOA delegation led by President Holland visited Nankai for the anniversary celebration and the signing of a three-year extension of the agreement pledging the SOA's continued support. The delegation then visited four other cities — Beijing, Shanghai, Taipei, and Hong Kong — to enhance the SOA's visibility in Asia. An article in the September 1997 issue of *Actuary* outlines this trip.

The correspondent program, begun in 1995, now has 41 actuaries from 15 countries enrolled. This program offers correspondent status to actuaries outside North America who are not SOA members. Correspondents receive Society publications and are invited to participate in the SOA's meetings, seminars, and other activities.

The Society continues to offer sessions focusing on international issues at its spring and annual meetings. Many sessions were suggested by the International Section, which now has 1,700 members. Some topics included health care in Latin America, job opportunities outside North America, insurance and pension developments in Indonesia, financial reporting of multinational companies, and the entrance of banks into the insurance industry around the world.



1997-98 SOA President Anna M. Rappaport, third from right, conducts her first SOA board meeting on Oct. 30 after her induction during the annual meeting. At the table with her are (L-R) Jack Turnquist, David Becker (blocked), Bradley Smith, SOA Executive Director John O'Connor, David Holland, Howard Bolnick, and Donna Claire.

E&E redesign goes forward

Since its approval in 1996, the redesign of the SOA's education and examination system has moved forward on schedule toward the January 2000 implementation deadline. The new system will emphasize the application of mathematical and other knowledge to the business problems actuaries face. It will incorporate these business topics at the earliest stages of the educational process.

Reporting to the Board Task Force on Education, the design team, led by Jeff Beckley, is charged with establishing the course learning objectives, defining study materials needed, and creating sample examinations. Its work is being carried out through working groups for each of the Basic and Advanced Courses. The main components in the new design are:

- Basic Education — Courses 1-6, which are actuarial in nature and test mathematical and business knowledge, leading to the Associate designation. Courses 1 and 2 will continue to be jointly administered with the Casualty Actuarial Society.
- Advanced Education — Course 7, which is an applied modeling seminar, and Course 8, which is a collection of exams for seven individual practice areas.
- Professional Development (PD) — An individual study plan to achieve 50 hours of SOA-approved

educational activities completed in a two-year period.

To date, working groups have devoted significant effort to Courses 1-8. A final report on Course 1 has been released to academics for their use in planning their course work. Learning objectives have been drafted for Courses 2-8, and working groups are establishing syllabus content and beginning the development of sample examinations. A Course 8 for each practice area is being developed with input from written surveys and focus groups conducted with senior members in the practice area. Specifics of the PD requirement are being developed by the new Task Force on Professional Development, headed by William Cutlip and reporting to the Board Task Force on Education.

After successful completion of Courses 1-8 and the PD requirement, the final step to obtain Fellowship is the Fellowship Admissions Course (FAC). The FAC is a two-and-a-half-day course on ethics and professionalism. This year, the board approved a task force to develop a professionalism course requirement for ASA candidates. The new requirement would take effect with the Year 2000 exams.

Stepping up organizational changes

This year, the Society saw dramatic moves in organizational issues and events. The board:

(continued on page 12)

1996-97 year in review (continued from page 11)

- Passed a resolution separating governance and management of the Society
- Hired an outside consultant to work with the board in examining the SOA's organization
- Began a process to reevaluate SOA programs, their costs, their benefits, and the factors needed for success
- Began conducting research into the needs of actuarial "customers" — employers and clients
- Embarked on strategic planning to implement the SOA's mission and vision

To improve the governance and management of the SOA, the board also voted this year to create an Operations Committee to carry out board-approved activities. The board also eliminated the Executive Committee. Under this new structure, the board will primarily focus on the Society's overall strategic direction, while the Operations Committee will be responsible for management and will place more responsibility on the SOA staff. A partial staff reorganization has created the role of Staff Fellow, who will be accountable for the activities of an SOA practice area. This completes an earlier process that directed much management of the SOA along practice area lines. The Operations Committee will be chaired by the SOA president, with the president-elect serving as vice chair, and may also consist of vice presidents heading the practice areas. However, the board's resolution allows members who are not vice presidents to serve on the Operations Committee.

An outside consulting firm experienced in examining professional associations this year analyzed the Society's volunteer and staff structure. Based on in-depth interviews with key SOA board and staff members, the firm's report was very positive about the SOA as an organization and its capability to grow and thrive while serving its membership. In particular, it commended the SOA's current model of volunteers determining direction while staff has major responsibility for implementing the directives.

The Strategic Planning Committee, headed by President-Elect Anna Rappaport, produced a new strategic plan for the Society. The committee researched how best to implement the mission and vision statement and conducted a major effort to create a plan that builds on the 10 strategic directives set in 1996. In addition, SOA vice presidents and other leaders representing the practice areas formed strategic plans for the individual practice areas as part of the planning process.



This year's SOA exhibit at the Annual Meeting included demonstrations of the SOA's Web site and a kiosk where members could check their Directory listings. Shown at the Web booth are Peggy Grillot (left), SOA online systems manager, talking with Renée Saunders of the American Academy of Actuaries staff. Debbie Jay, SOA online development coordinator, is in the background.

The Strategic Planning Committee conducted two research initiatives to further understanding of actuarial customers. A focus group consisting of senior members of 13 major consulting firms and a written survey of 406 small consulting firms were conducted. The results offer a first view of consultants' perceptions of what actuaries and the Society need to do to help actuaries meet clients' needs and thereby compete more successfully in the marketplace. Work on this customer research project continues, with future

plans including surveying insurance companies and those working in nontraditional jobs.

Also this year, discussions arose between the SOA and the Casualty Actuarial Society (CAS) about some CAS leaders' public statements of belief that the SOA intends to "take over" the CAS. The SOA board has not expressed this interest, and candid discussions by current SOA and CAS leaders have resolved the misunderstanding.

Research efforts start at home

In addition to conducting major research projects, the Society this year began a review and evaluation of its overall research project effort. Immediate Past President Sam Gutterman initiated the Task Force on Research Effectiveness to begin an assessment of the SOA's recent research project initiatives. The task force's charge was to design and conduct a comprehensive review and evaluation of the effectiveness of SOA research project activity, as distinct from the ongoing experience studies recently addressed by a different task force. Norman Crowder, SOA vice president for research, chairs the task force, which consists of six members of the SOA board. Major activities designed to obtain input were a comprehensive survey initiated in June, peer review of selected recent research project activities, and sessions at the annual Actuarial Research Conference and the SOA annual meeting.

The Society cosponsored and assisted with the 32nd Actuarial Research Conference, Aug. 6-8, at the University of Calgary, Alberta. Nearly 60 participants from Canada, China, Russia, the United Kingdom, and the United States attended. The formal program included three introductory addresses, 28 academic presentations, and three non-academic presentations, including a luncheon address by SOA President-Elect Anna Rappaport on "The SOA: Issues and Challenges." She also chaired a focus group to discuss how the SOA can better serve the needs of academic members.

SOA research this year included several examinations of the managed care environment:

- The “Definition of Managed Care Effectiveness” project seeks to find a common definition of effectiveness for managed care entities considering the perspectives of all stakeholders — health plans, health providers, patients, and others. Sessions at the spring and annual meetings presented partial drafts of the eventual SOA Monograph and a grid showing the numerous stakeholders and their widely differing perspectives. Howard Bolnick, 1997-98 president-elect, has oversight responsibility for this project.
- Two projects of the Committee on Health Benefits Systems Research aim to put actuaries at the forefront of the health plan measurement debate:
 1. A \$30,000 grant was awarded to the State of Utah to study the reliability of HEDIS 3.0 (Health Plan Employer Data & Information Set), the data collection and reporting standard advocated by the National Committee for Quality Assurance.
 2. A \$30,000 grant was given to the University of Michigan to study the usefulness of HEDIS measures to employees trying to choose a health plan.

Another important research project released this year was the “Pension Plan Turnover Rate Table Construction Final Report” by Steve Kopp of the University of Western Ontario. This is the first study of employee turnover and retirement patterns sponsored by the SOA. In addition to providing pension actuaries with much-needed data on these decrement patterns, this report breaks new ground with a multivariate analysis on a broad range of explanatory variables.

Ongoing research efforts include about 85 different activities in process in the six major research areas: knowledge extension, finance and investment, health benefit systems, life insurance, retirement systems, and special.

New publications hit the street

Volume 1, Number 1 of the *North American Actuarial Journal (NAAJ)*, a quarterly scientific publication replacing the annual *Transactions*, was published in January 1997. The first year’s issues illustrated the journal’s intent to reach beyond the actuarial audience to other professionals in business, academia, and government. The July issue was devoted to modeling, a topic of great interest in the financial community. Other issues displayed an extensive range of subjects, including interest rate risk management, analyzing data from continuing care retirement communities, and even the mortality of professional basketball players.

The second edition of *Actuarial Mathematics*, published mid-year, updated this important textbook to address some new ways of working in actuarial science. The book recognizes new products and approaches, reaches out to an international audience, and requires in its exercises the use of current information technology.

The SOA Monograph program, begun in 1996, continued this year with the publication of *Group Medical*

Insurance Large Claims Database Collection and Analysis, the results of a research project cofunded by the Health Section and the SOA. The project assembled and analyzed the first database of detailed information for a vast number of claims of \$25,000 or more. Claims came from 26 insurers for 1991 and 1992, totaled more than \$10 billion, and represented about 171,000 claimants. The 295-page Monograph is the largest of the five published to date and is available for \$35 from the SOA Books Department.

Several SOA communications received awards in 1997. In its inaugural year, the *NAAJ* earned a Certificate of Achievement in the American Society of Association Executives Gold Circle Awards, earning second place among the 19 other national peer-reviewed journals entered. Also in 1996-97, honors from communications organizations were awarded to: SOA President Holland for his speech, “Back to the Future,” from the 1996 annual meeting; *The Actuary*; the SOA Web site; the SOA Foundation’s program, “On the edge of change: Putting Social Security back

(continued on page 14)



The International Section reception on Oct. 28 during the annual meeting drew SOA members, honored visitors, and SOA staff from around the globe. Among those attending were (L-R) Sam Gutterman, 1996-97 SOA immediate past president; C.F. Yam, president of the Actuarial Society of Hong Kong; Patrick Cichy, SOA Asian services coordinator, assigned to the SOA’s new Hong Kong office; Lela Long, the SOA’s international outreach coordinator; William Bugg, 1996-97 International Section Council chairperson and a member of the SOA’s Committee on International Issues; and Linden Cole, SOA managing director, whose responsibilities include the SOA’s international activities.

1996-97 year in review (continued from page 13)

in balance"; and the Actuarial Circles program, a grassroots initiative to encourage actuaries to become involved with community groups and the media in their area.

Picking up the pace with technology

Expansion of the Society's information technology continued this year in support of members' needs and interests.

The SOA Web site, www.soa.org, already housing more than 1,000 files,

libraries, links to more than 130 sites, and e-mail links to all SOA staff members.

At the September 1997 SOA board meeting, the board voted to create a technology innovation fund of \$200,000 to further develop technology to enhance service to SOA members and the public. Among proposed uses are improvements to the SOA Web site, upgrading SOA hardware, and expansion of technology such as CD-ROMs for continuing education.

For the second year, the SOA produced CD-ROMs for continuing education use. Following the three issued in 1996, two new CD-ROMs were created in 1997. Both "Product Development," focused on product management issues, and "Hybrid Plans," discussing nontraditional pension plans, are interactive, and

"Hybrid Plans" can be used for continuing education credit by Enrolled Actuaries.

In step with other organizations

In keeping with its mission and vision, the SOA continued building bridges to other actuarial organizations. However, 1997 was a particularly active year for reaching out to other professions, spheres of activity, and nations.

Preparations began early in 1997 for a special seminar on Oct. 30 in Washington, D.C., concerning social security in the NAFTA countries. The seminar, "Impact of Mortality Improvement on Social Security: Canada, Mexico, and the United States," assembled a multidisciplinary group of 80 panelists and participants to discuss forecasting methodologies,

factors affecting mortality change, and mortality assumptions for each of the three countries. The seminar, co-funded by the Society of Actuaries Foundation, brought economists, demographers, medical researchers, and policy analysts together with actuaries and involved each country's social security administration. Participants completed a questionnaire during the last session of the seminar, and the results will be analyzed and used as a guide to set assumptions to test the impact of mortality improvement and long-range financial status of social security systems.

Results from the social security seminar will help strengthen the Society's relationship with another organization, the American Association for the Advancement of Science (AAAS), in which the Society was accepted as an affiliate last year. The social security project and its results will be presented in a session at the February 1998 annual meeting of the AAAS, which marks the 150th anniversary of the AAAS. For the first time, actuarial science will be represented in a formal way at this gathering of important scientific researchers.

As part of the SOA's goal to increase actuaries' roles in the broader finance sector, work was completed in 1997 for a conference, "Integrated Approaches to Risk Measurement in



Women are increasingly taking leadership roles in actuarial organizations. Gathering at the Board of Governors dinner on Oct. 25 are (L-R) Mavis Walters, president, Casualty Actuarial Society; Daisy McFarlane-Coke, president, Caribbean Actuarial Association; Anna Rappaport, 1997-98 SOA president; and Rosa Maria Farrell, president, Mexican Organization of Consulting Actuaries.

added several new features in 1997. Discussion forums were launched to prepare for the discontinuation of Actuaries Online, the interactive service for members on CompuServe, in 1998. An international calendar of educational events now lists important seminars and conferences the world over. And for the first time, members were invited to an online dialogue with candidates for the SOA presidency. To raise visibility for the profession, two sections were begun for visitors outside the profession — the News Room, in which the news media can access recent SOA news releases; and the page entitled "How Do I Become an Actuary?" for students and others looking for career information. The Web site now has more than 350 files

Halmstad Prize winner announced

Greg Taylor, Ph.D., has been named winner of the 1997 Halmstad Prize, administered by the Actuarial Education and Research Fund.

The SOA member was honored for his paper "An Equilibrium Model of Insurance Pricing and Capitalization." It was published in the September 1995 issue of *The Journal of Risk and Insurance*.



*The President's Awards program, recognizes those chosen by the SOA president for their contributions to the profession. Left, SOA President Holland presents an award to Robert Batten, who retired in 1997 from his position as professor of actuarial science, Georgia State University, after 30 years of teaching. Also receiving awards this year were: Jack Moorhead, 1969-70 SOA president and author of *Our Yesterdays*, a history of the profession; Christopher Daykin, past president of the Institute of Actuaries and immediate past chair of the International Forum of Actuarial Associations; and Linden Cole, SOA managing director, who has announced his retirement in 1998.*

the Financial Services Industry," held Dec. 8-9 in Atlanta. The multidisciplinary group of speakers included academics and practitioners from insurance companies, investment and commercial banks, and firms providing risk management services to institutions.

As a member of the International Forum of Actuarial Associations (IFAA), a section of the International Association of Actuaries, the Society was represented in the IFAA's successful effort to gain an actuarial voice in developing proposed worldwide accounting rules for insurance companies. The International Accounting Standards Committee (IASC), which developed proposed pension accounting rules without actuaries' input initially, turned its efforts to insurance companies this year.

An IFAA committee, headed by the 1997-98 Penultimate Past President Sam Gutterman, will help develop the proposed rules with the IASC. The committee represents both life and property-casualty companies. In addition, the IFAA is working with the IASC to alter its pension rule proposal.

Strengthening its relationships with other actuarial organizations, the SOA continued work on several joint projects, including:

- Joint AAA/SOA Health Financial Issues Committee, which completed its task of defining needs for research projects and public interface actions related to the various financial issues and capacity concerns encountered by risk-bearing health organizations
- Forecast 2000, the joint public relations initiative of the six organizations representing North American actuaries. Administered by the American Academy of Actuaries in Washington, D.C., Forecast 2000's goal is to gain more visibility for the actuarial profession among public policy makers, the media and the public. A June 1997 article in *The Actuary* gives an overview of this eight-year-old program
- The first CAS/SOA Actuarial Career Information Fair (see page 16)

Key staff changes ahead

Linden N. Cole, the SOA's managing director, has announced he will retire in October 1998. He joined the SOA staff in 1980 and currently serves as managing director, with responsibilities including the SOA's international activities and liaison work with other organizations. Cole joined the SOA from his former position as second vice president and actuary, Mutual Benefit Life, Newark, N.J. He attained Fellowship in 1963, and before joining the SOA staff, he served on various Education and Examination Committees. He graduated cum laude in mathematics from Harvard University.



David Holland, right, receives a replica of his presidential portrait from SOA Immediate Past President Sam Gutterman at the annual meeting while SOA Executive Director John O'Connor looks on.

- Joint CAS/SOA Statement of Actuarial Principles, which seeks to articulate the basic principles that are part of all actuarial work
- AAA/SOA Health Benefit Systems Communications Committee, which continued its work to promote awareness of health issues

1st CAS/SOA career fair draws crowds



College and high school math teachers and career counselors in the Washington, D.C., area were invited to bring a select number of interested students to the first Actuarial Career Information Fair hosted by the SOA Career Encouragement and CAS/SOA Minority Recruiting Committees. Linda Heacox, SOA public relations specialist (right), greets two students at the registration desk.



The career information fair, held Oct. 27 during the annual meeting, drew 143 students and 33 educators. Audience members at the opening session heard Sam Gutterman, SOA immediate past president, give an overview of the profession.



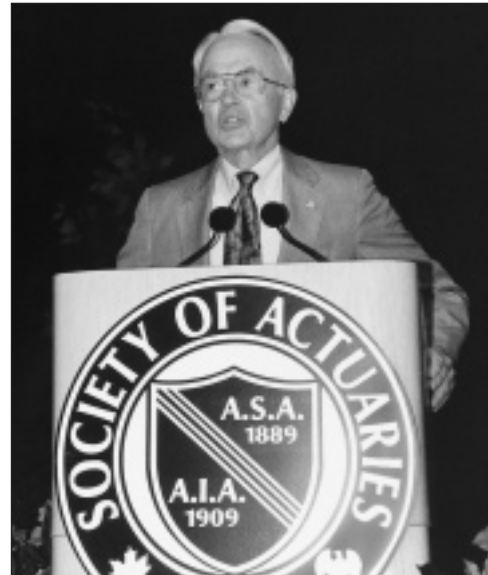
Ollie Sherman (standing, right), of Tillinghast-Towers Perrin, conducts "Interactive Auto Rating," a session in which students played a game that let them determine rates for car insurance. Three breakout sessions were offered to give students and educators greater insights into the actuarial profession.



Susan Martz, SOA minority scholarship coordinator, and Stuart Klugman, actuarial science professor at Drake University, talk with students in the fair's exhibit space. A total of 42 companies helped sponsor the career information fair, with 19 companies and organizations hosting career fair booths.

Eminent speakers address spring meetings

Continuing Education attendance			
Spring meetings:			
May 21-23	Palm Desert, Calif.	1,200	
June 18-20	Montreal	783	
Annual meeting:			
Oct. 26-29	Washington, D.C.	1,539	
Valuation Actuary Symposium			
Sept. 15-16	Atlanta	746	
18 seminars (including one teleconference)		1,138	

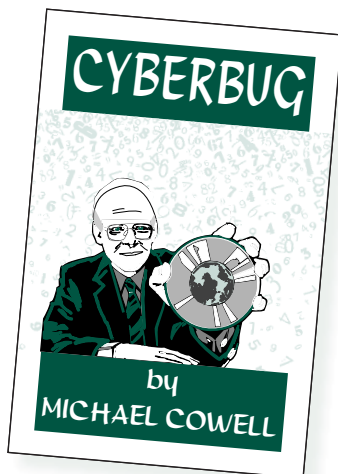


It's the topic for the next century: James C. Hickman presents the keynote address, "The Old Age Crisis," on May 22 at the general session of the Palm Desert (Calif.) spring meeting, which focused on health and pension issues.

Keynoting the Montreal spring meeting is Michael McKenzie, former Canadian Superintendent of Financial Institutions. His presentation, "Overview of U.S. and Canadian Financial Security Systems," on June 19 began the two-day program devoted to financial reporting, investment, and product development.



Michael J. Cowell presented the ideas behind his novella, Cyberbug, at the Palm Desert general luncheon on May 22. The story follows a 21st-century actuary as he copes with technology, globalization, and other dramatic changes (see The Actuary, June 1997).



Journalist Rod McQueen (left) and SOA President Holland listen to audience questions after McQueen's speech at the Montreal spring meeting's general luncheon. McQueen, a senior writer for The Financial Post in Canada, discussed his book on the demise of insurance company Confederation Life.

Foundation: \$1 million, and what it can do

Landmark achievements were made by the three-year-old Society of Actuaries Foundation in 1996-97.

Heading the list was reaching the "Preparing for Tomorrow's Possibilities: The Leadership Investment" campaign goal of \$1 million in individual contributions by the end of 1997. Ian Rolland, campaign chair, announced at the Oct. 26 Foundation dinner that the goal had been met three months early. He credited the 359 "charter investors" who pledged \$1,000 or more in the first three years, ensuring their names would always be on the list of those who shared the Foundation's vision of actuaries using their professional skills for society's good.

Other significant accomplishments included:

- Funding of the Advancing Student Achievement grants program, which provides grants to six programs at 10 elementary schools to establish math tutoring programs with local actuaries.
- Cosponsoring the symposium "Genetic Testing: Implications for Insurance" with the University of Pennsylvania Center for Bioethics and MetLife, which hosted the event in its New York offices. This unprecedented gathering of stakeholders in a new medical frontier brought leading geneticists, medical directors, bioethicists, lawyers, regulators, actuaries, and underwriters together to begin discussing the emerging issues surrounding genetic testing. A publication in early 1998 will summarize 11 presentations heard by the 130 participants.
- Development of "Time for a Medicare checkup," the second in the Foundation's series of "On the edge of change" consumer education brochures. "Time for a Medicare checkup" explains how Medicare is financed, why it

is facing problems, and what some approaches are to making long-term changes. The Foundation's partner in this effort is the Health Care Financial Management Association, which will use the brochures in its "Making Medicare Easier" educational events across the United States.

- Creation of its first donor-advised fund, with Milliman & Robertson as donor helping recommend how the fund can be used to create future demand for actuarial services through educating students on the roles of actuaries.

In recognition of its broadening scope in using actuarial skills to help solve the financial and economic problems of society, the SOA Foundation will change its name to The Actuarial Foundation on Jan. 1, 1998. The Actuarial Education and Research Fund (AERF) voted to participate in a five-year trial period of affiliation with the Foundation, with the intention to merge with the Foundation after this trial period. AERF will continue to issue grants for actuarial research during this period.



The SOA Foundation was among the sponsors of a multidisciplinary seminar discussing mortality projections and their impact on the NAFTA countries' social security systems. Opening the Oct. 30 seminar, "Impact of Mortality Improvement on Social Security: Canada, the United States, and Mexico" are (L-R) 1997-98 SOA President Anna Rappaport, seminar organizer Michael Sze, and researcher Shripad Tuljapurkar, Ph.D. Adding to the international perspective was Christopher Daykin, government actuary, the United Kingdom. (See "In step with other organizations," page 14.)





Above: At the Oct. 26 Foundation dinner, Cecil Bykerk (left), new Foundation trustees chair, congratulates Ian Rolland, chair of the Foundation's "Leadership Investment" campaign, on reaching the \$1-million goal. Below: Toasting the fund-raising success are (L-R) former U.S. Secretary of Labor Robert Reich, Walt Rugland, SOAF Executive Director John O'Connor, and Millie Rugland.



Michelle Orwing of the Pencil Foundation discusses Advancing Student Achievement, the Foundation-supported math tutoring program, at the Foundation's Math Mentoring Forum on Oct. 26.



Above, a game at the Foundation dinner illustrated a teaching technique used by actuary Mark Newton (below) in his volunteer role as "Mr. Financial Wizard," making math fun and accessible for students. Good sports playing the game are (L-R above) William Cutlip, Sam Gutterman, Ed Bales, and Sue Collins. Below, Newton talks about his work at a Boston inner-city school.

