

The Actuary

Back to the future



*by David M. Holland
1996-97 President
Society of Actuaries
Address at SOA Annual Meeting
Orlando, October 29, 1996*

If you attended a school with an actuarial program, do you remember your first actuarial course? I don't mean math and stats, but something dealing with real actuarial practice. For me, it was "Math of Finance," and it almost convinced me to pursue another career. Thirty years ago, the course focused on multiplying two 10-digit numbers together and then dividing by a 10-digit number. Calculators weren't available, and sometimes to decide on the "right" answer, the class would vote. To me, math was never a democracy, and spending the rest of my life as a human calculator was not appealing. Today, hand-held calculators with preprogrammed functions automatically solve problems more complex than any in that course.

One of my first actuarial jobs was calculating gross premiums for life products. It involved taping together sheets from large columnar pads, setting up formulas across the top, and doing hours of calculations. Then came the inevitable question: What would happen if we changed this number? Again, what took hours of tedious calculations can now be done in micro-seconds with a personal computer and spreadsheet package.

Today, we often prepare models that look 30 or more years into the future. We may conveniently extrapolate the future from assumptions derived from the past, but changes over such a period of time can be revolutionary.

Consider the Texaco gas station scene in the movie *Back to the Future*. The hero, Marty, was catapulted from 1985 back to 1955. One of the first things he saw was a state-of-the-art Texaco station. A car pulled up, and five gas station attendants delivered the ultimate in automotive service. I don't know if you've bought gas recently, but the last time I did, I did not see a single human being. Obviously, the vision of owning a gas station with a large staff lost out to automation, redesign, and downsizing. The future includes paradigm shifts. Both the Texaco scene and my early actuarial experiences show that a vision that assumes the future is a simple extrapolation of the past may be grossly misleading. Today, we speak

of "paradigm shifts." For example, a railroad must now be a transportation company. A manufacturer of large supercomputers cannot afford to ignore developments like the personal computer, local area networks, and the Internet. The United States cannot overlook the financial implications of an aging baby boom generation. Actuaries cannot assume that their world will not change; in fact, many changes are already apparent:

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The Actuary

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Robert D. Shapiro
Editor responsible
for this issue

Editor

William C. Cutlip, FSA
76443.1471@compuserve.com

Associate Editors

Robert H. Dobson, FSA
bob.dobson@milliman.com
Sue A. Collins, FSA
102714.2361@compuserve.com
Robert J. McKay, FSA
Robert D. Shapiro, FSA
73231.102@compuserve.com
Marc Twinney, FSA

Assistant Editors

Selig Ehrlich, FSA
Craig S. Kalman, ASA
74262.2543@compuserve.com
J. Bruce MacDonald, FSA
jbmlmac@ac.dal.ca
Ken A. McCullum, FSA
102757.2132@compuserve.com

Puzzle Editors

Louise Thiessen, FSA
lthiesse@accessweb.com
Dan Reichert

Society Staff Contacts
847/706-3500

Jacqueline Bitowt
Public Relations Specialist
jbitowt@soa.org
Cecilia Green, APR

Director of Public Relations
cgreen@soa.org

Linda M. Delgadillo, CAE

Director of Communications and Administration
ldelgadillo@soa.org

Correspondence should be addressed to
The Actuary

Society of Actuaries
475 North Martingale Road, Suite 800
Schaumburg, IL 60173-2226

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David M. Holland, FSA, President
Bradley M. Smith, FSA, Director of Publications

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EDITORIAL

What actuaries aren't

by Robert D. Shapiro

Dave Holland's presidential address, our front page article, presents a wonderful discussion of our SOA vision. This vision is "for actuaries to be recognized as the leading professionals in the modeling and management of financial risk."

Reflect for a moment on what this vision doesn't say:

- It doesn't say "recognized by the insurance and employee benefit industries as professionals." There is no industry specificity, as there is none for physicians, attorneys, or most other professionals. Our vision is to be recognized by everyone as the professionals to call whenever and wherever modeling and/or management of financial risk is required.
- It doesn't say "for SOA members to be recognized." By not referencing the Society of Actuaries, the vision statement conveys a "one profession" message to our stakeholders. Hence, the vision pushes us to work together with other actuarial organizations to assure that our publics receive consistent, high quality, professional service.
- It doesn't say "... modeling, problem solving, and advising on financial risk." Its emphasis on "management" encompasses not only problem solving and advising but also implementation and monitoring of proposed solutions. This emphasis requires a rigorous business context to be provided around our rigorous technical foundation. That, in turn, demands that the SOA educate actuaries beyond our historic mathematical and problem solving foundations — a thrust at the core of the SOA's new basic education plan.

We are witnessing a long-needed convergence of intent and action within the SOA. Few question the power of our actuarial skills or the need — for both the public and for the profession — to apply these skills beyond the limitations of our historic roles and employers. As the consistency and strength of these convergent streams of strategy and activity intensify, we will see more and more evidence of our vision being realized.

Several other articles and sections in this issue of *The Actuary* provide such evidence. The interview with Bill Potvin and Frank Buck, practice leaders at Deloitte & Touche, illustrates the potential to apply actuarial skills across a broad range of roles and industries. It should be noted that Bill is not an actuary. This broadened role is also seen in the interviews with Shane Chalke, Walter Rugland, and Dwight Bartlett regarding the role of the actuary. Your letters responding to these articles are welcome. We'd like your input on the topics they cover.

The letter to the editor from Yiji Starr provides additional perspective on the role of the actuary.

Introducing a new editorial board member

I would like to welcome Selig Ehrlich to *The Actuary's* editorial board as my assistant editor. He worked for 10 years at The Equitable Life Assurance Society and then as an actuarial consultant with Coopers & Lybrand for four years before joining Travelers Insurance as chief actuarial officer in 1994 with responsibilities in its life and property & casualty companies. He earned a bachelor of science degree in both actuarial science and finance from New York University

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Why actuaries have an edge in the marketplace

by Jacqueline Bitowt
SOA Public Relations Specialist

Financial experts were the highly valued professionals of the 1980s. In the '90s, reengineers took the spotlight. By the year 2000 and after, might the high-platform role in the marketplace go to those with credentials and experience as an actuary?

Deloitte & Touche LLP principals Bill Potvin and Frank Buck think so. Practice leaders at a consulting firm that once held business generalists in highest esteem, they now actively seek actuaries to help solve problems in ways that traditional business consultants cannot.

Why is the role of actuary joining the milieu of world-class consultants? Potvin, a nonactuary who is national director of the Actuarial and Insurance Consulting Group, and Buck, an actuary who leads the firm's national Life Practice Group, see problems ahead whose solutions require the skills actuaries have in abundance. Ironically, the forces behind those problems also will redefine the profession itself, the consultants said. These forces will make the current actuarial career path largely outmoded in about 10 years. Equally ironic is Potvin's and Buck's view that actuaries will have to "sell" business and industry leaders on the benefits of actuarial skills, in part by addressing those leaders in terms they understand. Two megatrends are forming the future

"We are looking for actuaries who view their future as expanding into a broader, risk-oriented set of services," said Potvin. "We've done some significant strategic planning in our actuarial practice area to prepare."

What do Potvin and Buck see in that future? "Demographics drive the major trends in this society, and the graying of the 'baby boomers' will create two megatrends," said Potvin.

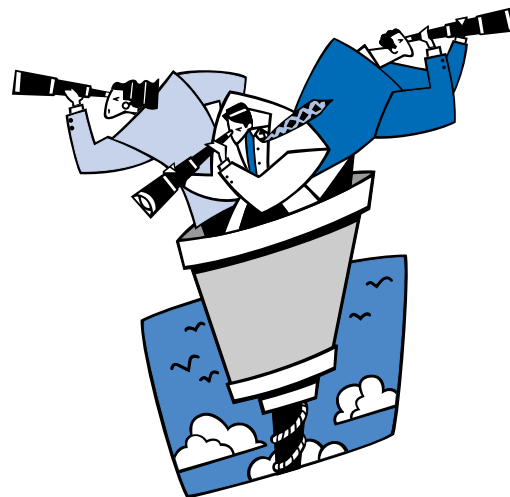
One is declining resources as the nation's workforce shrinks dramatically, leading to much lower production of goods and services per person. "Society will need to find a whole new set of ideas and behaviors to close the gap between the baby boomers' needs and the economy's ability to meet them," Potvin said. Health care and pensions will rank among the major concerns.

The second trend is the growing imperative to manage financial risk in a world of technology and global markets and the resulting breakneck speed of change.

Risk management will be critical to both individuals and corporations in years ahead, Potvin pointed out. "Baby boomers will look for ways to guarantee their income," he said. "On the corporate side, as 401(k) money gets drawn out of the marketplace, the stock market won't be going up so quickly. Capital will be harder to obtain, so managing capital will be very intense. We know that the boom of recent years won't reoccur to the same extent when baby boomers move into the retirement phase and become consumers of money, rather than investors." Who has the tools for risk management?

Potvin believes the ability to deal with future-oriented financial risk in a sophisticated way will be vital to society. "The demand of the financial industry for future management of their financials will be significant. Everyone will want to know: Has the company for the foreseeable future provided for major risks? Participating in the future risk analysis of companies may be the consulting 'product' of the next century."

This work calls for financial forecasts, risk analyses, creation of hedging



strategies — and the modeling behind those and other tools of risk management. Though several categories of professionals may have some of the skills needed to do the job, Potvin and Buck believe none are as thoroughly trained and experienced in those skills as actuaries. "There is a real dearth of programs focusing on probabilistic training for those on financial, social science, or business career paths," Potvin said. "Students with great ability in mathematics are often tracked into math and physics majors, leaving a huge gap."

Furthermore, Potvin observed, "The marketplace values professional certification. Most people in the marketplace don't understand what actuaries do, but they think of them as mathematicians with professional certification."

Potvin said that "this identity gives actuaries an edge" in a world increasingly dependent on successful management of financial risk. But actuaries could lose that edge as other professionals develop the needed skills — and stake their own claim on the financial risk management marketplace. Actuaries must re-tool. Potvin and Buck believe the future world of work for actuaries will be very different from that of the past.

Both point to the consolidation in the life industry. "Experts have predicted it for some time, and it's happening," Potvin said. "What actuaries are currently doing won't be in demand in the future. Look at the

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Back to the future (continued from page 1)

- Traditional insurance companies and financial services institutions are going through a radical transformation, which is being accelerated by consolidations and mergers.
- Long-standing laws separating insurance, banking, and other financial services are being challenged.
- Many problems and opportunities are being brought on by the aging of the population and the need for Social Security and Medicare.
- Health care delivery is being reformed with many new opportunities for actuaries being brought on by managed care.
- There is an increased emphasis on the quantitative aspects of finance and investments.
- Business is becoming more international every day.

Actuaries must be prepared to respond to these and other changes. Actuaries perceived as backward-looking. Just how are actuaries perceived? We know the truth — actuaries are superheroes. Unfortunately, the general public is not yet fully enlightened. An article published in the April 1 issue of *BestWeek* was no joke. Analysts from Oppenheimer discussed their opinion about problems in the individual disability income market. In a section headed "Fire the Actuaries," they say:

"Actuaries are trained to work with rear-view mirrors; they use historical claims experience, grossed up by expected inflation, to project claims. Moreover, actuaries' work is largely quantitative; they use historical data on the frequency of claims to predict future claims.

"Yet it was precisely this sort of backward-looking, numbers-oriented thinking that allowed the changes in medicine and law to go virtually unnoticed at disability insurers for years.

"That probably wouldn't have happened — at least not nearly to the

same extent — if disability insurers had relied more, in setting their premiums, on industrial psychologists and labor economists, professionals whose approach is much more forward looking than that of actuaries."

Actuaries cannot be seen as scapegoats for marketers demanding aggressive products and management living from quarter to quarter based on short-term results. In spite of our strong computational skills, we cannot accept the label of backward-looking number crunchers.



The 1995-96 President Sam Gutterman (left) transfers the gavel to 1996-97 President David Holland at the Orlando annual meeting.

SOA Mission and Vision Statement for the future actuary I am sharing this with you to talk about the Society of Actuaries' mission and vision. Over the past year, a new Mission and Vision Statement has been developed. I thank the Committee on Planning, the Board of Governors, and the members who submitted comments.

The Dilbert Principle defines a mission statement as "a long awkward sentence that demonstrates management's inability to think clearly." While some of you commented that management works on mission statements when it can't figure out what else to do, and that usually the finished product has little impact on an operation, your statements were generally thoughtful and encouraging. I found the process extremely beneficial in

focusing on where the SOA is and where the SOA wants to be. The Mission and Vision Statement the Board adopted 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. The vision of the Society of Actuaries is for actuaries to be recognized as the leading professionals in the modeling and management of financial risk and contingent events." The education part of the mission

First, the SOA is an educational organization. Students may think we are an examination organization, but we want our system to be the gold standard for actuarial educational excellence worldwide. A Board Task Force on Education has worked on the framework for actuarial education, both for today's actuary and the 21st-century actuary. Education doesn't end with completing exams. Meeting the needs of our members and other actuaries requires a comprehensive continuing education system, too. The research mission As a research organization, the SOA has long conducted historical experience studies, but our research activities have significantly expanded. Our first monograph, *Valuation of Interest-Sensitive Financial Instruments*, will be introduced at this meeting in a seminar track. Three other monographs were released in November, and two more are in production.

The professional role As a professional organization, the SOA promotes high standards of professional competence and conduct. It has a Code of Professional Conduct and, in matters of conduct and discipline, it cooperates with the Canadian Institute of Actuaries

and the American Academy of Actuaries, including the Actuarial Standards Board and the Actuarial Board for Counseling and Discipline. Public service

Actuaries provide service to the public by developing and valuing financial programs. The SOA meets its responsibility here by recruiting and educating actuaries and by performing its role as a professional organization. Note that as a professional organization, the SOA would place serving the public ahead of serving its members in the event of a conflict between the two.

Service to members

The SOA is committed to serving its members by providing services to meet their needs and improve their skills. This is the case whether our members work in traditional or emerging practice areas. Although most members reside in Canada or the United States, a significant number live or practice in other geographical areas. The SOA is committed to addressing their international needs and to developing actuarial science worldwide.

Knowledge advancement

In today's dynamic and rapidly changing world, actuarial knowledge must be continuously expanded to meet more complex problems and to enhance the value that actuarial analysis adds. The SOA's mission must be advancing actuarial knowledge and enhancing the ability of actuaries to use that knowledge. The Mission Statement acknowledges that today the actuary is viewed as providing expert advice and relevant solutions to problems. Here, there is an implicit perception of the actuary as adviser rather than manager. Our focus will continue to be on business, financial, and societal problems dealing with uncertain future events.

The power of having a vision Before talking about vision for the SOA, think for a moment about the power of vision. The future is not written, and we have the ability to influence it, if not write it. Harold Geneen, the

legendary chairman of ITT, said this on business management:

"You read a book from the beginning to the end. You run a business the opposite way. You start with the end, and then you do everything you must to reach it."

Management's role is to have a vision of the future, a goal we must march toward, an idea on how the book should end. Without that goal, the organization would be propelled only by its existing momentum. With the goal, we can use tools to see if we can reach it or make corrections to achieve it.

Dr. Martin Luther King Jr., an Atlantan who knew the power of vision and dreams, said:

"Let us not seek to satisfy our thirst for freedom by drinking from the cup of bitterness and hatred. ... Again and again, we must rise to the majestic heights of meeting physical force with soul force. ...

"So I say to you, my friends, that even though we must face the difficulties of today and tomorrow, I still have a dream. It is a dream deeply rooted in the American dream that one day, this nation will rise up and live out the true meaning of its creed — 'We hold these truths to be self-evident, that all men are created equal.'"

Walt Disney, the visionary who created Disney World, the location of our annual meeting, said:

"Of all the things I have done, the most vital is coordinating the talents of those who work for us and pointing them toward a certain goal."

The goal and vision of the Society of Actuaries "... is for actuaries to be recognized as the leading professionals in the modeling and management of financial risk and contingent events."

The vision is expressed in terms of actuaries — not just SOA members. Further, our desire is not just for actuaries to be the leading professionals in modeling and managing risk, but to be recognized as such. I hope the importance of this is crystal clear.

This vision does not mean the SOA is co-opting roles of the other North American actuarial organizations;

one way we can succeed is through cooperation.

Changing the image of the actuary

We must improve the image of the actuary that employers and potential employers have. Walt Rugland was on the right track when he had a campaign to "Ask An Actuary." I also applaud President-Elect Anna Rappaport's initiatives to involve the SOA with organizations emphasizing health and pension education and research.

The SOA vision also seeks to broaden our role from advisers and problem solvers to modelers and managers. Some members think we are pretentious to seek recognition as the leading professionals in modeling and managing risks. I unabashedly accept that criticism and say that I do not see how we can set our sights on being anything other than the very best.

Actuaries are people of incredible ability. Many will play out their careers in traditional practice. However, the 21st-century actuary, the redesigned actuary, must realize that actuarial practice cannot be narrowly defined by traditional insurance applications and life contingencies models. We must envision our role as the financial engineers of the future, and we must gain recognition as the leading professionals in modeling and managing financial risk and contingent events.



Past President Don Sondergeld (left) congratulates David Holland as he begins his term as SOA president.

The public good vs. private profit?

by Linda Heacox

SOA Public Relations Specialist

Is there a conflict in the roles actuaries assume? Can some actuaries serve as internal compliance officers while others lead large corporations and aggressive consulting firms? Can actuaries be regarded by the business community as strategic business people as well as professionals with an obligation to serve the public? Does a given actuary's decision to accept an expanding regulatory role diminish his or her capability to contribute to the strategic direction of a company?

"It is absolutely not an either/or situation," said Dwight Bartlett, III, commissioner of insurance for Maryland, former chief actuary of the Social Security Administration, and past president of the Society of Actuaries. "I don't think there is a negative associated with the enlargement of the legal roles actuaries play in valuation and illustration models."

"Actuaries can play either regulatory or business-oriented roles. You could compare it to the roles accountants play. The accountant who must sign

off on the company's audit obviously has a role of responsibility to the public. And the accountant who advises senior management is definitely seen as a member of the management team whose first responsibility is to management," he continued.

"Actuaries fill a variety of roles in insurance. The important thing is to balance them. Valuation and illustration actuaries clearly have a role defined by law, but the pricing actuaries have more of an employee role. They are chiefly responsible to their employers," Bartlett said.

Roles are compatible David O'Leary, vice president of life product development at Aetna, Hartford, Conn., agreed. "Pricing actuaries, in my opinion, have a final responsibility to the shareholders."

O'Leary said the roles are not mutually exclusive but compatible. In fulfilling their obligation to their employers, they also fulfill responsibility to the public. "Actuaries are the financial stewards of the insurance company. They make sure the company is sound and does things that are appropriate, and in doing so, are responding to the regulators."

Not all agree on roles One of the most outspoken dissenters is Shane Chalke, president of Chalke/SS&C, Chantilly, Va., who incorporated his ideas on the subject into his platform as an SOA presidential candidate in 1996.

"There are two competing models within the SOA leadership of how

actuaries can stake out a role for themselves in the modern world — strategic business leaders or internal regulators," Chalke said.

"I object to the tendency of our profession to carve out a role as guardians of the public trust. I remember a resolution from the Academy of Actuaries board about four or five years ago calling for much closer ties to the regulatory process, including a mandated opinion on company solvency. I view this as a form of rent-seeking behavior — building a wall around what actuaries do and forcing firms to buy a service that only actuaries can legally provide," he said.

"I don't want to say there isn't a powerful value in the oversight process. In fact, our most powerful regulatory sector today is the rating agencies. They perform an important private regulatory service. And since they function in a competitive economy, the quality of their work product continually improves and their analysis is more holistic than the more old-fashioned regulatory service," Chalke said. Becoming marginalized "When you're an internal auditor, you're being funded by shareholders, but you are functioning as a policeman. You're less valuable to shareholders and senior management than business decision makers. Senior management will view this role as binary — 'We're OK, we're not OK.' This view marginalizes actuaries, who tend not to be let in on the most serious business decisions except as part of the vetting process."

"In some circles in the business world, actuaries have a reputation for manufacturing work to keep themselves employed. There is a significant component of the management branch of the life insurance industry that tends to have this view of the valuation and illustration actuary campaigns."



"It doesn't speak well for the future of the profession. Because if you become a necessary evil, the executive asks How can I acquire this necessary evil at minimum cost?"

Walter Rugland, consulting actuary with Milliman & Robertson, is sympathetic with Chalke's views but doesn't entirely agree. "Because of the nature of the state laws governing valuation and who can do it, there can be a downside for the appointed actuary," Rugland noted. "Unlike the United Kingdom, where the appointed actuary is named by a company's board and is almost always the most senior actuary, in the United States they are appointed by management and are often not most senior.

"Therefore," said Rugland, "there is a potential for appointed actuaries to get boxed in and be viewed by senior

management as whistle blowers and technicians."

However, in the U.K., "Management gets a lot of technical as well as commercial value out of the appointed actuary," Rugland said.

Rugland is a believer in self-regulation as a much preferable alternative to government regulation. "I'm troubled by people who think there is a conflict between shareholders and policyholders, because policyholders are customers and shareholders are in business to serve customers. In the long run, what's appropriate for the customer is good for the shareholder. The insurer has no purpose if it doesn't serve the policyholders.

"The responsibility of the actuary is as an employee of the shareholders. That's very clear. The actuary shares the same concern about delivery of

good product to the policyholders as the shareholders. Implicitly, as a professional, the actuary has a responsibility to serve the public.

"The profession has established standards of practice. If the standards don't seem to serve the shareholder adequately, that's an issue to discuss. We don't want a lot of people telling us how to do our business, and we want rules kept to a minimum. In Standards of Practice, we say the public is best served when actuaries use their professional judgment. Then we turn around and say the public can be assured the work product is a good one if it follows the methodology articulated by the standards.

"We are focusing on the future all the time and asking if there are better ways to do things. We're moving forward in our science."

Why actuaries have an edge in the marketplace (continued from page 3)

number of insurance executives in their 40s and 50s pounding the pavement. Another example: Just 15 years ago, the proliferation of faxes, PCs, and spreadsheets we have today did not exist, and APL programming was the hot career. If you do not 're-tool' yourself every five years, unemployment is a very cruel possibility."

Payrolls were larger 15 years ago, and "outsourcing" was not even a word. Today, it's the trend in business — an unstoppable one, said Potvin, "because it's a more efficient business model." That means more professionals will need to take the role of consultant in the years ahead. "This is a fundamental shift in the marketplace," he said.

So the vision of the actuary employed for decades by the same employer, an insurance company, and growing in that job is coming to an end, Potvin and Buck believe. Creating models to manage financial risk on a consulting basis in a rapidly changing business environment — this is their picture of the actuarial profession's future.

New skills needed

in the era of outsourcing
"To be a successful consultant, you must be able to sell and communicate an answer," Potvin said. "If not, the solution is useless. Those who develop those skills will have a competitive edge in the marketplace. It's the difference between being a highly paid, highly placed professional and someone sitting in a cubicle somewhere — or even being unemployed."

Buck said he "grew up" in the insurance industry before moving to consulting about 10 years ago. "Too many actuaries are skilled technically in a very narrow area. They need to turn their attention to a broader range of problems."

Buck said it usually takes three to four years to acquire successful consulting skills once an actuary has joined a consulting firm. These skills include:

- Listening: "Listen to what the client wants."
- Comprehension and communication: "We have to work with our employers or clients to help them

understand what options are available. We need to understand what their needs are and develop actions they can take to meet those needs."

- Presentation: "You must present yourself well. You need to give the right answer — but in such a way that it can be useful to a client. You need to state it in terms of what its impact will be."

Potvin's role model for the actuary of the future is the lawyer who helps clients find paths to success, rather than just telling them why they can't take certain actions. "The successful actuary of tomorrow will assess what a business needs and where it has to go, and then help its leaders move it there," he said.

"The classic consultant was a business generalist. Actuaries are the opposite of that. They're highly trained technical specialists, and the needs of the business world are moving in that direction. The 'sweet spot' in the market is somewhere in the middle."

We've got two words for you

by Linda Heacox

SOA Public Relations Specialist

The Board Task Force on Education and Examination and the Design Team want to change the ways actuaries learn two basic, critical processes: modeling and thinking. These two words appear over and over in plans for developing actuarial skills suited to the environment of the 21st century.

In August 1995, the task force listed the skills it wanted the new syllabus and exams to foster:

- Unstructured problem solving
- Flexibility
- Adaptability
- Expertise in modeling techniques
- Global thinking
- Stochastic and dynamic approaches
- Expanded application of contingencies
- Imaginative responses
- Business value added

Design Team member Bruce L. Jones, assistant professor at the University of Western Ontario, said, "We hope these skills will better prepare actuaries to hit the ground running. Our goal is to add to their desirability by employers."

"Course 7, modeling, represents a big change from the way we teach modeling now. We envision it as an intensive seminar lasting at least one day and quite possibly longer. Candidates will work with computers and may be assigned teams. They will apply critical-thinking and problem-solving skills with the help of instructors. Admission will be limited to keep the instructor-to-candidate ratio low."

According to Jeff Allen, SOA education actuary, the new system will more closely reflect the things actuaries really do on the job. Many of the same subjects will be taught; the difference will be in the way they are taught.

"Right now," said Allen, "many subjects are being taught in a disjointed way. For example, modeling. We teach risk theory, demography, statistics, survival models, and other aspects of modeling all separately. But that's really not the way it is on the job. We want to integrate skills, and we want candidates to think critically in order to solve problems."



Allen said the Design Team hopes that by emphasizing this approach to subjects, actuaries will be better prepared to think of the tasks they perform in the total business context. To those who envision broader business roles for actuaries in the future, that kind of thinking is vital.

Marta Holmberg, Ph.D., SOA education executive, said, "People now pretty much see themselves as specialists. But the foundation for all those specialties is the same. So we want to emphasize the principles common to all types of practice, and we hope to make the foundation even stronger."

An actuary going through the new courses will be more comfortable as a generalist, according to Holmberg. "Somebody who wants a purely technical niche may not be comfortable

going through the system," she said.

"We hope this new approach will make them feel more confident when they see opportunities to break out of their boxes and head in new directions."

As for the specifics of the new integrated approach, Holmberg said, "It will be implicit in the exam process. Exams will require candidates to think of subjects as they relate to each other." Recruiter's eye view

Atlanta recruiter Terri Michalewicz, who has been placing actuaries for 12 years, emphasized the need for candidates to have a sense of the big business picture. "Historically, technical expertise was the primary requirement employers looked for. Now, more companies are giving greater importance to skills and abilities rather than focusing solely on specific technical experience," she said.

"Years ago, it was highly unlikely companies would consider anyone with anything other than an actuarial science, math, or statistics degree. Often, successful candidates had both a bachelor's and a master's in the same area," she explained. Now, it's not unusual to see undergraduate degrees in history, English, and other liberal arts disciplines.

"Companies don't see that as a negative anymore. As a matter of fact, some point to it as a plus, showing the possibility of a well-rounded person. MBAs are highly valued. Companies are looking for good business people," she said.

That lesson was highlighted last year when Michalewicz went looking for an actuary to work for a commercial bank. The interview process proved a challenge. "Finding the right technical skills was not the problem. The non-technical ingredients were hard to find."

"The bank wanted an actuary who understood corporate finance issues, such as how capital is raised, how deals get done, and how their world

relates and interacts with the rest of the company. The person had to be able to communicate in a way bankers could understand. Many candidates had a difficult time."

Michalewicz did eventually find the right person. "I talked to the bank the other day. They are happy with the performance and the contributions of this actuary. The two worlds are coming closer together."

Interestingly, it was the bank that came calling. "They came to me and said, 'We understand the asset side, but not the liability side. We think we need an actuary.'"

It is a phrase Michalewicz is hearing often these days, the result of growing awareness of risk management in the general business community. "Risk management is seen as a critical component of managing a business. Historically, many companies used asset/liability matching strictly to meet regulatory requirements. Today, asset/liability management and risk management in general is

considered a necessity, not a luxury. Actuaries are seen as risk management professionals."

Perhaps the biggest obstacle for candidates is overcoming some general perceptions about actuaries, she said. Managers generally believe actuaries are bright, but think they often lack communication, interpersonal, and management skills. They're good problem solvers but may be narrow and unable to see the big picture or business aspects. They are ethical but capable of arrogance and rigidity. They're analytically and quantitatively strong but may lack marketing sensitivity. They may be expert modelers and detail-oriented but often are unable to think "outside the box."

Michalewicz's list of skills actuaries need to be hired both in traditional and nontraditional roles includes:

- Effectiveness as a communicator
- Management and leadership ability
- The ability to influence and negotiate

- Understanding business principles
- Technical and analytical skills

She urges development of all these skills and said actuaries need to be able to demonstrate mastery of them to potential employers.

Editorial (continued from page 2)

College of Business and Public Administration in 1980, and he attained Fellowship in the Society of Actuaries in 1984. His professional activities have included presentations at numerous professional meetings and business conferences. He has served on the Actuary of the Future Task Force and Section Council.

We look forward to tapping into Selig's broad business experience as we develop future issues of *The Actuary* together.

Faculty openings announced by 2 universities

Chang Gung College of Medicine and Technology
Tao-yuan, Taiwan

Positions: The school is inviting applications for positions in actuarial science, insurance, risk management, finance, accounting, marketing, human resource management, and management information systems. Positions are open at the levels of professor, associate professor, assistant professor, and lecturer.

Qualifications: Qualifications include a doctorate or credits toward a doctorate in the related area, a strong commitment to teaching, and an equally strong commitment to research.

Language: English is the official teaching language.

Application: Candidates may forward their resumes to Professor Chang, Director, Graduate School of Management, Chang Gung College of Medicine and Technology, 259, Wen-Hua 1st Road, Kwei Shan, Tao-Yuan 333, Taiwan, R.O.C. Telephone, 886-3-328-3016, ext. 5410; fax, 886-3-327-1304 and 886-3-328-3031.

University of Waterloo
Waterloo, Ontario

Position: Tenure track position and/or definite term position in actuarial science at the assistant or associate professor level effective July 1, 1997, or later.

Duties: Undergraduate and graduate teaching and development of an independent research program.

Qualifications: A doctorate with research in an area of the mathematical sciences, and interests closely related to actuarial science. Proven ability in or potential for research. Good teaching and communication skills.

Application: Closing date for applications is February 28, 1997. Applicants must be Canadian citizens or permanent residents. Applicants should submit a curriculum vitae and arrange for three letters of reference to be sent to: Professor Mary E. Thompson, Chair, Department of Statistics and Actuarial Science, University of Waterloo, Waterloo, ON, Canada, N2L 3G1.

Survey shows strong support for full range of SOA programs

by Chelle Brody

The SOA's experience studies and a potential society program, mandatory continuing education, topped the list of activities drawing approval from members in a random survey conducted last year. Of the 500 members surveyed, 90% stated support for required continuing education. SOA-sponsored experience studies were seen as valuable by 86%.

Last July, the Society commissioned Westat, Inc., a large U.S. survey research firm, to conduct a random telephone survey of members and then benchmark the results to those of a similar survey conducted in 1992. The surveys assessed general attitudes, evaluated member perceptions of current and potential programs, and defined opinions on future strategies. A total of 238 FSAs and 262 ASAs participated in a 20-minute telephone interview.

Four SOA program/service benefits again received a high percentage of "definitely yes" or "yes" responses, indicating members perceived these programs as delivering high value:

- *Directory of Actuarial Memberships* (1996 - 73%, 1992 - 66%)
- Special interest Section newsletters (1996 - 67%, 1992 - 61%)
- *The Actuary* (1996 - 55%, 1992 - 51%)

- *Reports of Mortality, Morbidity, and Other Experience* (1992 and 1996 - 50%)

Additionally, the 1996 survey respondents said that these four programs — and services offered through the SOA library — should be delivered through electronic or on-line communication technologies.

About two-thirds of all respondents continued to feel that the SOA exhibits a high level of organizational strength in several other areas:

- Ability of members to assume leadership positions
- Design of programs to address major changes occurring in the profession
- Staff's responsiveness to members' requests and needs
- Staff's effectiveness in implementing SOA programs, services, and policies

Also, 59% of those surveyed perceived the fees for SOA programs and services as being priced fairly for all members.

More than half the respondents saw value in SOA research efforts such as:

- Ph.D. grants
- Funding for actuarial faculty in academic institutions
- Support for project work being conducted by practicing actuaries

With 86% responding that experience studies are valuable, 55% supported funding experience studies research through company assessments and dues but thought funding for theoretical and practical research should come from a combination of membership dues and Section support.

Those surveyed were divided about the value in the existence of several actuarial organizations (50%) versus consolidation of those organizations (44%). FSAs were more likely to advocate consolidation (50%) than ASAs (40%).

Viewed by practice area, the data showed that health actuaries appear to have the most favorable opinions, while pension actuaries have the least favorable feelings about the SOA's programs and services. (Among the respondents were 113 pension actuaries, 108 life, 64 health, 47 financial reporting, 29 retired, 22 general management, 15 reinsurance, and 10 investments, with 92 unknown.)

In analyzing the data by geographic area (415 United States; 85 Canadian), the question drawing the greatest difference was that on evaluating the staff's effectiveness in implementing programs, services, and policies. Americans were 63% favorable, while Canadians were 42% favorable. However, Canadians were more favorable (64%) than Americans (56%) about the future of the Foundation and about the value of electronically delivered services.

There were no overall differences between FSA and ASA responses.

Members gave the SOA high ratings in a wide range of areas. As hoped, the survey also pinpointed areas that the SOA should address or work to improve. Specifically, respondents thought the SOA should address broader issues, such as:



- Expanding the scope of the profession to benefit actuarial firms, practicing actuaries, and the general public
 - Working more closely with other professionals, such as economists and demographers
 - Developing asset-liability management principles
 - Developing models to evaluate retirement income policy initiatives
 - Becoming active in revising the current statutory and GAAP accounting systems
 - Identifying managed care issues and data to help practicing actuaries manage cost and quality of care
- The SOA Board of Governors reviewed the survey results at its October 1996 meeting in Orlando.

The staff is working with volunteer leaders to recommend changes where necessary. For a copy of the survey and its results, please call the Society of Actuaries (847/706-3500). Chelle Brody, former SOA director of operations, directed work on the membership survey. She continues to do contract work for the SOA from her new home in Orlando, Fla.

Upcoming SOA seminars

February 6	New Employee Benefits Changes for 1997 Teleconference	Various locations
March 10-11	Advanced GAAP Topics	Buena Vista Palace, Orlando
April 28	Total Retirement Planning	Atlanta Airport Hilton and Towers Atlanta
May 1-2	Corporate & Chief Actuaries Open Forum	TBA
May 22-23	SOA Spring Meeting	Marriott's Desert Spring Resort Palm Desert, California
June 18	Credit Insurance 101 Seminar	The Queen Elizabeth, Montreal
June 19-20	SOA Spring Meeting	The Queen Elizabeth, Montreal

Exam preparation seminars announced

Temple University, Philadelphia

Two groups of intensive review seminars for the spring 1997 exams will be offered in Philadelphia beginning in March.

Seven sessions will be offered by Temple University Actuarial Institute: Course 140, April 12-13; Course 150, April 16-20; Course 151, April 11-13; Course 160, April 19-20; Course 165, April 13-14; Course 200, April 3-7; and Course 230, April 5-6.

Casualty Actuaries of the Mid-Atlantic Region will offer six sessions: Course 100, April 3-6; Course 110, April 3-6; Course 120, April 10-12; Course 135, April 13-14; Course 4A, March 24-26; and Course 4B, March 16-18.

More information is available from Bonnie Averbach at Temple University (215/204-8153).

Georgia State University, Atlanta

Examination preparation seminars will be held at Georgia State University from April 3 to May 2 for the following courses: 120, 130, 135, 140, 150, 151, 160, 165, 200, 230, EA1A, and EA1B. Seminars may be held for F580 or F585 as well. For more information, call Robert W. Batten at Georgia State University (404/651-2736).

ASM, New York

An intensive three-day problem-solving workshop for the EA1B examination was announced by Actuarial Study Materials (ASM). The workshop is scheduled for April 18-20 in New York City. Details are available in the SOA study notes package or by calling Harold Cherry of ASM (516/868-2924). Information on ASM Study Helps is available through ASM's Web site (<http://www.webcentre.com/asm/>), e-mail (asm@webcentre.com), toll-free number (888/ASK 4 ASM), and fax (516/868-6595).

RESEARCH CORNER

Edward A. Lew Award

The first Edward A. Lew Award, established to recognize the best paper in modeling research, is expected to be given in 1997. The SOA Committee on Knowledge Extension Research is funding the initial prize of \$10,000. The award honors Lew's many contributions to the Society of Actuaries and the actuarial profession as 1973-74 SOA president and as a long-time contributor to actuarial research efforts. The initial award competition was announced at the December 16-17, 1996, SOA conference at Georgia State University in Atlanta, "Actuarial and Financial Modeling — Towards a New Science."

SOA Monograph Series

The final report of the Large Claims Study has been approved by the Committee on Health Benefit Systems Research. The report, published as part of the SOA Monograph Series, is available through the SOA Books Department (847/706-3526).

Other monographs based on SOA research projects and available through the Books Department include *A Study of Public Employee Retirement Systems*, *Study of Public Financial Guarantee Programs*, and *Comparative Analysis of Methods of Health Risk Assessment*. The monograph *Valuation of Interest Sensitive Financial Instruments* is available through Frank Fabozzi Associates (215/598- 8926). Recently completed reports The final report and diskette with tables for the study "Group Life 1985-90" are currently available for a \$10 copy fee through Karen Haywood in the SOA Research Department (847/706-3547). The study is scheduled to be published in the next *TSA Reports*.

The "1993 Reinsurance Mortality Report" is complete and has been distributed to reinsurance companies. An article will appear in a future issue of *Reinsurance Section News*. Additional and updated data are being solicited for the 1994 study.

The final report "1986-92 Credit Risk Loss Experience Study: Private Placement Bonds" is available for \$60 through the SOA Books Department and is scheduled to be published in the next *TSA Reports*.

Health benefit systems news The National Health Information Resource Center is now on line. Visit the website at <http://www.nhirc.org>.

Troy Pritchett is chairing the Project Oversight Group for a study of HEDIS measures. The results of this study will be presented at the fall 1997 Managed Care Symposium at Wharton.

Howard Bolnick has replaced Anna Rappaport as chair of the working group on Managed Care Effectiveness. A technical writer from Northwestern University Institute for Health Services Research and Policy Studies has been hired to prepare a final document from the draft report prepared by the working group.

Data contributions were received and tabulation is preceding for the study "Long Term Care 1992-94." The draft final report is anticipated in the first quarter of 1997. Retirement systems activity The Retirement Plans Experience Committee has reviewed the raw mortality rates tabulated by the researchers for the GATT Mortality Study. The process of creating a set of mortality tables from this data is now underway.

The request for data for the study "Group Annuity Mortality 1995-96" was mailed to potential contributors in early October.

The Asset Valuation Methods project, intended to improve actuarial practice in the determination of the actuarial value of assets in pension plan valuations for funding and accounting purposes, has been awarded to McGinn Actuaries, Ltd.

Phase one of the Safest Annuity Rule project, the analysis of PBGC data, has been awarded to Matthew Hassett of Arizona State University. SOA staff is compiling the results of the survey of market participants, which is phase two of the project. The purpose of the project is to assess the impact of Department of Labor Interpretive Bulletin No. 95-1 on the annuity market.

Preliminary findings of the Pension Plan Turnover Rate Table Construction project were presented at the SOA annual meeting in Orlando. Steve Kopp, University of Western Ontario, continues to study the data for the effect of early retirement windows and the interaction of variables. Life insurance practice area The SOA Board authorized the Committee on Life Insurance Research to state an opinion on the suitability of the "Interim Individual Annuity Mortality Table" to the NAIC. A memo from the committee containing the opinion and table were delivered to the NAIC on September 20. The NAIC Life Health Actuarial Task Force recommended acceptance of the opinion to the "A" Committee (Life); it was approved at the December plenary session. The final report and accompanying tables are scheduled to be included in a future *TSA Reports*. Copies are available now from the SOA Books Department (847/706-3526).

The draft report on the experience study "Structured Settlements 1990-93" has been distributed to the committee for review. The final report is scheduled to be included in the next *TSA Reports*.

The report "Universal Life Persistence Study," a joint SOA/LIMRA project, is available from LIMRA at a discounted price of \$95. To order a copy, call LIMRA's InfoCenter Service Desk at 800/235-4672. The report is expected to be included in a future issue of *TSA Reports*.

In phase one of the Actuarial Modeling project, the researchers are analyzing the impact of economic

factors on the performance of life insurers as a whole. Results are expected to be presented at the Western Risk and Insurance Association meeting in January. The second phase of this project will examine the impact of both firm-specific and economic factors on the performance of individual life insurance companies.

Faye Albert and Jack Bragg have completed their research on mortality and lapse rates. The report has been approved by the Project Oversight Group. Jack Bragg has agreed to perform a regression analysis as an additional test of the results of the

study. He will disclose the overall results of the regression (whether or not the results were significant) but for reasons of confidentiality will not disclose the details of the analysis. The Committee on Life Insurance Research has recommended that the results of the study be published in a forum allowing comments.

Finance practice area activity
Two papers will result from the project to study the use of derivative instruments by the insurance industry. The first paper, "Corporate Hedging in the Insurance Industry: The Use of Financial Derivatives by U.S. Insurers," will be published in the premier issue of

the *North American Actuarial Journal*. Keep in touch with Research
The "Resources from Research" brochure is available from the SOA's Research Department. The brochure presents clear, concise information about SOA research reports and how to obtain them.

Remember to check Actuaries Online, the SOA's electronic bulletin board, for requests for proposals, calls for papers, research reports, and other research information. Questions and comments about any SOA research activity can be directed to the Society's Research Department at 847/706-3500.

New puzzle contest announced

This month marks the end of *The Actuary's* 1996 puzzle contest and the start of a new format for 1997.

The 1996 contest consisted of five puzzles, which appeared in issues from April through November. Puzzle editors Louise Thiessen and Dan Reichert are still tabulating the results and will announce one or more winners of a year's subscription to *Games* magazine in the March issue.

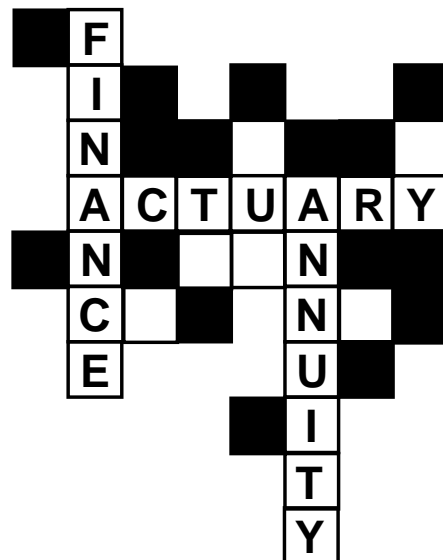
In 1997, one name will be drawn from among all puzzle solvers for each month that a puzzle appears. The prize will be unique, Thiessen promises,

because it will be created especially for *Actuary* puzzle solvers.

"We're kicking off the new year with an actucrossword this month," she said. "It's a change from the cryptics and crostics, and Dan and I hope puzzle enthusiasts will have a great time solving it."

Thiessen and Reichart expressed their thanks to all who participated in 1996. "We had a great response, and we always appreciate your comments and suggestions," Thiessen said.

Be sure to check the back cover for new puzzles this year.



Notices for May 1997 candidates of Courses 200 and 230

Updates in study materials were announced for students taking Courses 200 and 230 for the May 1997 examinations.

For Course 200, the spring 1997 *Associateship and Fellowship Catalog* requires the new 1996 text *Mercer Handbook of Fixed Income Securities* (11th Edition). The editor of this new text is G.M. Hall, not L.E. Coward as stated in the catalog.

For Course 230, the 1997 catalog, on page 53, says candidates may use either the 4th or 5th edition of the Fabozzi text *The Handbook of Fixed Income Securities*, with different chapters for each edition. The information printed in the 1997 catalog is correct; the assigned chapters from the 4th edition have changed from those that were assigned reading last year.

Members state support for E&E redesign

by Jacqueline Bitowt
SOA Public Relations Specialist

At its October 27 meeting, the Board of Governors unanimously approved moving to the next phase of development in the redesign of the basic education and examination system. The Board's united stand was reflected in the strong support shown by SOA members who completed the survey published in the August 1996 report by the Board Task Force on Education.

Of the SOA's 16, 775 members at the time of the survey, 796 responded. That's nearly 5%, "a very respectable rate" for a survey conducted with no special incentives or reminders, noted Marta Holmberg, Ph.D., SOA education executive.

Survey echoed views stated earlier

Most of the redesign elements, represented by 11 questions in the survey, drew significant support. Seven received positive responses from more than 60% of the respondents.

Members' views have been sought throughout the process, Holmberg observed, including the 1995 annual meeting, the two 1996 spring meetings, and two sessions at the 1996 annual meeting in Orlando. Members of the Board Task Force, 1995-96 President Sam Gutterman, and 1996-97 President David Holland have spoken on the subject to local club meetings, universities, and international organizations.

"Though there have been no big surprises along the way, it was good to have the input of the survey. The views expressed by the membership help validate the direction taken with the design," Holmberg said.

Only two questions received less than majority support — one asking about the effectiveness of the intensive

seminar format, the other about the value of the integrated course approach. In the case of the intensive seminar question (Question 7), favorable reaction outweighed unfavorable (46% versus 26%) with a significant proportion undecided. Responses to the question on the integrated course approach (Question 8) divided along FSA-ASA lines.

Respondent's level made a difference. Although breakdowns of survey respondents by practice area and national residence did not demonstrate any real differences, some distinctive patterns appeared among ASAs and FSAs. Of the 288 ASAs and 29 students responding (a total of 317), 242 are still taking exams. Some anxiety about certain aspects of the new system is natural for the group that could well be affected by the changes. The pattern between FSAs and ASAs was similar for most questions, but there were two areas where the ASAs' responses indicated more skepticism.

ASAs demonstrated a nearly even split on Question 8, the issue of whether large integrated courses are educationally more valuable than single subject courses. Forty-three percent of ASAs agreed, 39% disagreed. In contrast, 63% of FSAs liked the concept of larger integrated courses, with only 20% disagreeing.

On a related issue, the importance of finding ways to accommodate candidates who cannot pursue the FSA if faced with the demands of the larger courses (Question 9), there was a similar divergence of opinion between ASAs and FSAs: 61% of ASAs favored accommodation (25% opposed), while only 33% of FSAs favored accommodation (50% opposed).

An interesting divergence of opinion came in answer to the question of whether Course 1 should cover preliminary subjects (calculus and probability), though doing so is inconsistent with the underlying principles of the redesign. Fifty percent of respondents agreed with the inclusion of the subjects — they are covered in Course 1 in the current design — while 32% disagreed with testing preliminary subjects. The perceived support from the membership for including these general math subjects affected the design and focus for Course 1; these survey results suggest that the perception was accurate. Remaining issues being rigorously addressed. Based on the Board's vote and the membership's support, the SOA is continuing with detailed development of the courses and educational materials for both Basic and Advanced courses.

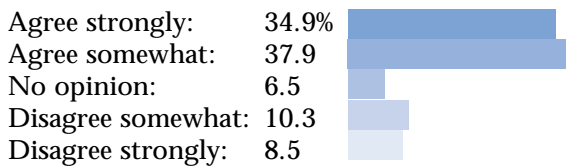
One area in which considerable work needs to be done is for the Course 8 series, which covers the specialty practice areas, said Holmberg. "We're actively soliciting input from practitioners to make sure we get the right mix of topics, the right balance," she said.

Of particular interest are the health, managed care, and pension practices. "We'll be working over the next several months to finalize the practical education needs of these areas."

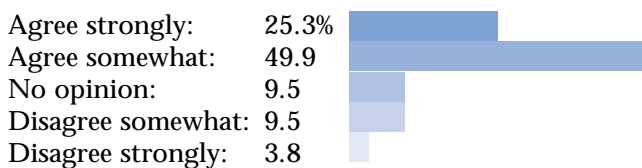
The new education system is expected to become effective on January 1, 2000. Rules guiding the transition from the current system to the new one will be available early this year.

Question-by-question: what members said

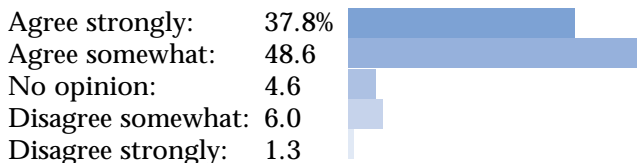
Question 1: The proposed education system is an improvement over the current system.



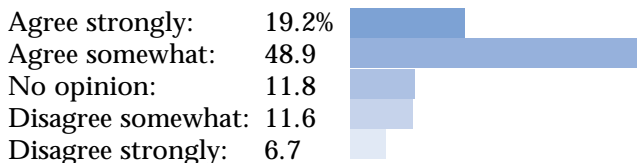
Question 2: Actuaries educated under the proposed system will be well-equipped to serve their publics and to fulfill their professional responsibilities.



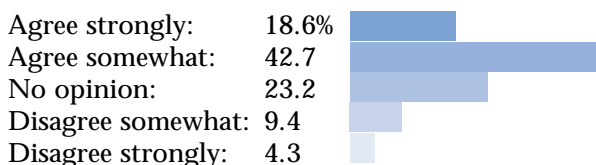
Question 3: The courses in the Basic category cover the fundamental subjects and tools needed by all actuaries.



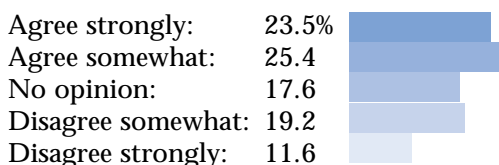
Question 4: The courses in the Advanced category cover the fundamental subjects and tools needed by actuaries in a specialty area



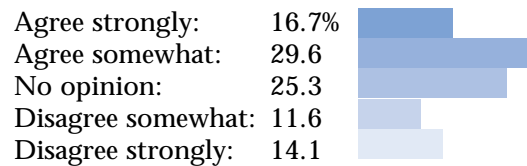
Question 5: Courses 1 and 2 will attract candidates who have the aptitude and skills needed to become effective actuaries.



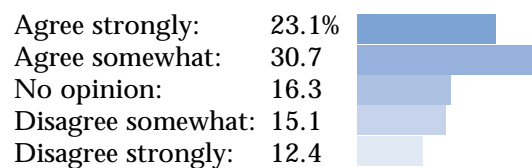
Question 6: Course 1 should cover preliminary subjects, even though that is inconsistent with the underlying principles of the redesign.



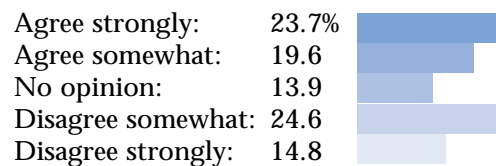
Question 7: The intensive seminar format is an effective educational method for the subject of applied modeling.



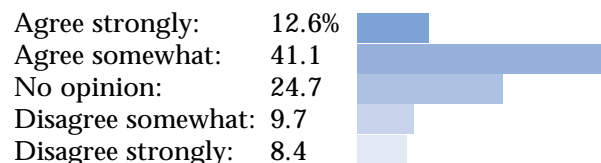
Question 8: The larger, integrated course approach proposed in the design will be of greater value educationally than the current single-subject approach.



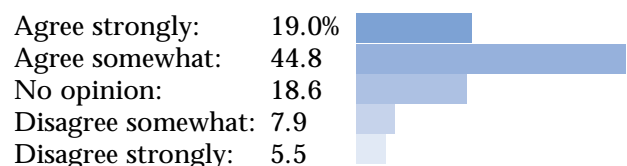
Question 9: It is important to find ways to accommodate candidates who cannot pursue the FSA if faced with the demands of the larger, integrated courses.



Question 10: The guidelines for the Professional Development category strike an appropriate balance between emphasis on practice-specific topics and offering candidates an opportunity to round out their individual pre-FSA education.



Question 11: The principles established for the transition are reasonable.



Note: The percentage of the 796 respondents not answering each question ranged from 1.8% to 4.1%.

DEAR EDITOR

Era of the generalist?

After reading several articles in the September issue of *The Actuary*, I could not help but feel that everyone is advocating basically the same idea. To keep your jobs as actuaries, be a generalist, not a specialist.

The issue of "generalist vs. specialist" is accentuated by the globalization theme of this issue. As pointed out by Kevin Law and Carolyn Geigerman in "Tips on going international," basic principles are likely to apply everywhere, but specific knowledge dictated by the North American environment will not.

I agree with this point completely. However, we don't need globalization to bring this issue out in the open. Just take a look at the changes in the medical profession and the law of demand and supply we all studied in Course 220.

About a decade ago, doctors were making a lot of money and specialists were making even more money. The majority of medical students wanted to go into fields like cardiology because a shortage of doctors existed — in particular, a shortage of specialists. An increasing number of students opted for the medical field, therefore increasing the supply of new doctors.

Today, a shortage no longer exists, except in certain geographic areas. Many surveys indicate that doctors' salaries are decreasing, and in particular the specialists' salaries.

Now, the majority of medical students want to be general practitioners. Much of this trend is due to the shift to a managed care environment. However, the bottom line is still the law of supply and demand. There is an oversupply of specialists and a limited number of people who need bypass surgery. On the other hand, everyone of us, at one time or another, will be sick and will need to see a general practitioner. The simple law of supply and demand is dictating the changes in the medical field.

Similar forces are shaping up the actuarial world. At the time of the famous *USA Today* article, which quoted the *1988 Jobs Rated Almanac* as rating the job of actuary as number one, there was a shortage of actuaries at all levels. With the influx of people entering the field, there is no longer a shortage. The insurance industry only needs so many actuaries for their traditional pricing and financial reporting roles.

Where will actuaries go? Investments, accounting perhaps. Unemployment perhaps.

Where can actuaries go? Elsewhere, to nontraditional actuarial roles. The Society of Actuaries is doing the right thing by redesigning its education process to prepare future actuaries for these nontraditional roles, including overseas assignments.

We have to learn the general principles well and be able to apply them with creativity to all environments in which we may practice. Specialization may make our skills obsolete with the next turn of events.

Yiji Starr

From Mike Cowell, editor of *The Actuary*, 1993-96: The September 1996 issue focused on the topic of globalization. Our intent was to contribute to readers' awareness of the increasingly international nature of business and our profession and to encourage actuaries to think in new directions.

Ms. Starr has shared another perspective on the topic of succeeding in the new global environment. We are pleased that the September issue of *The Actuary* was a catalyst for her ideas.

300 jobs posted with SOA resume matching service

Been downsized? Looking for an entry-level position? Some 300 jobs are waiting for good candidates through the SOA's resume matching service, where job listings now greatly outnumber resumes.

The service is available to unemployed members and to students with at least 100 actuarial exam credits who are not employed as actuaries. It is offered free of charge.

Resumes sent to the SOA are categorized by each candidate's education, professional level, practice area, and experience. Employers provide a list of qualifications for available positions to the SOA. Resumes on file are matched with those qualifications by the Society's

Education and Examinations ombudsperson, who submits the appropriate resumes to employers. It's then up to employers to decide which candidates to contact.

Both job seekers and employers can obtain applications by contacting Pat Holmberg, E&E Ombudsperson, Society of Actuaries, 475 N. Martingale Road, Suite 800, Schaumburg, IL 60173-2226; telephone, 847/706-3527; fax, 847/706-3599; e-mail via Compuserve, 76225,3424@compuserve.com, or the Internet, pholmberg@soa.org; or in Actuaries Online in the Education and Examination message section.



on the lighter side

Shhhh! Daddy's studying

by Joseph Sirote

My first child, Natanel, was born shortly after I passed Exam 135. I learned to work and study in the sleep-deprived environment that all new parents are familiar with. The main trick was to master concentrating with the baby around. When I was home alone with the baby, I picked him up and walked around while reading my study notes, or he slept on my lap as I did sample problems. Or, when he screamed in his crib as I desperately tried to concentrate, my plans changed: "OK, I'll study later — say 'Da Da' ..."

By the time Natanel was six months old, he liked to grab my study notes and play with them or, even worse, chew them. When he started to crawl, I learned not to leave my study material lying around (unfortunately, I didn't learn fast enough).

By the time Natanel was one, he would crawl into my office, pull himself up by my pants, and say "Uhhpp. Uhhpp. Uuuhpppp!" I could only ignore him long enough to finish one problem. So, up on my lap he went. For the next half hour, I would work desperately on the next problem while trying to keep my calculator, pencils, and papers on the desk. "OK, I'll study later — let's try to walk ..."

While preparing for Exams 160 and 161, my wife passed her second pregnancy test. Kira and I were due in January. No problem for exams, though we would miss the tax deduction. A few nights before the May exams, the OB/GYN called and told Kira, "You failed your AFP screening test. Come in tomorrow for a sonogram." Clearly, there was no studying that fearful night. The sonogram was conclusive: we were expecting twins. I passed 160 and 161.

Twins are usually born early, often six weeks premature. Thus, we could deliver in mid-November — smack in the middle of exam period. I explained to my saintly wife the importance of timing: after November 20 (my last exam) and before December 31 (to get the tax deduction). We delivered healthy twin boys, Shaya and Rami, on December 5, and I passed 150, 151, P562U (my first Fellowship exam) and attained Associateship. Not a bad two weeks.

The sleep deprivation got worse as the twins took turns screaming all night. Also, it was harder to hold twins and study. However, I found that I could hold both boys, keep a book open on a table, sway back and forth to calm the babies, and study (a little). The trick was finding a table the right height. I also found that reading study material to babies is a great way to put them to sleep. (Apparently this works on actuarial students, too.)

Our oldest was walking and talking by now, and he was able to admonish his younger brothers, "Shhhh! Daddy's studying." By locking my office door and buying some earplugs, I was actually able to study quite well. Still, at times I found that I had three adorable toddlers playing with the doorknob, knocking on the door, and whimpering "Daaadddeee,"

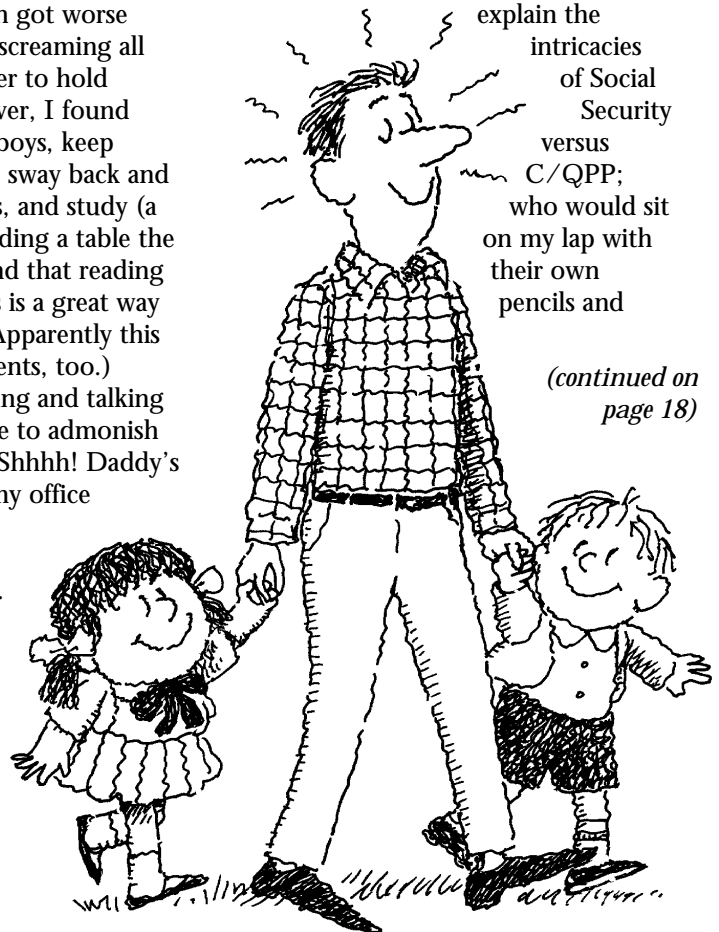
"Daaadddeee." "OK, I'll study later. Let's read Cinderella ..."

It was not always smooth sailing. One of my methods for studying was to summarize all of the material on a few pieces of paper (writing very small). One day after we put the children in bed, I went to my office to study. Something was wrong: my books were on the floor, and my notes had scribbling all over. I couldn't read them — months of work was lost! Kira and all the children (and perhaps a few neighbors) heard my primal scream. My (recall saintly) wife calmed me down. The boys got a good talking to and a new rule: "No touching Daddy's study notes!" Nonetheless, recreating my notes proved to be a good studying technique, and I passed.

Over the next two years, I passed 152, 200, 210, 220, 230, and F580. (It's too painful to list all the exams I failed.) During these sittings, I was helped by my three little assistants, to whom I would

explain the intricacies of Social Security versus C/QPP; who would sit on my lap with their own pencils and

(continued on
page 18)



On the lighter side (continued from page 17)

help me calculate a DAC, or turn the pages for me when I was going too slow; or “OK, I’ll study later — let’s have a pillow fight...” I enjoyed these study days immensely. My technique was simple: two hours of studying, one half-hour of playing with the boys, repeat.

While I was preparing for Exams I340 and I443, Kira passed her third pregnancy test. Again, we were due in early January (good for exams, bad for taxes). My saintly wife scheduled the sonogram appointment on a study day. We were expecting twins, again! (I think Kira was over-studying for these pregnancy exams.)

After I passed my May exams, I went over the routine with Kira again: delivery after November 6 (my last exam) but before December 31 (for taxes). As an added pressure, I would be sitting for I343, I441, and I445, which would make me a Fellow. But as study season progressed, it became clear that this pregnancy would not be easy. On September 19, I rushed Kira to the hospital in premature labor. The doctors were able to stop it, but Kira was given strict instructions: total bed rest. I was no longer able to study at night, and I could only squeak in a few hours on the weekends when the boys napped or relatives helped out.

Over the next 10 weeks, we went to the hospital many times. After I used up all of my vacation days, I used study days to take my wife to the hospital or to visit her there. I tried to study everywhere I went, but it was hard, especially in the hospital. As both the exams and the due date approached, tension grew. It was difficult to be the caring husband, understanding father, and studious actuary — and all suffered as a result.

Kira, true to her saintly form, held out until after exams. On November 14, we gave birth to healthy baby girls, Chaviva and Elisheva. The exams fared well considering the circumstances. I passed I343 and I445 but failed

I441. Close, but it was disappointing not to make Fellowship.

Well, there was one more exam left, and I was used to sleep deprivation by now. The only problem was that my office became the girls’ nursery. (Who can say “no” to adorable baby girls?) My study space shrank to one cramped table in the corner of my bedroom.

Then, just as my oldest was learning to read, the twin boys were becoming toilet-trained, and the twin girls were starting to crawl, I passed G421 and completed my Fellowship exams. When

we found out that I had passed, my children, coached by my wife, sang: “We’re so proud of you Daddy / we’re so proud of you Daddy / we’re so happy you don’t have to study any more.”

So are children a hindrance to studying? Not mine. They are my inspiration, my fortitude, my life. Joseph Sirote became an FSA in 1996. He is an actuarial associate with Metropolitan Life Insurance Co., Bridgewater, N.J., and a proud father of five.

Four in a family is still the top number

In March 1996, *The Actuary* turned its spotlight briefly on the Kobrine family. The family was celebrated for having four members listed in the SOA’s *Directory*: David, Robert, Ronald and Steven Kobrine. In the story, we asked whether any other family could make or exceed that claim of four trained actuaries in its ranks.

Well, the record number still remains, but another family — the Pollards of Australia — has met it. A.H. Pollard (see story, page 19) and sons John, Geoff, and Ian are all actuaries, statisticians, and recipients of awards from scholarly societies. The accomplished quartet includes

two full professors at Macquarie University near Sydney, Australia (father A.H., who is professor emeritus, and John, who succeeded his father as professor of actuarial studies); member of the actuarial program’s full-time staff (Geoff); and the program’s first Rhodes Scholar (Ian). They hold a combined total of 12 university degrees from Oxford, Cambridge, London, Sydney, and Macquarie universities.

The Actuary thanks Robert L. Brown for forwarding the Pollards’ story.

Is four the magic maximum? We await news of five or more.

SOA library facilitates donation to Korean institute

A near-complete set of the *Transactions* and a vast miscellaneous collection of books were given recently to the Korean Insurance Development Institute through the SOA library. Those wishing to donate or receive actuarial materials may contact the SOA’s librarian, Ellen Bull, who keeps a record of available materials and prospective recipients. Her telephone number is 847/706-3575. Requests also may be faxed: 847/706-3599.

Retirement leads topics at New Zealand meeting

Papers on life, superannuation, and investments, along with experience studies of life and disability income, were the focus of sessions at the biennial conference of the New Zealand Society of Actuaries October 30-November 1, 1996, attended by 100 at the Wairakei Resort near Taupo in the central North Island. Former Prime Minister David Lange, now retired

from parliament, was a guest speaker, as was Neville Henderson, president of the Canadian Institute of Actuaries, offering the North American perspective.

SOA member Peter Davies said that retirement funding was an issue of discussion at the conference. "The country has moved away from offering any tax incentives for retirement savings to a regime where there

are actually disincentives for low-income earners," Davies reports. He also said that New Zealand's recently enacted human rights legislation, which has taken away the right of insurers to decline applications for insurance on the grounds of age or disability, was also discussed.

Conference organizers are working on the 1998 conference and hope to again attract North American visitors.

Australian colloquium planners call for papers

Research papers on a wide range of topics are being sought for a special colloquium and publication at Macquarie University in Sydney.

The university will present a one-day research colloquium honoring Emeritus Professor Alfred Hurlstone Pollard on August 22, 1997. This date coincides with the centenary celebration of the Institute of Actuaries of Australia and with

colloquia sponsored by ASTIN and AFIR. Members and guests attending those meetings will have easy access to the Pollard colloquium.

Professor Pollard was the first professor of economic statistics at Macquarie. He developed innovative programs in actuarial studies and demography that have been emulated by schools in other countries.

For more information on submitting a paper or attending the colloquium, contact Sue Clarke at Macquarie University, 61/2-9850-8575 (fax: 61/2-9850-9481; e-mail, lschalch@efs1/mq.edu.au).



IN MEMORIAM

James Wilfrid Chambers
FSA 1945, FCIA 1965

Graham C. Thompson
ASA 1937, MAAA 1966

David T. Warner
FSA 1971, MAAA 1966

Melvin Wyatt
ASA 1931

Edward C. Zeiger
FSA 1942

Edwin B. Lancaster, FSA 1949, MAAA 1967, EA 1976, served as president of the SOA in 1970-71. He was a strong leader of the SOA's education initiatives, serving as Education and Examination general chairman in 1962-63 and in other roles with E&E committees from 1954 until he became president. He served on the Board of Governors from 1964 through 1971 and was a vice president, 1966-67. He built his career at Metropolitan Life Insurance Co. in New York, and was executive vice president, chief financial officer, and chief actuary when he retired in 1982. Contributions in his name may be made to the United Methodist Church of Mt. Kisco, 300 E. Main Street, Mt. Kisco, NY 10549, and Northern Westchester Hospital Center, 400 E. Main Street, Mt. Kisco, NY 10549.