

The Actuary

Going global

Proposed IAA/IFAA restructuring recognizes new realities

by Howard Bolnick
1997-98 SOA President-Elect

The technological, globalized world we live in was barely imaginable when the organization now called the International Association of Actuaries (IAA) was launched 103 years ago. However, that world was a reality when the International Forum of Actuarial Associations (IFAA) was formed as a section of the IAA in 1995.

As the quadrennial IAA congress convenes this month in Birmingham, England, IAA members will vote on a historic measure. They will consider transforming the IAA into the structure of the IFAA to maintain and work to increase the profession's influence in an increasingly globalized world.

At the IAA congress, (the International Congress of Actuaries, or ICA) June 7-12, IAA members will consider whether to convert the structure of the IAA, now an association of individual actuaries, to that of the IFAA, an association of actuarial organizations. (The IFAA and its 50-member governing body, the IFAA Committee, would be dissolved.) The proposal, its fate aside, offers a model for an international actuarial organization as the 21st century approaches.

The restructured IAA would consist of about 40 member organizations and would continue and further the work of the IFAA section begun three years ago. "As soon as we created the IFAA, we discovered how badly it was needed," noted Robert L. Collett, SOA delegate to the IFAA Committee, which supervises the IFAA.

Just six months after the IFAA's founding, an international committee of accountants (the International Accounting Standards Committee, IASC) issued an outline of proposed international standards for employee benefits accounting practices. The standards would have presented serious



challenges for companies and actuaries in many countries. (See "IFAA meeting brings world's actuaries together" and "The IFAA recognized as important resource," *The Actuary*, September 1996). The IFAA formed a subcommittee to respond to the proposal and since then has formed another sub-committee to focus on the IASC's proposed insurance accounting standards.

The IASC was not a major power in 1995, but it was expected to gain strength with the backing of the International Organization of Securities Commissions. The actuarial profession will have shared interests with those and other international groups, such as the International Association of Insurance Supervisors (see "View from the top," *The Actuary*, February 1998). It is crucial that the actuarial profession be

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OPINION

Articulating our value

by Walter S. Rugland

At the Australian Institute's Centenary Meeting in 1997, one of the plenary sessions was on the shape of the next century, and a discussion question was posed:

How can we define our "value proposition?" In other words, can we define how actuaries add value in our professional capacity and the distinctive competencies we offer our stakeholders and do so in an easily communicated manner?

Can a value proposition be defined? Perhaps not. Can a value proposition be articulated? Perhaps. It's true that a customer knows value when it exists. But looking at business needs from the customer's perspective, one can imagine the customer saying, "Since I am buying and you are vending, the value you offer will be measured relative to benefit or cost, and both will be compared to those of other vendors."

We have structured our profession presuming we provide high value for which customers are willing to pay high prices. If we change this, we need to change our entry hurdles and make the investment of entry into the profession less severe. I don't advocate this path. Rather, let's emphasize with aggressive articulation the potential value we bring.

In our work, on every assignment, we have a choice: Do we just take

orders, or do we take the initiative?

Do we use our technical skill and respond to the work request without concern about the reason, or do we validate the reason? I believe it's the second approach that maximizes our value (even when it's difficult to take the initiative or to validate the reason for the work). This leads to practical applica-

tion of our skills as we help look beyond symptoms to real problems.

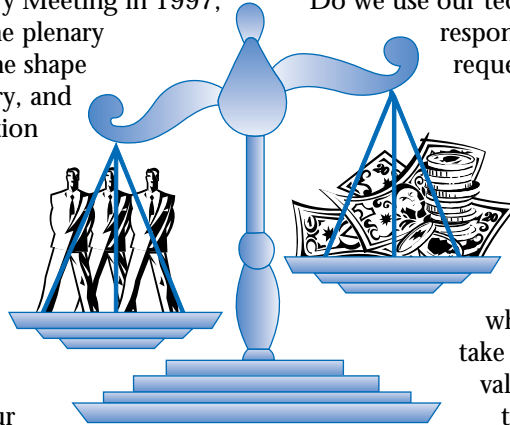
I propose we articulate our value in terms such as:

- Conceptual thinkers
- Problem identifiers
- Solution communicators
- Implication analysts
- Initiative testers

We add value when we exceed customer expectations. And by exceeding expectations, we create a basis for customers to demand greater value. It's like an imaginary funnel: If we fail to meet expectations, customer expectation next time is lower; if we exceed expectations, the expectation next time is greater.

Those are my thoughts as shared in the plenary session discussion. I am interested in what others' ideas are on defining and expressing actuaries' value. Responses will be considered for publication in *The Actuary*.

Walter Rugland, 1992-93 SOA president, can be reached by e-mail at walt.rugland@milliman.com.



Going global (continued from page 1)

poised to act, as well as react, as powerhouse organizations arise on the global scene, and the proposed IAA structure would make that possible.

How would the restructured IAA differ from the existing organization?

- Actuarial organizations rather than individual actuaries would become IAA members. (Current members will be allowed to retain their individual memberships.) The associations would designate delegates to the IAA Council — the central governing body — but the delegates would represent their respective organizations, not themselves individually.
- To be accepted for IAA voting membership, an actuarial organization would have to show that it has an established code of conduct and disciplinary process. This emphasis on professionalism is not applicable for the current IAA.
- Through committees, the new IAA would be continually active in the full range of areas related to the actuarial profession. The IAA in its current form has focused primarily on organizing the IAA Congress, held approximately every four years, and funding activities in developing territories.

In addition, the IAA functioning on the IFAA model would require leaders with a very different philosophy from that of a traditional association. “The pyramid is upside-down in the IFAA,” said the IFAA Committee’s chair, Walter S. Rugland. “The leader is on the bottom, balancing the whole thing. An association of associations works only if member groups know their sovereignty isn’t threatened and that it’s to their benefit to participate. Usually, an association has a leader with an agenda. That won’t work in an association of associations.”

Another difference of the IFAA model is the role and formation of committees, Rugland observed. “In a typical association, committees become entities unto themselves, developing

their own charges and carrying them out. In the new IAA, the council would agree on a charge and then issue a call for delegates to serve on the committee addressing the charge.”

Also under the restructuring, all IAA Council and committee meetings would be open — “There’s no privileged information,” Rugland said — and any motions made before the council must wait three months before action can be taken. This would allow adequate discussion by the leaders and members of the IAA’s member organizations. Impact on actuaries

If IAA members vote to implement the new structure, there would be two immediate implications for the new IAA’s member groups, such as the SOA.

First, motions passed by the IAA would need to be considered by its member organizations. For example, the report of the IFAA subcommittee on education will be considered at the IAA congress, and its findings on educational requirements for actuaries would be important for member groups and for the profession. The central question is “What is an actuary?” If actuaries are to compete internationally, their differentiation from other professionals must be clear, and the training they receive and the skills they acquire are central to the definition of an actuary.

Second, the establishment of IAA committees and their actions should be of interest to the member associations’ members. As committees are formed, “these would offer wonderful opportunities for individuals with global interests to get involved,” noted W. James MacGinnitie, who is U.S. vice president on the IAA Council and the American Academy of Actuaries delegate to the IFAA Committee. Also, individual actuaries would need to stay alert to the topics that IAA committees are addressing so that they could direct their opinions on those topics to their IAA Council delegate and the proper IAA committee.

A global voice

Behind the proposed IAA restructuring is a desire by many actuaries with a global view to protect and strengthen the profession.

Said MacGinnitie, “The globalization of financial services — of banks and investment houses in particular — has already occurred. Actuaries must recognize this will happen to their employers, if it hasn’t already. What’s the right way to do pension or employee benefits work? Currently, the answers to that and similar questions can vary dramatically from country to country, but that won’t work as globalization accelerates.”

The SOA, with membership totaling about one-half of the world’s actuaries, has a great deal at stake. The U.S. and Canada are in an exporting position, and if we want to be able to export our skills, we must be able to import them. Governments and nationally based companies won’t be willing to accredit our people if we won’t accredit theirs, so we must promote common professional standards that everyone can live with. The need for each IAA member association to have a code of conduct and a disciplinary process is an important beginning.

Collett’s comments pointed in this direction. “Until the formation of the IFAA, the important elements of the profession were developed where they existed, in the country where an actuarial group’s members were working. Those things are now in demand in the global economy,” he said. However, the restructured IAA’s charter would forbid it “to work on problems regional organizations can deal with alone” to avoid conflicts with regional groups on regional issues, Collett observed.

The restructuring of the IAA would “have a bigger impact on the world (actuarial) stage than the formation of the Academy and the Canadian Institute of Actuaries,” said W. Paul McCrossan, a founder of the IFAA and the IFAA Committee’s first chair. “The proposed structure addresses important

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Bad day ahead?

A look at the Y2K problem and questions about its cost

by *Tapen Sinha*

In the second half of 1997, magazine and newspaper reports started appearing in droves about the presumed doomsday of Jan. 1, 2000, for any and all activities associated with computers. Many businesses did not take the problem very seriously until the publication of Staff Legal Bulletin No. 5 (1997) by the U.S. Securities and Exchange Commission (SEC). In that bulletin, the SEC asked corporations to report any known costs associated with the problem, known as the "Y2K problem" (see the revised version of the document at www.sec.gov/rules/other/slbcf5.htm).

At about the same time, Edward Yardeni, chief economist of Deutsche Morgan Grenfell, testified before the U.S. Senate about this problem. He believes that the probability of a global recession in the year 2000 due to the Y2K problem is 35%. (His testimony is posted at www.senate.gov/~banking/97_11hr/110497/witness/yardeni.htm).

What is this hoopla about? What is the actual problem?

The problem is this: If the date function in computer software programs does not have four digits for the year, at the turn of the century such programs will begin operating as though the world had moved to an earlier point in time. This problem has been called by different names: the Year 2000 Problem (hence the inevitable abbreviation "Y2K"), the Date Problem, and the Millennium Bug, among others. Illustrating the problem

Any function or machine dependent on a computer — especially an old personal computer — represents a potential problem. A simple test will illustrate the problem on your PC. If you set the time and date on your personal computer to 23:58 1999, switch the PC off, wait five minutes, switch the PC back on, and then check the date, the result is likely to be Jan. 4, 1980, for many computers

(why that date, only the microchip manufacturers know). If the date is accurate, create a file using a not-so-recent computer program, and then check the creation date; it probably will be wrong. A test conducted over the Internet with about 1,000 participants indicated that 75% of all PCs will fail this test.

How the Y2K problem arose
There are several causes behind the potential problem.

Lack of date standards: No standard representation of dates has been internationally accepted and implemented. The numbers "01-02-97" mean Jan. 2, 1997, in the United States but Feb. 1, 1997, in the United Kingdom. There have been several attempts at standardization, such as the International Organization for Standardization's recommended standard of ISO-8601, which would set the date storage format as YYYYMMDD (the first four digits for the year, then the month, and finally the day). However, there has been no commercial acceptance.

Computer resource constraint: Perhaps the most important reason for adopting YY rather than YYYY was the constraint on memory in the early days of computers. When punch cards were used, only 80 columns were available for data entry. Taking up four columns to protect the millennium seemed a big luxury.

Greater success than expected:

Programs developed in the 1960s and '70s were not expected to last very long, so it seemed unnecessary to change the date format. But some programs have survived and are still being used.

Reusing old codes: Many new applications have algorithms or codes embedded from previous systems. Applying parts of old programs to new processes may have inadvertently hidden the problem of two-digit date formats. This may be the most critical factor of the looming problem.

Data decentralization: As the use of personal computers became widespread, programs percolated to the lowest level of the organization; they are no longer limited to storage in a few big computers. This means that the problem needs to be addressed for each computer separately. How costly, really?

The problem is largely a software problem (although some hardware has the date function embedded). Therefore, most estimates of costs to fix the problem are based on altering lines of code in software.

In 1996, the consulting firm The Gartner Group stated that, worldwide, 225 billions of lines of code would have to be fixed. At that time, the cost was estimated at \$1.10 per line for a total of \$250 billion. The firm further declared that in three years, the cost could escalate to \$2.50 per line, meaning the problem would grow into a \$600-billion headache.

This estimate has several problems. First, it assumes that lines of code need to be fixed one at a time. However, several programs are available that fix many programs in a PC at once and cost very little (in fact, some are free through the Internet). Second, many older programs can be scrapped and replaced at a much lower cost than that of fixing the codes. The entire cost of such



programs should not be allocated to the Y2K problem because the new programs will enhance productivity as well.

Legal concerns

The Y2K problem is much more predictable than most risks. Thus, if a Y2K-related difficulty leads to a major disaster for a company, directors and officers (D&O) may become liable if they are seen not to have taken "due care." Some insurance companies are offering insurance policies for the Y2K problem. D&O liability insurance will cover liability (typically with a large deductible) but not gross negligence. Under these plans, professional errors and omissions (E&O) are covered. However, it is difficult to judge ahead

of time what types of claims there will be and, therefore, whether E&O provisions will cover them.

Some tricky legal problems have not been settled. For example, most software companies do not allow users to modify programs. To fix the Y2K problem, users might have to alter a program's source code, and so questions might arise about breach of contract.

Risk management and the Y2K problem
Swiss Re has produced an interesting document on the issue of risk management of the Y2K problem (www.swissre.com/download/public/millen-e.pdf). The problem exhibits all the classic elements of risk management. However, unlike many other risks, the exact date when problems could begin is clearly defined. The risks will continue well past Jan. 1, 2000.

Basic elements of risk management are: (1) identifying exposures to accidental loss; (2) examining feasible alternative risk management techniques for dealing with these exposures; (3) selecting one or more of what appear to be the best risk management techniques; (4) implementing the chosen

risk management techniques; and (5) monitoring the techniques' results to ensure that the risk management program remains effective.

How do we perform risk management for the Y2K problem? The basics outlined by the OMB are worth quoting:

1. Raise management awareness of the problem.
2. Assess the scope of the problem by inventorying systems and deciding which ones to change, replace, or discard, renovating the systems to be changed.
3. Validate and test the changes in the systems.
4. Implement the revised systems (including developing a contingency plan).

These steps apply not just to government bodies but to any organization. It is also important for an organization to set a timetable for making changes. Otherwise, Mon., Jan. 3, 2000, could be a very bad day.

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Interesting Y2K links

Those interested in the Y2K problem might find a Yahoo! Web page useful, says Tapen Sinha. The site contains a long list of hyperlinks to informative Web sites. The URL is: http://headlines.yahoo.com/Full_Coverage/Tech/Year_2000_Problem/.

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questions that didn't exist a decade or two ago, such as 'Who's qualified to sign a pension statement that's filed on an international stock exchange?' There are only about 30,000 actuaries worldwide. To thrive or even survive, we have to be even better organized to be able to demonstrate that our members have something important to offer. Financial analysts, accountants, and others will move into our professional territory if we don't protect ourselves. We can't afford the luxury of, in the future, having to reinvent the wheel in each country separately, such as in the area of educational standards for actuaries." The IAA Web site Collett also noted that whether or not

the measure passes, SOA members should keep up with IAA activities and provide input. If the measure passes, "The SOA would be a major dues-paying member of this organization, and we would need to be sure our impact is felt," he said.

One way to monitor the IAA's activities is through its Web site at www.actuaries.org. Information is presented in both English and French. The results of the vote for the IAA/IFAA merger will be posted there. Also, visiting the Web site is a good way to keep up with the IAA Council, the committees, and their actions. Those involved with the IAA need to know your views.

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Breakthrough ideas

Stint in WWII operations research unit was just the beginning

by Jacqueline Bitowt
SOA Public Relations Specialist

With today's focus on nontraditional actuarial work, the image of the "traditional" actuary might be an unquestioned cliché: working in the "back office" for one or a very few insurance companies regularly and steadily, every single day, for an entire career. What many might not know is that the careers of some so-called traditional actuaries took dramatic turns.

One such actuary is John Boermeester, who retired in 1975 after 44 years with John Hancock Mutual Life Insurance. Boermeester was one of an elite group of actuaries who were asked to step out of their daily roles and into a special research assignment in World War II.

They were members of the U.S. Navy's Operations Research Group (ORG), a civilian unit formed to analyze military operations to determine what methods and procedures would have the maximum impact with minimum loss. Boermeester is mentioned in the book *Our Yesterdays* (E.J. Moorhead, Society of Actuaries, 1989), in which the ORG is described as multidisciplinary but whose organizers were interested in hiring physicists. A personal

Setting the pace

This story is part of a series that periodically highlights personal careers and offers new perspectives on actuarial job paths.

letter from actuary Nathan F. Jones is quoted, saying "I had the impression that in the beginning, (ORG leaders) thought that actuaries might be useful as routine statistical clerks. ... I am glad to say they found that actuaries were useful far beyond that."

Boermeester moved to Washington to join the ORG "right after Pearl Harbor" in 1942 and served through November 1945. Among his ORG colleagues was physicist William Shockley, who shared a Nobel Prize for inventing the transistor, and many other physicists from institutions including the Massachusetts Institute of Technology.

Boermeester said actuaries and physicists worked side by side, conferring in teams. "We were privy to top secret information sent to us from all over the world by our espionage system," Boermeester said. "We heard broadcasts made by the Nazis, and we knew when the Allies were launching operations to invade the French Coast."

The ORG was first focused on submarine warfare, but its mission soon grew to cover virtually all aspects of the war. Defense correspondent Andrew Wilson of the *London Times* is quoted as saying, "By the time the war ended, there was scarcely a field of military activity on the Allied side that had not been profoundly affected by operational research. Its impact ranged from improvements in tank gunnery and field engineering to the complete recasting of aid and naval procurement programmes" (*World War II: America at War*, Norman Polmar and Thomas B. Allen, Random House, 1991).

Beyond the ORG

After contributing to the war effort, Boermeester not only returned to his work developing reserve requirements for the Hancock but also began contributing to the profession. He wrote or coauthored eight papers, including three published in the *Transactions*.

Boermeester's 1956 paper, "Frequency Distribution of Mortality Costs," in the *Transactions* marked a



John M. Boermeester

historic turn for the profession. "The paper suggested for the first time the use of simulations for solving actuarial problems involving uncertainties," said Jim Hickman, dean emeritus and professor, University of Wisconsin School of Business. "It sounds simple today, but using computers to solve problems involving random numbers was a breakthrough idea. That paper served as the basis for many others' work on simulations. Forty years ago, John began a pattern of thought that developed and grew. Today, it's the way actuaries naturally tackle many problems."

In a rapidly changing world, actuaries are looking at their skills and thinking about their futures. As 1996-97 SOA President David Holland reminded members at the 1997 annual meeting, "the consulting mathematician, the model builders, the collectors and interpreters of data are our real spiritual ancestors." John Boermeester can be seen as an actuary who is a "spiritual ancestor" of actuaries today and in the future. His contributions helped make the profession what it is now and will be in the future.

Report to members

A view of SOA accomplishments and the road ahead

by Anna M. Rappaport
1997-98 SOA President

Last year, the SOA leadership informed you of the SOA's strategic plan and its objectives. I am very proud of the many activities underway today. My year as president, which ends in October, has not represented a change in direction but rather a continuation of the activities started by my predecessors, Dave Holland and Sam Gutterman. While some additional emphasis has been placed on outreach, our goals today are largely consistent with those of the last few years.

Our goal during my term was to help our members become more effective in serving the needs of their customers. Actuaries' long-term success will be a function of:

- Actuaries adding value to our customers and being known for doing that
- Adequate traditional and non-traditional job opportunities for actuaries
- An adequate supply of good people to fill those jobs
- Keeping our knowledge base up-to-date so that we can add significant value to our customers.

Knowledge, visibility

from outside the profession One of the leadership's key objectives was to find appropriate avenues for joint ventures and other work with outsiders, an initiative which has grown in recent years. This enriches the content of our work, gives us visibility outside the profession, and offers valuable new contacts. In 1998, the SOA worked with several organizations.

The retirement and health practice areas sponsored a symposium, "Strategies for a Changing Workforce," in March with the American Compensation Association and the International Foundation of Employee Benefit Plans. The presenters and audience were a mix of actuaries and human resource

professionals. (See story, "SOA cosponsors conference to explore changing workforce," *The Actuary*, February 1998.)

About three years ago, the health practice area determined that managed care effectiveness was its top priority. This resulted in three research projects now underway involving groups and individuals from outside the profession:

- A monograph on managed care effectiveness discussing ways to meet the needs of diverse stakeholders
- An analysis of HEDIS (Health Plan Employer Data Information Set) indicators from the perspective of purchasers
- An analysis of HEDIS indicators from the perspective of consumers

In addition, the symposium "Managed Care in a Time of Transition" was held last month to present preliminary results of that research. (See story, "SOA symposium to explore managed care issues," *The Actuary*, April 1998.) Panels included a group of purchasers and a group representing the consumer perspective. Attendees included actuaries, purchasers, and other members of the health care community.

The finance practice area has identified the value at risk methodology and other new ways of measuring and defining risk as crucial elements of the actuarial knowledge base. A call for papers was issued, and a symposium was held in December 1997. (See story, "Integrated approaches to measuring risk is topic of December SOA conference," *The Actuary*, September 1997, and "Dialogue on risk," *The Actuary*, March 1998.) Again, the presenters and attendees were a mix of actuaries and nonactuaries. Another program on risk measurement is planned for spring 1999.

Mortality has been improving, and mortality rates are of concern to actuaries in various practice areas. During 1997-98, a group headed by Mike Sze and Irwin Vanderhoof worked on a three-phase research project on mortality improvement projection methods and the impact of mortality improvement on the NAFTA countries' social security systems. (See "NAFTA countries support SOA study on social security mortality," *The Actuary*, November 1997; "Social security 'summit,'" *The Actuary*, January 1998; and "A gathering of scientists," *The Actuary*, March 1998.) The project was a cooperative effort between the SOA, the Pension Research Council, and the three NAFTA countries' social security agencies. Other funders included The Actuarial Foundation, the Retirement Research Foundation, and the American Society of Pension Actuaries Education and Research Foundation. Participants included leading actuaries, demographers, economists, and medical researchers. Results were presented at the 1998 American Association for the Advancement of Science annual meeting and a meeting of a working group of the International Institute for Applied Systems Analysis, and they are scheduled for presentation at the International Congress of Actuaries and the 1998 SOA spring meetings.

Retirement security is a growing concern in our aging society. The SOA is in the middle of a project designed to help us understand the post-retirement period better. A call for papers was issued around the topic of a retirement needs framework, and 16 papers have been promised which will be presented at a conference in December 1998. (See story, "How do needs change during retirement?," *The Actuary*, February 1998.) This is a project of

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the retirement practice area. Again, we expect authors and attendees to include both actuaries and nonactuaries.

Annuities represent an increasing share of life insurers' business. The SOA sponsored a conference on annuities jointly with LOMA and LIMRA in April. This one-and-a-half-day conference focused on income annuities and conservation. Some 200 attendees, a mix of actuaries and other professionals who develop and administer annuities, discussed trends in medicine and lifestyles and the point at which people will have to invest more wisely and save more to fund their growing retirement years. Topics spanned packaging payouts, how to increase participation in qualified plans, the next generation of variable annuities, and equity-indexed annuities.

The SOA has a number of activities that involve us with members of the academic community. SOA projects currently involve researchers from about 30 universities. An ongoing SOA program provides support for academic SOA members to participate in SOA committees and meetings. In addition, we are seeking to expand our relationships with academia. One step in this process is formation of a task force to explore increasing the ties between the SOA and academic institutions. (See story "Are strong academic ties our missing link?" on page 10.)

Outreach also extends beyond North America. In 1997, the Financial Reporting Section sponsored four seminars with local actuarial associations in the Far East's four countries. A session is scheduled for August sponsored jointly by the Section and a local actuarial organization in Argentina. The role of SOA ambassador — members who help support SOA efforts — has been established in more than 25 countries. Our Hong Kong office, which opened in late 1997, supports the efforts of the SOA Asia Committee and our members in eastern Asia.

The projects mentioned above are helping to expand our knowledge base.

At the same time, given the speed of change, we are concerned about keeping up with the needs of SOA members, potential SOA members, and actuaries' current and potential customers.

Research initiatives

A revised discussion draft of the Joint CAS/SOA Statement of Actuarial Principles has been developed by the CAS and SOA principles committees. It is expected to be distributed to members of the actuarial profession by late summer. Also, the current draft will be presented at the International Congress of Actuaries this month in Birmingham, England.

During the last few years, the SOA Committee on Knowledge Extension Research (CKER) grants and Ph.D. grants programs have helped strengthen our relations with the academic community at the fundamental level of basic research. These programs both encourage basic research related to actuarial science and help develop young actuarial researchers, two activities that are essential to the continued success and survival of any scientific profession. CKER has agreed to fund up to seven new research projects as part of its grants program, and the Ph.D. Grants Task Force is in the final stage of evaluating applications and expects to award at least six.

New emphasis on modeling

The SOA has begun to place significant emphasis on modeling in both our education and research efforts. In December 1996, the SOA sponsored its first modeling research conference and is organizing a second for December 1998. The importance of modeling research to the SOA is evidenced by the recent selection of three papers for the inaugural Edward A. Lew Award for the best papers in modeling research. The current intensive seminars and the new syllabus' Courses 4 and 7, which will be required of all SOA students, reflect the importance the SOA places on modeling in its education process.

Technology

Technology is increasingly important to

actuaries and to the SOA. We are gradually increasing the use of electronic publishing and will continue to do so. The Web site is operational and is being improved regularly. The SOA is exploring the delivery of education through the Internet and hopes to launch its first program next year on an experimental basis. Several programs have been released in CD-ROM format. At the same time, the technology committee has been expanded and is working on a long-term vision for technology within the SOA. Information on technology is being exchanged among all actuarial organizations.

Educational programs

During 1998, we expect that 17,000 students will write 35,500 examinations at 290 different examination centers. We will fill 9,200 orders for study notes and offer 675 different study notes. Student enrollments are down, partly as a result of the transition to the new syllabus, but it also appears that the number of new entrants is down as well.

Work continues on the implementation of the new syllabus. The first four examinations will be held jointly with the CAS. Many volunteers and staff people are working very hard on this effort. The final report for each course in the new system is posted on the SOA Web site as soon as it has been approved. The reports for Courses 1 and 2 are already posted; reports for Courses 3 and 4 are expected to be available by the end of June. All others are slated to appear by the end of the third quarter but will be released earlier if possible.

Our continuing education program is extensive. During 1998, we will sponsor four major meetings and 17 seminars. We expect 3,000 registrations at the major meetings, and 1,200 at the seminars. The continuing education coordinating committee is working on alternative delivery methods and a catalog to help people plan better. It is focusing on how to deliver the professional development component of the new educational program and on how to deliver

services effectively to members outside of North America.

Career planner

In the current environment, all of us must take responsibility for our own careers, and it is quite common for change to force us to rethink where we are and where we might be going. The SOA recently published *The Actuary's Career Planner*, a powerful tool for members and students alike to use in managing their careers. Sessions are conducted at SOA meetings for members seeking help in working through the career planner. We hope that use of the career planner will support members and students throughout their professional lives.

Experience studies

This has been a challenging area for us in recent years. It is difficult to get data, and studies often are not completed in a timely fashion. Several years ago, a task force headed by Esther Milnes made recommendations to improve performance. We continue to work on implementing these recommendations. At the same time, SOA Vice President Norman Crowder is seeking ways to innovate and make further improvements. This will have high priority for the next few months.

Reorganization

to focus on practices

Within the last three years, we have reorganized the SOA Board of

Governors and made some changes in the staff and committee structures. We are now reorganizing the staff, dividing functions into four main areas and creating a management team consisting of the executive director and the managing directors in charge of the four areas. A key feature of the new organization will be a much greater focus on practice areas and greater involvement of the practices in managing the SOA's research and education agenda. Each major practice area is supported in the new structure by a practice fellow, called a staff fellow, who has primary responsibility for driving implementation of practice initiatives. Three of the four staff fellows are now in place: Jeff Allen, finance; Judy Anderson, retirement systems; and Jerry Vance, health. Linden Cole, an experienced SOA staff actuary who will retire this fall, is serving as the life practice fellow while we recruit for that job.

During 1997-98, a major study was completed on the effectiveness of our research efforts. One change will be to establish criteria for selecting and prioritizing research projects. Every project will need to have a strong advocate and a strong client, and in many cases, the practice area will be the client.

In 1997, we hired a management consultant specializing in associations to study the SOA's office operations.

Most of the recommendations have been evaluated, and many have been implemented. Howard Bolnick, 1997-98 SOA president-elect, is heading a task force seeking further opportunities to improve operations. The longer term

In the short run, the actuarial world looks very good. There are lots of jobs and opportunities, and we have been doing many exciting things. However, the SOA leadership is paying attention to two dramatic warning signs. First, our primary customers are in industries undergoing great turmoil. Second, SOA membership has dropped over the last three years. This is at least in part due to a 1995 change in the requirements for Associateship, which has resulted in a temporary slowdown in the flow of candidates into Associateship status as they work to meet the new requirements. We are seeking a greater understanding of this trend and the examination enrollments. Howard Bolnick, who as president-elect chairs the SOA strategic planning committee, is working with the committee to address our longer-term future, identifying threats and opportunities and exploring possible future scenarios.

Anna Rappaport, principal of William M. Mercer Incorporated, Chicago, can be reached by e-mail at anna_rappaport@mercer.com.

Next Bowles chairholder and symposium topic announced

The fourth holder of the Thomas P. Bowles Chair of Actuarial Science is Harold D. Skipper, Jr., Ph.D., CLU. He will lead the 1999 Bowles symposium, which will focus on financial services integration and globalization.

Skipper is professor of risk management and insurance and holder of the C.V. Starr Chair of International Insurance at Georgia State University, Atlanta. He received his bachelor's degree from Georgia State and his master's and doctoral degrees from

the University of Pennsylvania, where he was a Huebner Fellow.

Papers available

The third Bowles symposium, chaired by Patrick L. Brockett, Ph.D., of the University of Texas at Austin, was held March 26-27, 1998, at Georgia State. More than 100 attendees participated in the two-day program on the medical, underwriting, legal, and ethical issues relating to genetic technology and underwriting.

The program produced many original papers. These papers combined

with the Anderson Award papers are available for \$50, and audio tapes of the entire symposium, including audience discussions, are available for \$75. (See story, "Winners of 3 actuarial research competitions announced," page 17.)

To order 1998 symposium material or for more information on the 1999 Bowles symposium, contact Anne Chamberlain at Georgia State (404/651-0931; e-mail: achamberlain@gsu.edu) or visit the Bowles Web page (www.rmi.gsu.edu/bowles/b-chair.htm).

Are strong academic ties our missing link?

Does the actuarial profession have strong enough ties to institutions of higher learning? How can existing ties be strengthened and new ones developed? Is actuarial science fundamentally different from accounting, architecture, dentistry, law, medicine, nursing, pharmacy, teaching, and theology?

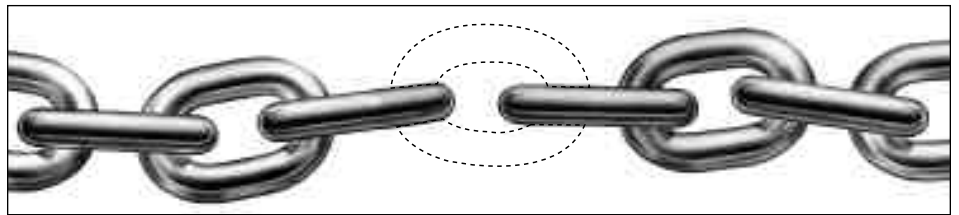
Fifty Society members teaching in academia or involved in SOA research and education efforts examined those and other questions at a by-invitation seminar, "The Actuarial Profession's Relationships with Academia," held Feb. 4 in Chicago. The seminar was sponsored by the SOA, CAS, and CIA and was convened by Howard J. Bolnick, SOA president-elect and adjunct professor, Northwestern University; James Hickman, emeritus professor and dean, University of Wisconsin School of Business; and W. James MacGinnitie, Fellow of both the SOA and CAS and chief financial officer and senior vice president, CNA Insurance Companies.

After the keynote address by Burton J. Bledstein, Ph.D. (see sidebar, "Organization, rhetoric not enough, says scholar," page 11), two presentations addressed the profession's history with academia and its current ties. "Actuaries and Academics," the historic overview, was presented by Hickman representing the SOA; Harry Panjer, CIA president, representing the CIA; and Steven D'Arcy, professor of finance, University of Illinois at Champaign, representing the CAS. The profession's current status in academia was discussed in the session "Actuarial Academics," presented by Robert L. Brown, professor of actuarial science, University of Waterloo; Don Behan, professor of actuarial science, Georgia State University, Atlanta; and Bryan Hearsey, professor of mathematics, Lebanon Valley College, Annville, Penn. The topic was their schools' ties to the profession and industry.

Breakout sessions chaired by the conveners in the afternoon explored the

need for the profession to improve ties with academia and to create specific ideas that participants think should be considered by the SOA, CAS, and CIA leadership. Ideas included:

- Recognize schools of actuarial science based on meeting specified education and research criteria.
- Recognize professors of actuarial science for excellence in teaching.
- Create a recognition program for academic actuarial researchers.
- Establish a formal academic forum open to all academics interested in actuarial teaching and research.



- Fund or help fund chairs of actuarial science in recognized schools.
- Establish a new associate membership category for nonactuarial academic researchers in insurance, finance, and related areas.
- Consider granting exam credits for certain courses taught at recognized schools and by recognized professors.
- Develop continuing education programs at recognized schools.
- Use recognized actuarial professors to teach SOA intensive seminars.

"It's important to look at our relationships with academia," said Bolnick. "We're far behind the other professions. Better and stronger ties would help the profession both internally and externally — internally by improving our training and continuing education and externally by improving our visibility."

"The ideas were interesting but not bold enough. We need to do even more," said Hickman. "When you could define your territory and ride herd around it, the system we had was fine. But when the world becomes bigger and you're competing with statisticians and economists with

broader ideas and a Harvard stamp on them, the old way just won't work."

MacGinnitie said he believed stronger ties between the profession and academia were needed when he taught at the University of Michigan 25 years ago. "All professions begin with self-study and eventually migrate to a university base," he said. "The question is, how long is it going to take us? We're no different from anyone else." MacGinnitie served as one of the symposium's conveners, he said, "because I believe the profession needs to actively work to foster that

evolution." The symposium, he said, was "a useful first step, but we have a long road to travel." Task force being formed
The Joint Task Force on the North American Actuarial Profession's Ties with Academia is being formed as the next step in the process. The task force has four charges.

First, the task force is to explore the arguments for and against expanding ties between the actuarial profession and academia and make a recommendation about the need, if any, for change. Task force members are being asked to consider the growing competition for bright mathematics students who have historically chosen to write actuarial exams. They are also being asked to consider the experience of the accounting profession and its relevance to actuaries, as well as the experience of the actuarial profession in countries where the profession has close ties to academia.

Second, the task force is to consider specific ideas developed at the symposium and any other ideas of interest if the task force recommends expanding academic

ties. Specific programs recommended to the SOA, CAS, and/or CIA leadership bodies for adoption are to include their purpose, expected results, and appropriate cost estimates.

Third, the task force may identify programs that might be considered in the future. These might include programs that seem expensive for immediate consideration or programs that might best be implemented following programs recommended for immediate adoption.

Fourth, the task force may recommend goals for improving the actuarial profession's relationships with academia, ways to monitor the results of programs proposed for adoption, and methods to evaluate such programs.

The task force is expected to report its findings to the SOA, CAS, and CIA leadership by the end of this year.

Serving as chair will be R. Stephen Radcliffe, 1993-94 SOA president. Task force members and the organizations they represent are: Brown, CIA;

Hickman, SOA; MacGinnitie, SOA; Trevor Matthews, Australian Institute of Actuaries; Dale Porfilio, CAS; Andre Premont, CIA; Kurt von Schilling, CIA; and Bill Wilkins, CAS.

More information on the conference and task force is available from Chelle Brody, SOA managing director of international affairs (phone: 407/876-0800; e-mail: chellebrody@compuserve.com).

Organization, rhetoric not enough, says scholar

Is actuarial science a powerful profession? What steps can the professional take to become more powerful — or even just to protect others from encroaching on its turf?

These questions were central to the keynote address given by Burton J. Bledstein, Ph.D., at the by-invitation SOA symposium "The Actuarial Profession's Relationships with Academia." (See story, page 10.)

Bledstein is associate professor of history, University of Illinois - Chicago. His talk, "Lawyers, Doctors, Accountants, and Academics," looked at a unifying characteristic of these powerful professions — a strong academic base — and stated that the U.S. actuarial science profession must build a place in the country's university system if the profession is to increase or even maintain its strength.

"The primary characteristic one observes regarding a powerful modern profession, like medicine, ... is the right of naming and classifying a powerful idea or concept based on expanding knowledge — in most cases, knowledge that is cultivated and nurtured in higher educational institutions," Bledstein said in his speech.

Bledstein traced the rise of the

American university system as a credentialing institution that served young middle-class men and women as an alternative to the state on one hand and the markets on the other. As the need for expert management grew, "the bigger, visible hand of higher education (provided) credentials independent of either business interests or the politics of officials."

Professional societies also "lost out in the knowledge base of new academics." Bledstein cited the American Medical Association as an example, saying it is basically a trade and lobbying group with fewer than half of all U.S. doctors belonging to it. "What is far more powerful, what gives the medical profession credibility are, in fact, medical schools, and the academics associated with them, and their research and publications," he said.

Bledstein pointed out that actuarial science in the United States didn't parallel other professions in establishing themselves through academia for several good reasons. While universities were modernizing in the late 19th and early 20th centuries, actuaries "were simply too small in numbers, the science was not sufficiently developed, and the

need based on demography was not great."

However, "times have changed, and the actuarial profession has all the necessary parts in place: schools, research, theory, exams, certification, and employment for practitioners." In addition, actuarial work focuses on a great concern of the U.S. middle class — "the creation of buffers against insecurity by risk assessment and risk investment ranging from retirement pensions, to paying for a college education, to buying a car."

Bledstein warned, "However, if actuaries don't take firmer possession of their productive and lucrative territory in the cultural sense of a profession based on higher education, others will. More rhetoric about greatness won't do. Organization alone falls short. Dependence on other disciplines like statistics, demography, and mathematics is insufficient."

Bledstein's entire speech, including his five elements of a powerful profession, can be viewed on the SOA Web site (www.soa.org) under General Libraries.

Burton J. Bledstein can be contacted by e-mail at bjb@uic.edu.

How actuaries add value in era of managed care

Eight case studies outline actuarial approaches to assessing risk in the era of managed care in a new report, "The Actuary's Role in Managed Care," produced by a working group of the SOA Committee on Health Benefit Systems Professional Education and Development. The report will be published in the July 1998 issue of the *North American Actuarial Journal (NAAJ)*.

The working group was chaired by Bruce Pyenson, consulting actuary, Milliman & Robertson, New York. The members were Melissa Dubauskas, consulting actuary, Milliman & Robertson, New York; A. Kirk Twiss, actuarial consultant, Bob Gold & Associates, Inc., Chicago; and Dale Yamamoto, principal, Hewitt Associates, Lincolnshire, Ill.

Financial risk is moving to center stage in the \$1-trillion U.S. health care market. The growth of managed care has created new forms of risk. It has also shifted risk from insurance companies, which have long dealt successfully with risk, to health care providers and other organizations that have not traditionally accepted the same type and amount of risk. "The Actuary's Role in Managed Care" shows, through the case studies and other discussion, that actuaries can help institutions and the nation protect their financial well-being and provide quality care.

"The health care industry represents 15% of the U.S. domestic product, and its turmoil-filled transformation affects everyone — doctors, hospitals, insurers, health care consumers, and others," said Pyenson.

"Health care is becoming part of the risk industry, and normal financial analysis will not be adequate for institutions taking financial risk. The risk industry is large, stable, and successful because of the role actuaries play. Actuarial models, the proven tools that actuaries use to evaluate risks, offer management a window into the managed care world."

The report's case studies show the types and scopes of tasks encountered by managed care actuaries and outline approaches that can help balance risks in today's health care system. The case studies, built on experience gained in hundreds of cases, discuss situations affecting five groups:

Providers: A hospital and its physicians form a physician hospital organization (PHO). Because the PHO will receive a fixed amount of money per member, distributing that money among key players becomes a matter of controversy. How can fair distribution be determined? Financial solvency and growth also are issues; how does the PHO decide what paths to take?

Employers: A unionized manufacturer is seeking to reduce health care costs so that wages can be maintained or even increased. How can the employer decide what managed care plan is best for its situation?

Regulators: A state insurance department must make recommendations on a proposed agreement between an HMO and a PHO. The PHO wants to avoid the lengthy and expensive process of obtaining an HMO license, which would include meeting the state's net worth requirements. The HMO supports the PHO's wish to not be licensed as an HMO, because the PHO would become a competitor. How should the regulator make decisions about the agreement?

Public policy groups: A national association of health plans opposes a legislative proposal that would require all self-insured health plans, HMOs, and insurers to cover chiropractic benefits. How might the association analyze the proposal's possible impact?

HMOs: A start-up HMO is working to obtain its license. How should it develop the health insurance premium rates and financial projections that it must file with the state?

Pre-publication copies of "The Actuary's Role in Managed Care" are

available for \$5. All SOA members receive the *NAAJ* free of charge. For nonmembers, copies of individual issues cost \$25 (annual subscriptions are \$95) and can be obtained from the SOA Books Department (phone: 847/706-3526; fax: 847/706-3599; e-mail: bhaynes@soa.org).

Managed care to be subject of August seminar

The SOA will continue its exploration of actuarial issues in managed care at a seminar, "Managed Care: Capitation and Beyond," Aug. 27-28, near Chicago.

Sessions will address the needs of those with limited knowledge of the subject or more advanced knowledge. Little or no experience is required for the session "Managed Care Pricing: Nuts & Bolts" all day Thurs., Aug. 27. Also on Thursday, three consecutive sessions will be held for actuaries with advanced experience in managed care topics. The sessions are "Health Data Sources," "Federal and State Regulation of Managed Care and Provider Organizations," and "Elements for Successful Risk Contract."

Panels and interactive forums on Fri., Aug. 28, will address all levels of experience. Scheduled topics are specialty risk transfer mechanisms and risk adjusters.

All sessions will be held at the Westin O'Hare Hotel, Rosemont, Ill., near Chicago's O'Hare airport. More information is available from Sheri Abel, SOA program manager (phone: 847/706-3536; fax: 847/706-3599; e-mail: sabel@soa.org).

Lester Thurow to speak at '98 SOA annual meeting

Economist, professor, and author Lester Thurow has been announced as the keynote speaker for the Society's 1998 annual meeting, Oct. 18-21, New York.

Thurow is professor of management and economics at MIT and the author of several books, most recently *The Future of Capitalism*. He also coordinates the Asia Pacific Initiative of MIT's Sloan School of Management, and he is the school's former dean.



Lester Thurow

Currently, Thurow writes for *The Boston Globe* and *Technology Review* and is a frequent guest on PBS' "Nightly Business Report." In addition to his books, Thurow has authored hundreds of journal articles and columns on global economics for *The New York Times*, *The Wall Street Journal*, and *The Los Angeles Times* and is often quoted

in news stories on economics and management.

Thurow served as a staff economist for U.S. President Lyndon Johnson's

Council of Economic Advisers and has advised several Democratic presidential candidates on public policy.

He received his doctorate from Harvard and his master's degree from Oxford, where he was a Rhodes Scholar. More info to come

The 1998 SOA annual meeting will offer three days of continuing education courses and networking opportunities. All sessions will be held at the Marriott Marquis, located in the heart of Manhattan.

Registration information will be mailed to all members in July. Watch *The Actuary* and the SOA Web site (www.soa.org) for more information.

SOA, CAS will repeat successful career information fair

Reflecting the success of the first Actuarial Career Information Fair, held during the SOA's annual meeting last year, two more fairs will be held in 1998.

The first will be conducted at the Philadelphia Marriott Hotel on Sept. 27, the day before the CAS Casualty Loss

Reserve Seminar at that location. The second is set for Oct. 18, the day before the SOA annual meeting begins, at the meeting's site, the Marriott Marquis Hotel in New York. The fairs are planned by the SOA Career Encouragement Committee and CAS/SOA Minority Recruiting Committee.

The first fair was a success by several measures. More than 175 Washington, D.C.-area high school and college students and teachers attended. Most knew very little about the profession before they came to the fair, and they left with a great deal of knowledge and a briefcase full of materials from the Society of Actuaries, the Casualty Actuarial Society, and 43 companies that sponsored the event.

The 1998 fairs will repeat last year's session giving an overview of the profession and will again invite organizations to sponsor booth exhibits. In addition, a special educator's track will be added to the breakout session lineup.

Sponsors are again being solicited to make it possible for students and educators to attend free of charge. A sponsor interest form is included in this mailing of *The Actuary*. Sponsorship questions should be directed to Cecilia Green (phone: 847/706-3561; e-mail: cgreen@soa.org). To register a student or to attend as an educator or guidance counselor, contact Linda Heacox (phone: 847/706-3528; e-mail: lheacox@soa.org).



Students head toward breakout sessions after hearing SOA Past-President Sam Gutterman's overview of the actuarial profession at last year's information fair. The event's success led the sponsoring committees to schedule two more in 1998.

Second ballots due Aug. 7

Second ballots for the SOA 1998 elections of officers and board members will be mailed to all Fellows on July 7. To be valid, ballots must be received in the Society office no later than Aug. 7. If you are a Fellow and do not receive the second ballot mailing by July 20, please contact Lois Chinnock at the Society office (phone: 847/706-3524; fax: 847/706-3599; e-mail: lchinnock@soa.org).

Preferential voting

Fellows have had some questions about the preferential voting process on the second ballot for the office of president-elect. The following brief description is offered to shed some light on the subject.

Preferential voting is a two-stage election process. To win, a candidate

must receive a majority of valid votes cast. First-choice votes are counted initially. If no candidate receives the necessary majority of first-choice votes, the candidate receiving the smallest number of first-choice votes is eliminated. Votes for the second-choice candidates named on that candidate's ballot are added to the remaining two candidates' first-choice votes. The winner, one of the two remaining candidates, is the one with the most first-choice votes plus distributed second-choice votes.

The second-choice votes have determined the outcome of several recent elections. This shows the need for Fellows to carefully consider both their first- and second-preference votes for president-elect.

SOA members invited to September board meeting

Interested Society members are welcome to attend the SOA Board of Governors meeting Sept. 18 at the Westin City Center, Washington, D.C.

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.

President-elect forum on the Web

SOA members will be able to learn more about the views of this year's president-elect candidates through the Society Web site (see "Exchange views via the Web with SOA president-elect candidates," *The Actuary*, May 1998).

Members' questions and candidates' answers will be posted on the site's Discussion Forum section from June 15 through July 7.

On the SOA home page (www.soa.org), click on Discussion Forums and then on President-Elect Candidates' Dialogue with Members. Choose an existing discussion thread or key in a new topic.

Technical questions can be directed to Debbie Jay at the SOA office (phone: 847/706-3539; fax: 847/706-3599; e-mail, djay@soa.org).

Cast your votes in the Section elections

Ballots for the Section elections will be mailed the week of July 6. Take an active role in the election process. Review the list of candidates and their biographies to determine whom you would like to represent you.

Ballots must arrive in the SOA office no later than Aug. 7. If you are a Section member and do not receive the election mailing by July 21, contact Jeanette Selin at the SOA office (phone: 847/706-3581; fax: 847/706-3599; e-mail: jselin@soa.org).

Competition offers prizes for educational papers

The 1998 Actuarial Art & Science Education Contest will be sponsored again this year by the *Journal of Actuarial Practice*. The contest offers first, second, and third prizes of \$1,000, \$500, and \$250 respectively.

Papers can focus on any subject related to actuarial science or insurance and do not have to contain original ideas. Priority will be given to papers

intended to educate newer actuaries on current actuarial practice.

The deadline for abstracts is Sept. 15. Completed papers are due Nov. 15. More information is available from Colin M. Ramsay, editor, *Journal of Actuarial Practice*, P.O. Box 22098, Lincoln, NE, 68542-2098 (phone and fax: 402/421-8149; e-mail: absalom1@ix.netcom.com).

New SOA office in Asia welcomes questions from students and members

by Patrick Cichy

If you are an actuarial student or member residing in Asia, the Society of Actuaries (SOA) is closer than you think. Last year, the SOA launched its new Asia Committee to promote actuarial education in Asia and to strengthen support services to its members in the region. The Asia Committee's mandates are:

- To represent the SOA in promoting actuarial education in Asia
- To provide services to its members in the Asia region in the development of actuarial education, research, and professional support
- To build the image and awareness of the actuarial profession in Asia

Membership in the Asia Committee is open to all SOA members residing or practicing in Asia. Actuarial students residing in Asia will automatically

become general members of the Asia Committee as soon as they achieve the ASA designation. General members are entitled to attend the business meetings of the committee and to join in discussions.

The committee has also opened the SOA's first representative office outside North America. The office, which opened in November 1997, is located at 11/F — Bank of East Asia Building, 10 Des Voeux Road Central, Hong Kong. Patrick Cichy, an SOA staff member from the U.S. office, administers the Hong Kong office. Questions related to the SOA can be directed to Patrick Cichy, Society of Actuaries Representative Office, G.P.O. Box 192, Hong Kong (e-mail: pcichy@soa.org).

Specialty guide on asset/liability management to be issued this summer

A new professional actuarial specialty guide, "Asset/Liability Management," will be distributed this summer to members of the SOA's Investment and Financial Reporting Sections.

The specialty guide was developed by a task force under the auspices of the Finance Practice Area Professional Education and Development Committee. The Asset/Liability Management Specialty Guide Task Force was chaired by Anthony Dardis.

A preliminary draft is posted on the Society's Web site (www.soa.org) under Libraries, then Finance & Investments. When available, the guide can be ordered through the SOA Books Department (phone: 847/706-3526; fax: 847/706-3599; e-mail: bhaynes@soa.org). Refer to AA-1-98. Individual copies are free to

members. A nominal fee is charged for multiple copies.

The SOA periodically prepares professional actuarial specialty guides to offer actuaries the opportunity to become more familiar with specialized practice areas. Each specialty guide focuses on one practice area and includes an overview of the practice area, a description of actuarial roles, and references for major topics within the practice area. A description of each reference is included along with an indication of the knowledge level required for the reference.

Topics of other specialty guides being developed include demutualization and equity-indexed insurance products. In addition, existing guides on Canadian taxation and Canadian financial reporting are being updated.

Fall exam prep seminars announced

Course 150 in Texas
James W. Daniel will conduct an 8-day intensive Course 150 seminar Oct. 3-10, Austin, Texas. The registration deadline is Aug. 21, and enrollment is limited to 15 participants.

More information is available from Dr. Daniel (phone and fax: 512/343-8788).

Courses in Philadelphia
Several intensive review seminars will be offered this fall in Philadelphia.

Temple University Actuarial Institute will sponsor seminars for the following courses: Course 140, Oct. 10-11; Course 150, Oct. 14-18; Course 151, Oct. 9-11; Course 160, Oct. 17-18; Course 210, Sept. 25-27; and Course 220, Oct. 1-4.

Casualty Actuaries of the Mid-Atlantic Region will hold review seminars for Course 100, Oct. 1-4; Course 110, Oct. 1-4; Course 120, Oct. 16-18; and Course 4B, Sept. 17-19.

Details are available from Bonnie Averbach, Program in Actuarial Science, Ritter Annex 475 (004-00), Temple University, Philadelphia, PA 19122 (phone: 215/204-8153).

Atlanta offerings
Georgia State University will sponsor exam preparation seminars in October for Courses 120, 130, 135, 140, 150, 151, 160, 210, 220, and CAS 4B.

More information is available from Vicki Abrams at Georgia State (404/651-2734).

RESEARCH CORNER

CKER highlights

The Committee on Knowledge Extension Research (CKER) recommended funding seven proposals submitted in its 1997 grants competition.

Letters of agreement are being processed for the following four projects.

- “Application of Nonparametric (Model Free) Technique for Forecasting Big Jumps and Falls in Interest Rate Values,” Faye Albert, Albert Associates; Vladimir Cherepanov, University of Toronto; and Vladimir Ladyzhets, Price Waterhouse. The researchers are investigating improved methods of assessing investment risk pertaining to interest rate volatility. The goal is to contribute to a better understanding of the statistical mechanism of interest rate fluctuations. The Investment Section is also providing funding for this research.
- “Inflation-Parameter Family of Discrete Probability Distributions and their Application in Analysis of Over and Under Dispersed Insurance Data,” Nikolai Valtchev Kolev, University of Sao Paulo, Brazil; Leda Dimitrova Minkova, Technical University of Sofia, Bulgaria; and Plamen Nikolov Neytchev, Bulgarian Academy of Sciences, Bulgaria. The researchers propose to construct a new family of discrete probability distributions which appear as an extension to the family of generalized power series distributions. They will study the properties of these distributions and apply some of the sub-classes in modeling and analysis of heterogeneous insurance data that exhibit over- or under-dispersion.

- “Asymptotic Behavior of Non-Homogeneous Risk Processes and Ruin Probabilities,” Victor Yur’evich Korolev, Moscow State University. He will investigate the asymptotic properties of generalized risk processes in which the process of insurance claims is not a homogeneous Poisson process as it is assumed in classical theory. As a basic model, generalized Cox processes, which are characterized by the stochastic intensity, will be considered. Ruin probabilities, asymptotic distributions, asymptotic expansions, and exponential bounds for tail probabilities will be obtained for these processes.

- Funding for a research assistant to help Sheldon Lin, University of Iowa, prepare his monograph on stochastic calculus and stochastic differential equations. (See “Research corner,” *The Actuary*, April 1998)

Letters of agreement for the remaining three proposals are pending receipt of additional information about other funding sources or the status of the proposed research.

Health benefit systems news

Speakers of diverse backgrounds stimulated a lively interchange of ideas at the SOA-sponsored symposium “Managed Care in a Time of Transition,” held May 4-5 in Minneapolis. The symposium focused on the future evolution of the managed care industry and the role of Health Plan Employer Data and Information Set (HEDIS) measurements in assessing health plan performance and quality improvement.

Three new SOA-sponsored research papers nearing completion were discussed. Jill Schield of Northwestern University and Jim Murphy of Howard Johnson & Company presented “Defining Effectiveness of the Managed Care System,” in which they examine the perspectives of the various classes of stakeholders in the managed care system to find synergies and conflicts in their goals and expectations. Denise Love and Luis Paita of the Utah Department of Health presented “Evaluating the Quality, Internal Consistency, and

Validity of Selected HEDIS Measures,” in which they examine the reliability of HEDIS measures for assessing health plan performance. Michael Chernew of the University of Michigan and Dennis Scanlon of Penn State University presented “The Relationship Between HEDIS Measures and Health Plan Choice,” in which they examine the correlation between the health plans chosen by employees during open enrollment and the HEDIS measures of those plans.

Other presentations included panels on purchaser and consumer views of managed care, practical issues in preparing HEDIS measures, and using HEDIS in decision-making. Tapes of the symposium are available from Teach ‘Em (phone: 800/225-3775; in Illinois, 312/467-0424).

Retirement systems update

The Retirement Plans Experience Committee has contracted with a research team lead by actuary Charles I. Vinsonhaler, Ph.D., professor, Department of Mathematics, University of Connecticut, to do a multivariate analysis of the pension plan mortality data gathered for the GATT Mortality Study.

Keep in touch with Research

The “Resources from Research” brochure presents concise information about SOA research reports and how to obtain them. The spring 1998 edition will be available at the SOA spring meetings in Hawaii and through the Research Department at any time. Copies are free of charge. Information on the Society’s research activities regularly appears on the SOA Web site (www.soa.org). Requests for proposals, calls for papers, research reports, “Resources from Research,” and other research news and information are available.

Questions and comments about any SOA research activity can be directed to the Research Department at 847/706-3500.

Winners of 3 actuarial research competitions announced

Recipients of awards have been announced for the first Edward A. Lew Award and the 1997 Annual Prize, both sponsored by the SOA, and the first James C.H. Anderson Memorial Award, sponsored by the Actuarial Education and Research Fund (AERF).

The Lew award recognizes achievement in modeling research. It was established by the SOA Committee on Knowledge Extension Research (CKER) to honor Lew's 1972-73 presidency of the SOA, his many contributions to the actuarial profession, and his support for actuarial research efforts. Lew died in 1996.

The high quality of the papers submitted for the first Lew award led CKER to make three awards of \$5,000 each for the papers:

- "Forecasting Social Security Actuarial Assumptions," Edward W. Frees, FSA, Ph.D., professor of business and statistics; Siu-Wai Lai, ASA; Marjorie A. Rosenberg, FSA, Ph.D.; and Virginia Young, FSA, Ph.D., assistant professor, School of Business, all of the University of Wisconsin
- "Understanding Relationships Using Copulas," Edward W. Frees and Emiliano Valdez, FSA, Ph.D., University of Wisconsin
- "A Longitudinal Data Analysis Interpretation of Credibility Models," Edward W. Frees, Virginia

Young, and J. Luo, ASA, all of the University of Wisconsin

The winners will be honored at the SOA Modeling Conference, Dec. 14-15, Orlando.

The Annual Prize honors the author of the best paper published in the *North American Actuarial Journal* (in past years, in the *Transactions*). For 1997, the \$500 prize was awarded to Phelim P. Boyle, Ph.D., Fellow of the Canadian Institute of Actuaries, director of the Center for Advanced Studies in Finance, University of Waterloo, and Sheldon Lin, ASA, Ph.D., and associate professor, Department of Statistics and Actuarial Science, University of Iowa, for their paper, "Optimal Portfolio Selection with Transaction Costs." It appeared in the April 1997 issue of the journal. In each calendar year, a prize is awarded only if the editorial board deems one is merited.

The first Anderson prize recognized outstanding papers presented at the March 1998 Bowles symposium, which focused on genetic testing. Papers were to address "innovative approaches to significant problems created by genetic testing." Honorable mention awards of \$5,000 each were given for three papers:

- "Should the Law Restrict Insurers' Use of Genetic Information? A Guide to Public Policy," Mark A. Hall, J.D., professor of law and public health, Wake Forest University School of Medicine

- "Effective Underwriting in the Genetic Testing Era," Robert J. Johansen, FSA, consulting actuary
- "Modeling the Impact of Genetics on Insurance," Angus S. Macdonald, Ph.D., Fellow of the Faculty of Actuaries, senior lecturer, Department of Actuarial Mathematics and Statistics, Heriot-Watt University, Edinburgh

The prize honors Anderson for his contributions to the actuarial profession. He is recognized as the builder of the former Tillinghast actuarial firm, growing a two-office operation into an international consulting firm with 28 offices in seven countries. (The firm has merged with Towers Perrin.) Anderson also was known as an innovative thinker and a pioneer in new products and systems. He died in 1993.

For more information on these competitions, contact Kathie Peters at the SOA office for the Lew award (phone: 847/706-3574; fax: 847/706-3599; e-mail: kpeters@soa.org); Cheryl Enderlein at the SOA office for the Annual Prize (phone: 847/706-3563; fax: 847/706-3599; e-mail: cenderlein@soa.org); and Curtis Huntington, executive director, AERF, at his *Directory* address for the Anderson prize.

Information on awards sponsored or judged by the SOA also is available in the *SOA Yearbook*.

Faculty openings in Australia

Two actuarial science teaching positions are available on the Faculty of Commerce and Economics at the University of New South Wales, Sydney.

The positions will be at the senior lecturer or lecturer level. They will take effect in January 1999, but one may be postponed until June 1999.

Duties will include teaching undergraduate and postgraduate actuarial subjects, developing the actuarial syllabus, and contributing to research and continuing education programs.

Minimum qualifications are a professional actuarial qualification and a higher degree, or substantial progress to completion of a higher degree or

an equivalent research record.

Details are available on the Web at <http://149.171.208.125/positions/htm> and from Michael Sherris, Faculty of Commerce and Economics, University of New South Wales, Sydney NSW 2052, Australia (phone: 61-0-2-9385-2333; fax 61-0-2-9313-6337; e-mail: msherris@unsw.edu.au).



on the lighter side

A new life in a field of dreams

by Dave Hall

Ever dream about working in a fantasy world?

As a kid, I was an avid fan of the Cleveland Indians. I remember going to sleep at night with my transistor radio nestled under my pillow, listening to the exploits of Sam McDowell and Rocky Colavito and thinking how great it would be if someday I could be a major leaguer. Even as a teenager, when I had fully realized that I wasn't blessed with big league baseball talent, I still thought the coolest job would be that of a baseball statistician.

After 21 years as a life actuary, the last 14 as an investment specialist, I decided to pursue that fantasy, although in a way I couldn't have imagined as a teenager. I retired from my job and started an adventure as a fantasy sports analyst (which abbreviates, coincidentally, to F.S.A.).

Fantasy sports have grown into a major global pastime. Fantasy baseball reportedly has more than 4 million players worldwide. Fantasy games encompass a wide variety of formats, but the general framework involves selecting active professional athletes for a roster that you manage. The players are either chosen by a draft process or purchased using fantasy money. Your team accumulates the actual statistics that each of its players is producing in real life. These stats are then converted

into a score by means of an algebraic formula or else ranked against the comparable stats for other teams in your fantasy league. During the season, players can be traded among teams or released, and free agents can be added. Some games even provide a "capital market" for buying and selling players, with each player's price changing day by day according to his market demand.

The Internet is an ideal arena for staging fantasy sports games; statistical data is widely available, and computer programs can easily administer roster moves and manage the scoring tabulations. Virtually any sport that maintains player statistics can easily be adapted to a fantasy format. Baseball is clearly predominant today — with its most common form referred to as "rotisserie baseball" — but fantasy leagues are also widely available for football, basketball, hockey, golf, tennis, soccer, auto racing, and even sumo wrestling (or so I hear). More recently, a number of sports-based stock market simulations have emerged, treating teams and players as tradable financial instruments; the objective is to accumulate fantasy wealth rather than real stats.

I became hooked on fantasy sports because it offers a way to enjoy professional sports in a highly mathematical context. While success as a fantasy team manager requires at least a basic understanding of the sport and some familiarity with the players, the most critical skills are mathematical — such as developing a trading strategy, optimizing and balancing statistical output under financial constraints, and planning for unforeseen contingencies (e.g., injuries). Actuaries apply many of these skills in the real world. As an avid fantasy sports player, I found many useful Internet sources for sports information but few for technical strategic analysis. That's where I thought I could provide a useful service — and have a ball (no pun intended) while doing it.

So last December, I started a Web site (www.RotoGuru.com) devoted to the analysis of fantasy sports strategy,

with an emphasis on games that include a capital markets aspect. (The site generates a small amount of revenue from advertising arrangements.) I provide daily observations, statistical tables, essays on strategy, Q&A feedback columns, and an occasional contest. I already have regular readers and correspondents from around the globe. I am particularly fascinated by contrasting the inefficiencies of many of these new markets with the efficiencies of the U.S. capital markets. I can also see that, as these markets grow in size and improve their access to better and more timely information, some of those inefficiencies are gradually evaporating.

Reading the sports section "is job related now."

What's my day like now? I begin "work" around 8:30 a.m. by reading the sports section. (It's job related now; sounds like a fantasy already, eh?) Then I wander over to my computer, download stats from the previous night's games, create a few reports, and upload them to my Web site. I also prepare my opening commentary, in which I write whatever I want to. After an early afternoon trip to the local swimming pool for some exercise (unless I opt to golf instead), I respond to e-mail, do research, write strategy articles, and shuttle my kids to their various lessons or appointments. In the evening, I try to watch or listen to a game while I continue research and writing. The night ends with ESPN's "Sportscenter," "Baseball Tonight," or both.

It doesn't get much better than this.

There's a very important side benefit to my new venture. Both of my teenage sons have become interested in fantasy sports. So now my teenagers and I have a common area of interest — about which we can actually have a dialogue.

Dave Hall's e-mail address is
davehall@home.com.

DEAR EDITOR

Keep actuaries
'in the room'

I was delighted to see three articles related to the topic of affordable health care in the April 1998 issue of *The Actuary* ("Seeking answers," by Richard Lake; "Rate making under pressure," by Janet Carstens; and "Dealing with the puzzle," by John Hartnedy).

My article in the May/June issue of *Contingencies* (the American Academy of Actuaries magazine), "Affordable Health Insurance for Faithful Persisters," discusses a new methodology for pricing. A more complete discussion is scheduled for the fall 1998 issue of *Actuarial Research Clearing House*. I would welcome comments and questions from readers.

In her editorial, Ms. Carstens quoted political economist Uwe Reinhardt as saying that when HMOs set the rates, the marketing people take charge, actuaries are sent out of the room, and managers pray to God and their medical directors that expenses will stay low. If HMOs were regulated under the methodology I propose, actuaries would always have a place in the room.

Dinkar B. Koppikar

The fertility rate
and Social Security

Steve Kellison's article ("In praise of indexing," *The Actuary*, January 1998)

hit the mark regarding major impacts on the U.S. Social Security system.

The low fertility rate of the baby boom generation is certainly a major threat to the system's stability. I propose direct recognition of an individual's contribution to society's future productivity in determining his or her Social Security benefit. Of course, there should be a floor for all wage earners, but wage-earners who parented children should qualify for additional benefits. A reasonable structure to price would offer a 5% benefit bonus per child with a 50% cap. (A counterargument to this proposal is that persons who have borne more children have more potential sources of support in old age.)

I know that some will find this suggestion repugnant because incentives for childbearing have characterized some totalitarian societies in recent history. However, our society's future productivity depends on the willingness of married couples to bear and raise children. A social insurance benefit incentive would go a long way towards rectifying the deterrents to childbearing which currently characterize our society. This in turn would help the demographics which drive Society Security costs.

Kenneth Faig

Steve Kellison responds
I agree with Ken that discussion of

fertility rates quickly gets into controversial areas. As actuaries, I believe our role is to focus on the economic impact of such factors as fertility rates and dependency ratios. Ultimately, the political process has to resolve what types of human behavior should be rewarded or discouraged through program design.

Myers to be listed
in Guinness book

The Guinness Book of World Records has announced it will list Robert J. Myers as a record-holder for the number of times he has testified before the U.S. Congress.

Myers is cited for testifying 175 times, mostly over two periods — 1947-70 as chief actuary of the U.S. Social Security Administration and 1981-82 as deputy commissioner of Social Security.

Myers has addressed Congressional committees a number of additional times, most recently on Feb. 26 (see "Actuaries testify on Social Security retirement age," *The Actuary*, April 1998).

Upcoming SOA meetings and seminars

Aug. 27-28	Managed Care: Capitation & Beyond	Westin O'Hare, Chicago
Sept. 23	Basic GAAP	Disney's Coronado Springs Resort, Orlando, Fla.
Sept. 23	Term Wars	Disney's Coronado Springs Resort, Orlando, Fla.
Sept. 24-25	Valuation Actuary Symposium	Disney's Coronado Springs Resort, Orlando, Fla.
Oct. 15-16	Advanced GAAP	Marriott Marquis, New York
Oct. 18-21	SOA Annual Meeting	Marriott Marquis, New York