The Newsletter
of the Society
of Actuaries

The Actuary

Vol. 33, No. 4
April 1999

Epidemic on trial
Blue Cross tobacco case quantified smoking's costs

by Richard Niemiec and Nancy Nelson

The costs of tobacco use are staggering. In Minnesota alone, it is estimated that one in six deaths is attributable to smoking, and the cost for medical care and lost worker productivity is estimated at $1.3 billion every year, according to estimates by the Minnesota Health Department. That doesn't take into account personal losses to smokers, their families, and their friends.

In a new attack on the tobacco epidemic, Blue Cross and Blue Shield of Minnesota joined the State of Minnesota in 1994 to test a new legal approach: sue the tobacco companies for consumer fraud and antitrust violations. Instead of a lawsuit by an individual smoker, the tobacco companies would face the resolve and resources of a multimillion-dollar corporation in partnership with a state's attorney general.

Blue Cross remains the only health plan from the private sector in the nation to have sued and settled with the tobacco industry. Actuaries at Blue Cross played a key role in several aspects of the lawsuit and settlement. The lawsuit was groundbreaking in setting legal precedents and opening to the public long-hidden secrets of the tobacco industry's inner workings.

More important, the settlement holds great potential to set a new standard in the health care industry. Blue Cross is proposing to invest in tobacco reduction and other health improvement programs that should return $3 for each $1 spent and deliver to Minnesotans better health and quality of life.

1994: the lawsuit begins

Blue Cross and the state of Minnesota filed a joint lawsuit against the tobacco industry in August 1994. They charged that cigarette manufacturers had violated consumer fraud and antitrust laws by deceiving consumers. The resulting damage was higher medical costs for the state and Blue Cross to cover care for smoking-related illnesses. In other words, it was the actions of the cigarette makers, not the product of cigarettes, that were the target of the lawsuit. The damages were directly to Blue Cross and the state, not to individual smokers.

In filing the lawsuit, Blue Cross forged a strategic partnership with the State of Minnesota. Blue Cross is Minnesota's oldest and largest private-sector health plan. It was founded in 1933 with a charter to serve the public's health. On the state side, Hubert Humphrey III, Minnesota's attorney general when the lawsuit was filed, had built a reputation over the prior decade for strengthening and enforcing consumer fraud laws.

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Vol. 33, No. 4 • April 1999

Janet M. Carstens
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***The Actuary* welcomes articles and letters. Send correspondence to:**
The Actuary
Society of Actuaries
475 North Martingale Road, Suite 800
Schaumburg, IL 60173-2226
Web site: *www.soa.org*

The Actuary is published monthly (except July and August).
Howard J. Bolnick, FSA, President
Bradley M. Smith, FSA, Director of Publications

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

EDITORIAL

Will managed care become unmanaged care?

by Janet M. Carstens

I don't get it. Do we want managed care or do we not?

Throughout the 1990s, managed care has been increasingly accepted by the purchasers of health care services as a means to control costs. Managed care leads to greater control of cost levels because it provides coordinated care to individuals through a limited provider network "team." The team component is present to ensure that individuals receive the appropriate level of care through a coordinated effort that incorporates preventive care and adheres to specific access and care management protocols. Utilization savings are achieved through the determination of appropriate care and the appropriate care settings with an emphasis on preventive services and reductions in care delivery variation. To control the cost per service, the limited provider network generally agrees to a negotiated reimbursement arrangement that often includes a risk-sharing component; this gives the providers a financial incentive to ensure that appropriate care is delivered in the most cost-effective manner.

In recent years, this increased acceptance of managed care concepts has been accompanied by relatively low health care cost trends. Now, as numerous reports emerge indicating that health care inflation and premiums are on the rise, legislation continues to be proposed that appears to make managed care more unmanaged (i.e., more similar to traditional indemnity insurance). The legislative proposals are in response to consumer demand. Although consumers like the lower prices associated with managed care, they do not like the controls and the constraints on service.

As an example, increased levels of exposure to tort liability have resulted in managed care organizations (MCOs) implementing more sophisticated review processes over coverage denials based on a determination of medical necessity. In addition, several state and federal proposals have been introduced that not only may expand this liability but would mandate creation of an external review process, which effectively shifts part of the care management team to an outside party. The more the decision about appropriate care is taken away from those participating in an individual's care management, the less coordinated—and the less managed—it becomes.

A second example relates to "any willing provider" legislation that requires MCOs to include any provider that agrees to the organization's financial terms. This requirement would interfere with the MCO's ability to establish a provider network team to coordinate care and determine medical necessity. In addition, the long-term erosion of cost savings derived from negotiated fee arrangements will be an obvious consequence. Increased (or preserved) market share is the carrot that MCOs offer to providers in exchange for discounted fee arrangements. If MCOs cannot limit their networks, they will not be able to deliver on the promise of increased patient volume. Over time, this will erode the savings achieved through the reimbursement arrangements.

A third example is legislation requiring open access to specialty services. While it is unclear whether overall costs are higher under an MCO with a primary care gatekeeper requirement than they are under an open access

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Epidemic on trial (continued from page 1)

Another key partnership in the lawsuit was with the Minneapolis-based law firm of Robins, Kaplan, Miller, and Ciresi, which had agreed to take the case on a modified contingency basis.

The case posed a significant risk. The tobacco industry was undefeated in the courts. Big Tobacco was also known for its tactics of overtly attacking its opponents. But in 1994, Blue Cross CEO Andy Czajkowski inspired the Blue Cross board to take on the lawsuit as an important means to attack the tobacco epidemic. The lawsuit's goals were to unveil the truth about the tobacco industry's manipulation of consumers, to stop cigarette makers from marketing to children, and to hold the industry financially accountable for the harm it has caused. The ultimate goal is to change the way the tobacco industry operates in Minnesota, reduce tobacco use, lower the rates of illness and deaths caused by tobacco, and cut health care costs for treating smoking-related illness.

The combination of the state, Blue Cross, and the Robins Kaplan legal team presented a strong front to withstand the legal onslaught of the tobacco industry's legion of attorneys.

Building the case against Big Tobacco

The lawsuit was filed against the six largest cigarette manufacturers in the United States: Philip Morris, RJ Reynolds, Lorillard, Liggett, and Brown and Williamson and its parent company, British American Tobacco, as well as the industry's trade group (the Tobacco Institute) and the industry's research arm (the Council for Tobacco Research).

There were two tracks to developing the legal arguments for the lawsuit: documents and damages.

For the first time, tobacco companies were required to turn over millions of internal documents to be examined for consumer fraud and antitrust activities. The legal team succeeded in obtaining through court order the index of tobacco industry documents to guide the discovery process. More than 26 million pages of memos, marketing and research plans, and other internal information were compiled at a document depository in north Minneapolis. Another 7 million pages of internal documents were compiled in England from the British American Tobacco Company. The documents represent the largest collection of information from a single industry and perhaps the most important collection on a public health issue of this century.

The documents revealed how tobacco companies manipulated nicotine to keep smokers addicted, how they marketed to children, and how they collaborated in a massive public relations campaign to counter mounting information on the hazards of smoking.

As one legal team poured over the details of the documents, another was formed to create a damages model. That team consisted of epidemiologists and biomedical statisticians.

Their first step was to identify smoking-related diseases to be built into the damages model. Smoking-related illnesses include heart disease, hardening of the arteries, emphysema, peptic ulcers, and cancers of the lung, mouth, larynx, esophagus, kidney, pancreas, and bladder. There is also a category of diminished health status — illnesses made worse because the person smokes. For example, research has shown smokers take longer than nonsmokers to recover from injury, illness, or surgery.

Blue Cross' damages model was based on 60 million medical claims from Blue Cross for these diseases for 20 years, from 1978 through 1997. This included claims from only fully insured groups and excluded self-insured members, members in Blue Cross' HMO, and fully insured individuals. The Blue Cross actuarial department was responsible for extracting and preparing the data for use by the expert teams of biomedical statisticians.

Each of the smoking-related diseases was identified in medical claims by their ICD-9 diagnosis codes. But because the claims did not record whether the person was a smoker, the damages model needed to extrapolate the percent of claims directly attributable to smoking. The percent of smokers was drawn from the Minnesota Behavioral Risk Factor Surveillance System, a telephone survey of a sample of adults conducted by the Minnesota Health Department each year for the past decade. The damages model was also adjusted for confounding factors, such as the percent of persons who were obese or had other complicating health problems.

The result was a damages claim by Blue Cross of $460 million, which we considered a conservative estimate. The state claimed $1.7 billion in damages over the same period of time.

Blue Cross as plaintiff

Blue Cross sued for damages from only fully insured group claims because they presented the strongest case that Blue

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Managed care
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MCO, an open access requirement affects the ability of the MCO to coordinate and manage care.

It seems that if consumers want comprehensive and affordable care such as that associated with managed care, they must be willing to accept the controls and constraints on service associated with managed care — or be prepared to accept the high premium increases that accompany indemnity insurance.

Epidemic on trial (continued from page 3)

Cross had suffered higher medical costs as a result of the tobacco industry's actions.

In fact, one of the first actions the tobacco industry attorneys took in the first year of the lawsuit was to file a motion challenging Blue Cross' standing as a plaintiff. The motion was appealed all the way to the Minnesota Supreme Court. The court's ruling, issued in July 1996, confirmed Blue Cross' right to sue on its own behalf.

The tobacco companies had argued that Blue Cross did not suffer any damages and that it was the smokers themselves or the individuals and organizations that paid premiums to Blue Cross that should be suing. But the court rejected this "pass-through defense." In presenting the majority opinion, Justice Sandra Gardebring wrote:

> Here, the tobacco companies argue that because Blue Cross is a nonprofit corporation, any increased costs associated with increased medical care needed by its nicotine-addicted consumers will simply be passed on to employer subscribers. … The argument that no injury has been suffered because costs were passed through one entity to customers, consumers, or other entities usually arises in antitrust cases. It has been uniformly rejected in the courts, primarily on the theory that the injury is sustained as soon as the price, artificially raised for whatever reason, has been paid.

The ruling set a precedent for private-sector corporations in Minnesota to sue the tobacco companies. But no other health plan in the country filed a lawsuit against the tobacco industry until 1998, four years after Blue Cross filed its lawsuit.

The Blue Cross-State of Minnesota lawsuit set another precedent when the trial began on Jan. 20, 1998. Similar cases involving Mississippi, Texas, and Florida had been settled before any trial could begin.

Two actuaries at Blue Cross were deposed prior to the trial and were on the witness list for the plaintiffs and even for the tobacco industry's defense. They were involved in extensive preparation to take the stand, but neither ended up as witnesses.

Tobacco companies agreed to pay Blue Cross $9 million more than the original damages claim.

The Minnesota trial lasted four months, until May 8, the day the jury was to begin deliberations on the case, when the tobacco industry agreed to an out-of-court settlement.

In the settlement, the tobacco companies met all the demands Blue Cross and the state had laid out before the trial. Nearly all of the documents collected for the trial are open to the public for the next 10 years. Tobacco companies agreed to stop advertising on billboards or transit boards in Minnesota, to stop selling cigarette brand promotional items, and to meet numerous other restrictions on marketing. They also agreed to pay Blue Cross $469 million over the next five years to cover past and future claims for smoking-related illness, $9 million more than the original damages claim from Blue Cross.

Blue Cross received its first payment of $160 million in September 1998. The final payment will be received on Jan. 1, 2003. Blue Cross estimates the present value of the lawsuit settlement at $434 million. As a taxable nonprofit corporation, Blue Cross must pay federal and state income taxes. It has already paid $75 million in taxes and may have future tax liabilities. Another $21 million was transferred to the Blue Cross and Blue Shield of Minnesota Foundation to provide grants to communities around Minnesota for health improvement.

Under state law, the Minnesota Department of Commerce has authority to regulate what Blue Cross does with its settlement proceeds. Over the past year, Blue Cross has developed a plan for investing the proceeds in health improvements for Blue Cross' fully insured business. The goals are to reduce tobacco use among Blue Cross members by 30% and reduce other health-risk behaviors. Blue Cross estimates that its savings from improving health will be nearly $2 billion over 20 years, about a 3-to-1 return on investment. We also expect the health improvement programs to offer significant residual effect for our self-insured business.

Actuaries from Blue Cross were responsible for modeling financial aspects of the 20-year plan and responding to Commerce Department requests for further financial information. The Commerce Department is expected to issue a ruling on the Blue Cross tobacco proceeds plan in the next few months.

The health improvement programs will be based on scientific research and evaluated for their effectiveness, and the results will be published and shared with the medical community. This will provide a new model for health plans. More importantly, prevention programs will improve the health of future generations. This historic lawsuit and landmark settlement are the beginning of the end of the tobacco epidemic.

Richard Niemiec is senior vice president, corporate affairs and subsidiary operations, and Nancy Nelson is vice president and chief actuary, Blue Cross and Blue Shield of Minnesota. More information on the tobacco trial or the settlement can be found at *www.mnbluecrosstobacco.com*.

SOA program of mandatory continuing ed?

by Warren Luckner
SOA Director of Modeling Education and Academic Relations

And the current answer is: No. But that's not the whole story. Let me explain.

First, some background. A telephone survey of a random sample of SOA members was conducted in July 1996. Five hundred respondents participated in the survey. One of the most eye-catching results was the response to the question, "Do you support the concept that mandatory continuing education policies are desirable for the profession?" An overwhelming proportion (90%) of the respondents said "definitely yes" or "yes." The proportion was about the same by area of practice, country, and membership level. Of course, this should not be too surprising — and should be very encouraging — because one of the hallmarks of any profession is its unique expertise, which can only be maintained through continuing education.

In 1998, as a result of the survey response, the SOA Board of Governors asked the Committee on Professionalism to consider the question of whether or not the SOA should establish a program of mandatory continuing education. The committee's report, presented at the board's January 1999 meeting, emphasized the following points.

- When an SOA member uses the designation ASA or FSA, that member is telling the public and the user of actuarial services that the member has qualified as an actuary and is subject to a code of professional conduct. The code requires that the member perform professional services only when qualified to do so.
- As part of the SOA's responsibility to serve the public interest, the SOA needs to be concerned that every SOA member is up-to-date with the current requirements of any actuarial work the member is performing.
- The SOA should strongly encourage the continuing education of its members, and it should facilitate opportunities for its members to obtain the continuing education necessary to fulfill their professional responsibility to perform professional services only when qualified to do so on the basis of basic and continuing education, training, and experience.
- However, highly focused, mandatory continuing education programs based, for example, on a specific amount of continuing education measured in hours or "hour equivalents" per year should be left to national organizations, such as the American Academy of Actuaries (AAA) for U.S. actuaries and the Canadian Institute of Actuaries (CIA) for Canadians.

So the committee's answer to the board was "No" — and the board agreed.

But the story doesn't end here. The broader issue, alluded to above, is contained in Precept 3, and Annotations 3-1 and 3-2, of the soon-to-be-distributed exposure draft of the revised Code of Professional Conduct, the professional code for U.S. actuaries that is supported by the U.S.-based actuarial organizations (including the SOA).

> Precept 3: An actuary shall perform Professional Services only when the actuary is qualified to do so on the basis of basic and continuing education and experience, and meets applicable qualification standards.
>
> Annotation 3-1: It is the professional responsibility of the actuary to observe applicable qualification standards that have been promulgated by a recognized professional actuarial organization for the jurisdiction in which the actuary renders Professional Services, and to keep current regarding changes in these standards.
>
> Annotation 3-2: The absence of any applicable qualification standards for a particular type of assignment or for the jurisdiction in which the actuary renders Professional Services does not relieve the actuary of the responsibility to perform such Professional Services only when qualified to do so in accordance with this Precept.

The first annotation is intended to expand on what is meant by "meets applicable qualification standards." The second annotation emphasizes that the responsibility to perform professional services only when "qualified to do so" remains even in the absence of qualification standards, as might be the case in countries just now

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SOA program of mandatory continuing ed? (continued from page 5)

developing an actuarial profession.

In today's fast-changing and increasingly global business environment, the responsibility to abide by Precept 3 and its annotations really makes continuing education for actuaries "mandatory." The Committee on Professionalism has the duty to remind SOA members of their responsibility to abide by Precept 3 and to encourage members to seek out the necessary and relevant continuing education.

The committee believes continuing education is essential as a means to an end — the "end" being qualified to perform professional services. The committee also emphasizes that continuing education is not just attendance at meetings or seminars. Without active participation, such attendance may not serve as an effective educational activity. Continuing education should be an everyday habit in order to provide employers, clients, and the public the best insights and performance possible. Only by continuing to update our knowledge can we provide valuable and value-added services.

The SOA Continuing Education department — working with the practice areas, special interest Sections, other actuarial organizations, and commercial vendors — provides opportunities for relevant continuing education. The Committee on Professionalism encourages all members to participate in relevant continuing education activities. The committee also urges members to read and provide feedback on the exposure draft of the revised Code of Professional Conduct when issued.

Attainment of a professional actuarial designation represents a significant achievement and gains one acceptance in the actuarial profession. However, that achievement does not mean one is qualified to practice in all areas of actuarial work or even currently qualified in one's primary area of actuarial work. Continuing education — and knowledge and adherence to standards of practice and qualification standards of professional actuarial organizations, such as the CIA, the AAA, and the Actuarial Standards Board — are essential to maintaining one's qualification to practice. The SOA Committee on Professionalism believes this responsibility presents a significant, but exciting, challenge in a time of rapid change. The committee also reminds SOA members that in Canada the CIA's Committee on Professional Conduct and in the U.S. the Actuarial Board for Counseling and Discipline are available for consultation on any issues related to professional conduct.

Warren Luckner, FSA, is SOA staff liaison to the Committee on Professionalism. He can be reached by e-mail at *wluckner@soa.org*.

IACA sets 2000 meeting, lowers dues

The International Association of Consulting Actuaries (IACA) has announced its next biennial meeting will be held June 4-8, 2,000, in Hershey, Penn.

IACA has designed a professional program to help insurance and benefit consultants and forensic actuaries (who serve as expert witnesses) add to their knowledge base, noted Conrad M. Siegel, a member of the IACA committee and arrangements chair of the conference. "With the globalization of business, even small-firm actuaries must increasingly become aware of the developing international accounting rules affecting pension and insurance matters," Siegel said.

Social events are priced separately from the educational sessions, "so attendance need not be costly," he added. One-day attendance is also available for those interested in a particular subject.

The meeting will be held at the Hotel Hershey, picturesque home of the famous chocolate factory. Settings for networking include the hotel tennis court and five local golf courses, one within walking distance of the hotel. Other attractions include landmark sites within an hour's drive — Gettysburg, Amish country, and the state capitol, Harrisburg.

Dues lowered

Reflecting IACA's strong financial condition, the group has lowered its annual dues to $25 (U.S.) from the previous $55. "We're opening the door to encourage more consulting actuaries to join IACA and participate in its conferences," Siegel said.

Information on IACA 2000 is available from Shermer Associates (phone: 717/545-9991; e-mail: *shermerassoc@paonline.com*). IACA committee members in North America include Ron Walker, Jay Jaffe, Martha Moeller, Mike Mills, and Siegel.

1998 meeting

IACA's most recent meeting was held in April 1998 in Cape Town and attracted actuaries from 13 countries. Papers were presented in nine subject areas. IACA's £500 prize for the best paper was awarded to "Avoiding Disappointment in Investment Manager Selection," by Roger Urwin, Watson Wyatt Worldwide, Surrey, England.

Cross-border practice

Rules for Canadian, U.S. actuaries working on other's turf

by William J. Falk

In this increasingly global economy, actuaries frequently find themselves in situations involving cross-border practice. This is particularly true for U.S. and Canadian actuaries. Recent agreements and discussions among the U.S. actuarial organizations and the Canadian Institute of Actuaries (CIA) clarify how the various actuarial standards are to be applied to cross-border activities.

All Canadian and U.S. organizations require that their members abide by the standards of the country in which they practice. This is stated in Annotation 3-1, Annotation 4-1, and Annotation 16.2 of the U.S.-based organizations' Code of Professional Conduct and the Preamble, Annotation 3-1, and Annotation 4-1 of the CIA Rules of Professional Conduct.

In November 1996, the American Academy of Actuaries, the American Society of Pension Actuaries, the CIA, the Casualty Actuarial Society, the Conference of Consulting Actuaries, and the SOA signed an agreement intended to ensure that an actuary practicing in Canada and the United States would be subject to only one disciplinary process based on the location of the work. The agreement defines the location of work and clarifies how the requirements in the codes and rules mentioned above are applied.

In what country are you practicing?

Actuarial work constitutes practice in a particular jurisdiction (Canada or the United States) if the work is "performed pursuant to the legal or regulatory environment of" the jurisdiction or if "it is intended for use in" the jurisdiction. Note that the country of practice depends on how and where the work product is to be used, not on the physical location of either the plan participants or the actuary. Consequently, a U.S. actuary could "do work in Canada" without ever setting foot in that country. The same is true of a Canadian actuary doing work in the United States. Examples of cross-border practice include:

- A U.S. actuary calculating the annual expense of a U.S. pension plan for inclusion in a Canadian parent company's Canadian financial statements
- A Canadian actuary calculating the annual expense under FAS 106 for the Canadian subsidiary of a U.S. company

Rules Applying to U.S.-based Actuaries Practicing in Canada

Rule	Actuary is not an FCIA	Actuary is an FCIA
CIA Rules of Conduct	Yes	Yes
CIA Standards of Practice	Yes	Yes
CIA Eligibility:		
Canadian Experience	No	Yes
Canadian content exams	No	Yes
Continuing professional development	No	Yes

Rules Applying to Canadian-based Actuaries Practicing in the United States

Rule	Member of U.S.-based Organization	Not a Member of U.S.-based Organization
Code of Professional Conduct	Yes	Yes
Actuarial Standards of Practice	Yes	Yes
Qualification Standard:		
Basic Education	Yes	Yes
Recent Relevant Experience	Yes	Yes
Continuing Education	Yes	Yes

U.S. actuaries practicing in Canada

A U.S. actuary who performs work that is considered to be practice in Canada is subject to the following professional requirements.

- CIA Rules of Conduct: These are similar, but not identical, to the U.S. Code of Professional Conduct. The most significant difference is the stronger requirement (in Rule 13) for the actuary to report violations of the rules or standards of practice to the CIA. Rule 3 requires that the actuary only do work for which the actuary is qualified.
- CIA Standards of Practice: These Canadian standards of practice may differ significantly from the U.S. standards, depending on the practice area. The U.S. actuary is responsible for reading, understanding, and applying the Canadian standards.

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Cross-border practice (continued from page 7)

The actuary is not subject to any of the CIA eligibility requirements, since they only apply to members of the CIA. These include the Canadian experience requirement, the requirement to be a fellow of an approved actuarial organization (FSA, FCAS, FIA, etc.), the Canadian content examination requirement, and the Canadian continuing professional development requirement.

Of course, a U.S. actuary is not permitted to sign any statements for which the FCIA designation is required by law or regulation in Canada, unless the individual is an FCIA and meets all of its requirements. For example, virtually all of the pension funding valuations for Canadian pension plans are prepared under pension standards legislation that require the signed opinion of an FCIA.

If a U.S. actuary's practice in Canada becomes the subject of disciplinary proceedings, they will be conducted by the CIA in accordance with its rules. The CIA will investigate the issue and determine whether the matter should be heard by a disciplinary tribunal. The tribunal, whose hearings are open to the public, will determine whether the actuary is guilty or innocent of violating the applicable professional requirements. If the tribunal finds that a violation has occurred, the CIA will then make a recommendation to the U.S organizations of which the individual is a member. Each U.S. organization will decide appropriate sanction based on its assessment of the CIA's findings.

Canadian actuaries practicing in the U.S.

As indicated in the CIA Rules of Professional Conduct, a Canadian actuary who performs work that is considered to be practice in the United States is subject to the following U.S. professional requirements.

- Code of Professional Conduct: This is similar, but not identical, to the CIA's Rules of Professional Conduct. The most significant difference is the precedence of client confidentiality over the requirement to report a suspected violation. Precept 3 requires that the actuary only do work for which the actuary is qualified.
- Qualification Standard: This specifies requirements for signing Public Statements of Actuarial Opinion. (A Public Statement of Actuarial Opinion is a statement that is required by law or regulation, required by an Actuarial Standard of Practice, or made for the purpose of complying with an accounting standard.) The actuary must have completed basic education in the topic of the statement, either by examination or equivalent experience. The actuary must have recent experience that is related to the statement's topic. The actuary must have completed at least 24 hours of continuing education during the prior two years in the practice area of the statement.
- Actuarial Standards of Practice: U.S. standards of practice may contain significant differences from Canadian standards of practice, depending on the practice area. A Canadian actuary practicing in the United States is responsible for reading, understanding, and applying the U.S. standards.

Of course, a Canadian actuary is not permitted to sign any statements for which there is a specific qualification requirement unless the actuary satisfies that requirement. For example, the Enrolled Actuary designation is required for signing certain statements regarding a defined benefit pension plan, and the Member of the American Academy of Actuaries designation is required for certifying some insurance company reserves.

If a Canadian actuary's practice in the United States becomes the subject of disciplinary proceedings, they will be conducted by the Actuarial Board for Counseling and Discipline in accordance with its rules. The ABCD will investigate the issue and decide whether a hearing is required. If, after a confidential hearing, the ABCD determines that a violation of the professional requirements has occurred, it will make a recommendation to the CIA and any U.S. organizations to which the individual belongs. Each organization will decide upon the appropriate sanction based on its assessment of the ABCD's findings.

William J. Falk, principal, Towers Perrin, Chicago, is president of the Conference of Consulting Actuaries and a member of the Joint Committee on the Code of Professional Conduct. Comments may be forwarded to him at *falkb@towers.com.*

First across China's finish line

The first actuarial student to receive his FSA totally through examination in China is Bo Weimin. He is shown here receiving his certificate from Anna Rappaport, immediate past SOA president, at the Fellowship Admissions Course in Toronto in September 1998. Weimin began taking the SOA examinations in 1994 when he was a student at Fudan University and the AIA-Fudan Actuarial Center in Shanghai. After graduation, he joined the American International Assurance Company(AIA), where he completed his examinations. The SOA has actively supported actuarial education in China for more than 10 years, providing funds, study materials, and other resources.

BOOK REVIEW

Remembering why we enjoy math

by Jim Toole
Actuary at Milliman and Robertson

Paul Erdos, or "Uncle Paul" as he was known to his various caretakers, was a homeless wanderer living out of two tattered suitcases, yet he became the most prolific mathematician of the 20th century. A playful and inventive biography, *The Man Who Loved Only Numbers* (Hyperion, 1998) has been written by Paul Hoffman, past editor of *Discover* magazine and publisher of Encyclopedia Britannica.

Hoffman uses Erdos' life and work as a springboard to introduce the reader to a pulsating cast of eccentric geniuses and unsolvable problems. Of more relevance to actuaries, Erdos pioneered techniques for mathematical proofs using probabilistic methods, now known as Monte Carlo methods.

Erdos' work habits were nothing short of amazing. He would appear at friends' homes unannounced and work 19 hours a day, leaving his hosts bewildered and spent after two or three weeks of ferocious collaboration. The typical 6 a.m. greeting began not with "good morning" and small talk, but with "let n be an integer such that…" The same focused intensity was true of his letters, and he was prolific.

Erdos invented his own language, which he developed in his youth in post-World War I Hungary. There, "epsilons" (small increments) were children, God is the SF or "Supreme Facist," and perfect proofs are "straight from The Book," which the SF reveals, one tantalizing page at a time, to the privileged few. People willing to work "open their brain" to him. People who left pure math for applied jobs were, tragically, "dead."

One of Erdos' gifts was his uncanny ability to both identify problems and divine the relative complexity of the solution. He shared this same insight into the abilities of his fellow mathematicians, whom he challenged by putting dollar values on the so-called "Erdos problems." Many budding mathematicians found themselves drawn to their calling by grasping at a mathematical cookie put just beyond their reach by Erdos' long arm.

Throughout the book, we are reintroduced to timeless problems familiar to most actuaries. Each problem is magically animated with its own persona. Some are identified with their conqueror, others with their conjecturer. The most stubborn have littered at their peaks the souls of those who lost everything in the rarified air of the pursuit; mathematicians speak wryly of a "black theorem" which, once revealed, drives the possessor mad.

As a general rule, math is a collaborative effort, and conferences end up being working sessions (more so than other sciences where papers are merely presented). Such conferences were very fertile for Erdos. Even into his 80s, he would gather four or more brilliant mathematicians and "assign" each a separate problem, demanding their full attention to it while he buzzed from mind to open mind. Thus, mathematicians were turned into machines for converting caffeine (or amphetamines) into theorems. You got a sense that a math conference was as much fun as a Star Trek convention to a trekkie, and just as weird.

One exception to this rule was Andrew Wiles, single-handedly responsible for slaying one of the oldest and most well known problems, affectionately known as Fermat's Last Theorem ($xn + yn = zn$ only if $n = 2$). Heretofore unproven, by 1993 it was

known that if a counter-example existed, the exponent would have to exceed 4 million. Hoffman's description of the events leading up to the proof, and its presentation, is a mathematical cliffhanger worthy of Tom Clancy.

The book becomes as much a story about Erdos as the arcane world in which he inhabited, aided and abetted by his prime players. It provides the layman a glimpse into the rarefied world of higher math, complete with a supporting cast of characters straight out of an Oliver Sachs patient list, from Pythagoras ("one-tenth genius, nine-tenths sheer fudge") to Graham Nash, who gets insights juggling six balls or turning flips on his trampoline. If you ever enjoyed math, this book will certainly have you remembering why you did.

Jim Toole is a consulting actuary in Milliman & Robertson's Denver office. He can be reached by e-mail at *jim.toole@milliman.com.*

Ensuring future diversity of the actuarial profession

by Kelly Mayo
SOA Public Relations/Marketing Coordinator

Since 1977, the mission of the CAS/SOA Joint Committee on Minority Recruiting has been to support the education of and provide monetary assistance to qualified minority students (African Americans, Hispanics, and Native North Americans) to pursue an actuarial career.

Indications are the need is increasing for programs like this. Recent reports show a drastic decline in college enrollment of minority students. For example, the University of California campuses report a 45% decline in their 1998 fall enrollment of black and Hispanic students. A Washington organization surveyed 1,600 U.S. colleges and also parents and students from eight cities and found 83% of African-Americans and 79% of Hispanics worry that college is unaffordable. These concerns, coupled with an average 6% annual increase in college tuition, could make college seem out of reach to many students.

'98 activities

Each June, the Joint Committee on Minority Recruiting meets to award scholarships for the coming school year. The criteria for awarding scholarships is scholastic ability, math aptitude, potential for and interest in an actuarial career, and financial need.

For 1998, more than $31,500 was awarded, $29,500 in student scholarships. Of the 42 applicants, 26 received money and an exam waiver and 16 received exam waivers and/or calculators as encouragement to take an exam. Most awards were for $1,000; four students received $2,000 and one student received $500. The International Association of Black Actuaries (IABA) contributed an additional $2,000 to two applicants. Each scholarship recipient is assigned a committee member as an advisor who tracks his or her exam progress.

Summer actuarial programs in 1998 for qualified high school students at Howard University and Illinois State University also received funds from the committee. These programs offer outstanding minority students with high mathematics scores an opportunity to explore actuarial careers through exposure to courses such as math applications and computer literacy and to visiting actuaries.

The committee participated in two Actuarial Career Information Fairs in Philadelphia and New York in conjunction with CAS and SOA meetings. About 300 college and high school students and educators who knew little or nothing about actuarial careers attended sessions and booth exhibits. About 35% attending were minorities. Because of the generous support of corporate sponsors, nearly $10,000 was given toward minority recruiting programs after expenses were paid.

The committee also participated in the U.S. Hispanic Leadership Conference and College Fair on Oct. 1, 1998, in Chicago. More than 2,000 Hispanic high school students met for a half-day program and exhibit show, at which the committee had a booth.

'99 high school programs

This year, the committee has renewed its dedication to encouraging college-sponsored summer programs for qualified high school students. Schools with existing programs or new ones under development were asked to submit a proposal to be evaluated against guidelines established by the committee last year. The committee awarded the following schools with summer funding at its March meeting: Howard University, Illinois State University, University of Louisville, and Temple University.

Individuals or companies wishing to make a donation to the Joint Minority Recruiting Program may use the green insert in this issue to send a donation. A contribution of $50 for each Associate and Fellow on a company's staff is suggested. Questions? Contact Kelly Mayo at the SOA office (phone: 847/706-3509; fax: 847/706-3599; e-mail: *kmayo @soa.org*.)

'The Quiet Company' speaks up for minority recruiting

One company saw the SOA's 50th anniversary as a chance to support the profession's next 50 years. Northwestern Mutual Insurance Co., known from its ads as "The Quiet Company," has been a significant contributor to the CAS/SOA Joint Minority Recruiting Program for many years, through its charitable foundation. Recently, it announced an increase in the foundation's 1999 donation from $3,000 to $8,000 in honor of the 50th anniversary.

"We saw the minority recruiting program as an opportunity to acknowledge the Society's anniversary while 'giving back' to the actuarial profession," said William Koenig, senior vice president and chief actuary. "By our investment, we are making it possible for more individuals of every background to have the chance to become actuaries."

Northwestern Mutual has gone beyond the monetary contribution to the actuarial profession. Its long-established actuarial internship program has provided many college students the opportunity to experience the profession. For the past couple of years, graduates of Howard University's summer actuarial program for minority students and an SOA minority scholarship recipient have been among Northwestern Mutual's interns.

Celebration update

More sponsors, Canadian speaker, children's contest

by Cecilia Green
SOA Director of Integrated Communications

'The tremendous response to our call for sponsors a little more than a month ago has been very gratifying," said Ian Rolland, honorary chair of the SOA 50th anniversary celebration. "It's a real affirmation of the significant contribution that the actuarial profession and the SOA have made to the companies they serve."

At press time, 14 sponsors had pledged their financial support of the anniversary. (See box for complete list.) Since the first six were announced in the March issue of *The Actuary,* eight more companies have come on board.

Platinum sponsors ($50,000)

William M. Mercer recently added its name to the list of top-level sponsors.

William M. Mercer is a world leader in the field of employee benefits, actuarial, compensation, communication, and other key human resource consulting services. It has more than 8,700 employees in 106 offices in the principal cities of most major countries. "With more than 1,000 actuaries in our ranks, Mercer has benefited tremendously from the Society's commitment to readying its members and the actuarial profession for the 21st century," said Timothy J. Lynch, vice chairman. "On behalf of the entire firm, I am pleased that we will be a sponsor of the 50th anniversary celebration."

Gold sponsors ($25,000)

Lutheran Brotherhood, in Minneapolis, Minn., is a fraternal benefit society of 1.1 million Lutherans joined together for financial security, volunteer service, and charitable outreach. The Society and its affiliated companies manage more than $22 billion in assets. Founded in 1917, Lutheran Brotherhood has in recent years ranked among the Fortune 500 and was the first fraternal benefit society to offer universal life, mutual funds, and variable products to its members.

"We wish to recognize the tremendous contributions that the Society of Actuaries has made and will continue to make to the profession and our industry," said Robert Gandrud, FSA, president and CEO. "At Lutheran Brotherhood, actuaries have played a significant role in our past and current success. We currently have 35 employees who are members of the SOA in such positions or functions as president/CEO, president-elect and COO, CFO, investments, marketing, insurance services, and finance — as well as the more traditional roles of product design and pricing and valuation."

Silver sponsors ($10,000)

Six new Silver sponsors made their pledges recently: Actuarial Careers, Inc.; PolySystems, Inc.; Security Life Reinsurance; State Farm Life Insurance Company; SunAmerica; and TIAA-CREF.

Actuarial Careers, Inc. is a highly specialized executive recruiting firm exclusively dedicated to the placement and advancement of actuaries on a worldwide basis. The company's blend of advanced technologies and unique team approach has made it the fastest-growing firm of its kind serving the actuarial community.

"Since I began placing actuaries in 1985, we have seen the role of the actuary move beyond the back office and into the boardroom of corporate America," said Aimee Kaye, president. "We are proud to be a part of this evolutionary process, and we are honored to support the 50th anniversary of the Society of Actuaries which, by the strength and innovations of its membership, has been responsible for this transformation of the actuarial profession. As we move into the 21st century, Actuarial Careers, Inc., shall continue to partner with and support the Society of Actuaries and its membership."

Sponsors of SOA's gala 50th annual meeting

Platinum ($50,000)
LAI Worldwide
William M. Mercer, Inc.
Milliman & Robertson, Inc.

Gold ($25,000)
Aid Association for Lutherans
Lutheran Brotherhood

Silver ($10,000)
Actuarial Careers, Inc.
Munich American Reassurance Company
PolySystems, Inc.
State Farm Life Insurance Company
Security Life Reinsurance
Teachers Insurance and Annuity Association-College Retirement Equities Fund (TIAA CREF)

Bronze ($5,000)
McGinn Actuaries, Ltd.
Robert J. Myers, FSA
SunAmerica Inc.

(continued on page 12)

Update on 50th celebration (continued from page 11)

PolySystems, Inc., was founded in 1970 and is headquartered in Chicago. Its 70 employees provide valuation and analysis software to life and health companies worldwide.

"The members of the firm have always contributed to the activities of the Society of Actuaries in the form of volunteer work. This is a different way to support and recognize the efforts of an organization that means so much to the insurance industry and its public," said Tom Herget, executive vice president.

"We look forward to helping the Society reach its goals and objectives for the next 50 years as well," added Roger Smith, president.

Security Life Reinsurance is an integrated life insurance risk management company that leverages the global financial strength of its parent company, ING Group, the world's leader in integrated financial services. Denver-based Security Life Reinsurance provides financial security to its clients through a mix of total risk management, life reinsurance, and STAR — Security Total Accident Reinsurance — services.

"Security Life Reinsurance is proud to be a sponsor of the Society's 50th anniversary," said Thomas F. Conroy, president. "We wish the Society a great celebration, and will be pleased to join you at the annual meeting in San Francisco."

State Farm Life Insurance Company in Bloomington, Ill., was founded in 1929. Based on ordinary life insurance in force in 1997, its affiliates rank fifth among all life insurance groups doing business in the United States.

"The Society provides very important and necessary research and educational functions for the insurance and pension industries. Congratulations on achieving the 50-year milestone," said Darrell Beernick, vice president and actuary.

SunAmerica is a leading financial services firm that focuses on the rapidly growing retirement savings market. It provides more than 1.7 million investors with a broad range of long-term retirement savings products and investment services,

"The Society's 50th anniversary is a great milestone for the profession," noted Edwin Raquel Reoliquio, senior vice president and chief actuary. "Our company is one of the prime movers in the industry, and as such we felt it was appropriate to show support for this milestone. We are proud and excited to be a sponsor."

Teachers Insurance and Annuity Association-College Retirement Equities Fund (TIAA-CREF), with headquarters in New York City, is the nationwide retirement and financial services system for people who work at U.S. colleges, universities, independent schools, and other nonprofit education and research institutions.

"I have a deep sense of personal gratitude to the Society of Actuaries for its role in my own personal life," said John H. Biggs, chairman, president, and CEO. "TIAA-CREF, of course, has benefited from the Society's education program but also from the shared research and professional development represented by the Society's meetings.

"The exceptionally high standards of the Society have significantly raised the competence of the entire life insurance industry in America and its leadership. Congratulations on the 50th."

SOA card contest: members' kids have chance to win

Not all the activities for the 50th anniversary celebration look back into history. A special activity taps into the talents of the future generation of actuaries — or maybe future artists.

Members' children and grandchildren can showcase their talents by making a "Happy Birthday, SOA" card and entering it in a contest. Prizes will be awarded in each of three age groups: 3-5 years, 6-9 years, and 10-12 years. Six monthly prizes (April, May, June, July, August, and September) of Tony Bennett's new children's CD, "The Playground," will go to one winner in each age group. (Bennett will entertain at the SOA's gala dinner on Oct. 19.)

Each month's winners will be entered in the grand prize competition for a $50 savings bond. Monthly winners' cards will be displayed on the SOA Web site, and the three grand prize winners' cards will be displayed in

Happy Birthday, SOA
Card Contest

the SOA 50th anniversary exhibit hall booth in San Francisco, Oct. 17-19. Contest rules and entry blanks can be accessed from the SOA home page (*www.soa.org*). Just click on the words "Happy Birthday, SOA, Card Contest" for full details.

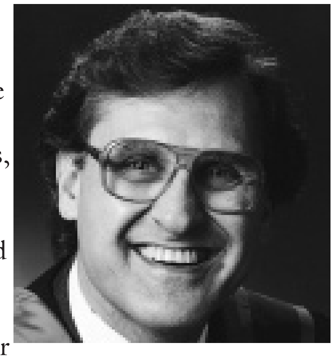
Canadian diplomat to address '99 Presidential Luncheon

Stephen Lewis comes out of his five-year sabbatical from speaking to join the Society of Actuaries at its Oct. 19 Presidential Luncheon during SOA's 50th anniversary annual meeting.

The former chair of Canada's New Democratic Party, Lewis has concentrated his efforts recently on his work as deputy executive director of the United Nation's Children's Fund (UNICEF), a New York-based position he has held since 1995. His distinguished diplomatic career includes serving as Canadian ambassador to the U.N., 1984-88, and taking active roles in human rights initiatives of both the U.N. and Canada.

He currently serves on the seven-member panel appointed by the Organization of African Unity to explore the 1994 Rwandan events leading to dramatic instances of genocide there and seeking methods of prevention. Earlier, he chaired the committee that drafted the five-year U.N. Program on African Economic Recovery.

Lewis was elected to the Ontario legislature at the age of 25 and seven years later became provincial leader of the New Democratic Party for nearly eight years.



Stephen Lewis

Between his legislative and diplomatic careers, Lewis became a distinguished radio and television commentator on public issues and a prominent labor relations arbitrator. He holds degrees from the Universities of Toronto and British Columbia and fourteen honorary degrees.

Speaking out on Social Security

Several actuaries were among 100 citizens participating in The Citizen Forum on Social Security, sponsored by The Public Forum Institute in Northbrook, Ill., Feb. 27. Former Society President Anna Rappaport (second from left) presented facts and options concerning the U.S. Social Security system and proposed reforms. The event included an exercise in which groups of 8-10 participants crafted their own Social Security reform proposals from a list of options. Shown with the event's keynote speaker, U.S. Rep. John Porter (R-Ill., third from right) are: Ray Barry, Rappaport, Peter Plumley, Noel Abkemeier, Kenneth Faig (back), Jerry Levy, Lane West, and Bob Aronsohn.

New: SOA Web site lists members' articles

Journalists and others visiting the SOA Web site's *Newsroom* can begin to learn the scope of actuaries' contributions to society through a new listing posted there *(www.soa.org)*.

The list, "Actuarial authors in the media," will show titles of articles written by Society members for national and international nonactuarial publications, such as *Best's Review, National Underwriter,* and the *Journal of Compensation and Benefits.*

Each entry will give the article's title, author's name, publication name, and publication date. Also posted will be a path to obtaining the article, either by direct link to a Web site where it's posted or through contact information (such as an editor's name and phone number).

For details, SOA members should contact Jacqueline Bitowt, public relations manager, at the SOA office, 475 N. Martingale Road, Suite 800, Schaumburg, IL 60173 (fax: 847/706-3599; e-mail: *jbitowt@soa.org*).

RESEARCH CORNER

CKER highlights

The winning paper in the second Edward A. Lew Award competition is "Dynamic Asset Allocation and Optimal Investment Strategies," by Hans U. Gerber and Elias S.W. Shiu. The authors will receive $10,000 and will present the final paper at an SOA meeting. Seven proposals were submitted this year. CKER members review the proposals and select the winner. The Lew award, given for achievements in modeling research, honors the 1972-73 SOA president for his support of actuarial research and other major contributions. He died in 1996.

The Committee on Knowledge Extension Research (CKER) is funding a project to identify and develop materials related to the new Courses 3 and 4, actuarial models and modeling, in the SOA education system taking effect in 2000. Patti Scott, University of Michigan, has conducted an initial literature search. Items identified in the search will be used to generate study materials.

CKER is managing a project to update the SOA library's index of actuarial literature to provide members, educators, students, and others interested in such information easy access to actuarial literature. The SOA Web site will be used as the central repository for both literature and the index. In addition to funds from the SOA research budget, financial support is being provided by the Actuary of the Future, Education and Research, Pension, and Product Development Sections.

Funding has been approved for Krzysztof Ostaszewski's comprehensive analysis of the significance of social security within capital markets.

Retirement news

The actuarial consulting firm Bolton Offutt Donovan, Inc., of Baltimore, Md., has been selected to conduct a research project, Actuarial Aspects of Cash Balance Plans. The SOA is asking pension actuaries to provide these researchers with information about provisions of plans of which they are aware, especially those provisions that allow participants to make choices regarding their cash balance accounts. Contact Tom Edwalds, SOA senior research actuary, to submit cash balance plan information. (phone: 847/706-3578, fax: 847/706-3599; e-mail: *tedwalds@soa.org*).

Finance news

A request for proposals (RFP) has been issued for the Risk Position Report Survey. The project's purpose is to increase awareness about the kind of risk measurement reports that are currently being used in the insurance industry. Project objectives are:

- To survey insurance companies about what risk position reports they currently use and what additional risk information they would like to see reported
- Based on the survey results, to provide a summary and commentary on the current state of the art in risk position reports
- To make companies familiar with the types of asset/liability risks that can affect them and spur ideas for ways to monitor and manage these risks

The complete RFP is available on the SOA Web site in the *Research Library* (*www.soa.org/research/rprs.html*).

A letter of agreement has been signed with Teresa R. Winer for research on the project, Market Research for Actuarial Counseling. She will conduct focus groups to obtain meaningful feedback on the viability of actuarial counseling as a profession. Potential categories for actuarial counseling in-clude financial, product selection, life and health expectancy, small business pension plans, and benefit entitlement counseling. This research is expected to be completed by Dec. 31.

A complete package of materials distributed at the Actuarial and Financial Modeling II Conference held Dec. 14-15, 1998, is now available. The cost is $15. To purchase or for further details, contact Beverly Haynes in the SOA Books Department (847/706-3526; fax 847/706-3599; e-mail: *bhaynes@soa.org*).

New York University Stern School of Business and the Society of Actuaries held a conference, "Fair Value of Insurance Business," on March 18-19. Conference papers are now available. The $200 price includes a copy of the conference proceedings when published. Orders, accompanied by check, should be sent to New York University, Salomon Center, Stern School of Business, 44 West 4th Street, Suite 9-160, New York, NY 10012. An order form is available on the SOA Web site at *www.soa.org /research*.

Health news

The 1991-92 Group Medical Insurance Large Claims Database is available on diskette through the SOA Books Department for $35 (phone: 847/706-3526; fax: 847/706-3599; e-mail: *bhaynes@soa.org*). This database contains the experience of 26 carriers on claims over $25,000 in 1991 and 1992. The experience was analyzed and published as an SOA monograph, *Group Medical Insurance Large Claims Database Collection and Analysis.*

Clarification

A story in the March issue of *The Actuary* inadvertently switched topics and dates of this year's SOA spring meetings. Life and finance topics will be the focus of the May 24-25 meeting in Atlanta; health and pension topics will be central to the June 16-18 meeting in Seattle.

Topics and dates are correct on the SOA Web site and in *The Actuary's* February 1999 issue under "Upcoming meetings and seminars."

DEAR EDITOR

GeneratioNext revisited

The article "GeneratioNext: keeping up with the future" (*The Actuary,* February 1999) was interesting and creative. This initiative by Pakistani author Muzammil Waheed will encourage other actuaries and students in Pakistan to contribute more to actuarial
publications and take an interest in the profession's development.

Javed Ahmed

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I'm still chuckling. The article was a fun read, and it also prompted some "GeneratioNext" thinking of my own. If all *px*'s were to equal 1, pension actuaries such as myself would have a lot of business trying to keep plan costs to reasonable levels!

Margaret Berger

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I greatly appreciated the humor in Waheed's story. However, it raised some points that deserve serious consideration as well.

If human cloning is successfully performed and is legalized, then its implications for actuaries and insurers will indeed be profound. Policyholders will be exposed to the risk of fraud as much as insurers.

Waheed's questioning of the effect of zero gravity on mortality is very timely in light of former U.S. Senator John Glenn's recent space journey. His mission's objective was to determine the effect of space travel on aging. The data from this study will be of great interest to the actuaries. The SOA should probably make an effort to get access to the data.

On a lighter note, I believe that if a person comes from the future to claim his or her life insurance benefit in the present (after the person died), the actuary may advise that person to contact the office of the insurer in the future time. Actuaries living in the future may have found a solution to this particular problem by then.

Madeeha Abdullah

An invitation

I read with interest and surprise the results of your Social Security survey. One statement, in particular, struck me as counterintuitive. That was the fact that "only women, as a group, supported the statement [reforms should include a defined contribution (DC) feature], with 45.6% in favor and 44.7% opposed." That really shocked me. Why would women want a DC feature and men not? Women now have a defined-benefit (DB) Social Security system with unisex benefits. Thus, on a pure "money's worth" basis, they do better than men. In a DC world, they would have to buy their retirement income from the private sector and would get less income per dollar of savings than men with equal savings.

Then I had an "aha." The survey analysis in the January issue must be flawed. The issue really is one of age, not gender, I thought to myself. Younger people generally tend to support DC funding arrangements and are suspicious about whether they will ever see their OASDI benefits. Older people, in general, are more supportive of DB arrangements. Add to that the fact that most female actuaries are young, and we have a wrongly skewed analysis.

Staff kindly sent me a breakdown of the data, and I was able to prove my theory — at least partially. Of the women who responded, 58.5% were under age 40, whereas only 29.7% of the men were under age 40. For women age 40 and under, 47.2% favored the DC concept and 43.1% were in opposition (the balance were neutral), while for women over age 40, 43.1% favored DC but 47.1% were opposed. I then compared this to the male response. Among male actuaries age 40 and under, 42.7% favored the DC concept and 45.2% were opposed to it, while for men over 40, 34.8% favored DC and 57.7% did not.

What does this all prove? Well, there is a mixed bag here. Clearly, more young actuaries than older ones favor the DC concept. However, it is also clear that more female actuaries than male favor the DC concept. And this makes absolutely no sense to me whatsoever. There are 22 female actuaries out there over age 40 who said they favored the DC concept. Maybe a few of them could write in and tell us why, or feel free to contact me at my *Directory* address on a confidential basis (that is, you won't have to admit publicly that you are over 40).

Robert L. Brown

Testimonial

I enjoyed Robert J. McKay's editorial ("Let universities in," *The Actuary,* January 1999). I attended the University of Cape Town and had an exemption agreement with the United Kingdom's actuarial bodies, and it certainly added years to my life. Our class felt that the university's standards might have been even higher than the U.K. exam standards — possibly because our professor knew he always had to keep his exams up to par.

Perry Teperson

IN MEMORIAM

W. James D. Lewis
FSA 1949, FCIA 1965

Jeff McGill
ASA 1999

William Gilbert Cook
FSA 1951

George C. Campbell
FSA 1935