

# The Actuary

## C/QPP's uncertain future

by J. Bruce MacDonald



Many Canadians fear for the future of the Canada/Québec Pension Plans (C/QPP). They believe the funds will be exhausted by the time they retire. They do not realize the plan has always operated on a pay-go basis with a contingency fund equal to two years' benefit payments. Implicit in this is a scenario of increasing contributions, which has been planned from the start in 1966, although contributions were not to increase (and did not) for 20 years. In the first years, contributions exceeded benefits paid for reasons that had nothing to do with the plans' actuarial funding. Sophisticated observers fear that the ultimate

contribution rates will be higher than Canadians will be willing to pay.

Last year, the Canadian Institute of Actuaries (CIA) appointed a Task Force on Social Security Financing. Coincidentally, at just about the same time, Rob Brown of the University of Waterloo, presented his paper, "The Future of the Canada/Quebec Pension Plans," at the June 1993 CIA meeting. This paper and its discussions were of help to this task force, chaired by Kit Moore. It released its report at the November 1993 CIA meeting.

The rest of this article summarizes the "Report of the Task Force on Social Security Financing."

### Contribution rates

The report notes that contribution rates to C/QPP will increase to levels higher than expected, because of significant benefit improvements and the "baby bust" that started in 1960. The combined employer/employee contribution rates to CPP will increase steadily from 5.00% in 1993 to 13.27% in 2035, after which they are fairly level.

### Components of the retirement income program

The Old Age Security Pension (OAS), the Guaranteed Income Supplement (GIS), the Spousal Pension Allowance (SPA), and the C/QPP make up the Canadian retirement income program. OAS is a universal demogrant, while GIS and SPA are income tested. OAS is taxed back in whole or in part (the "claw-back") if income exceeds

a certain level (currently \$53,315).

C/QPP are earnings-related and not subject to any income test or claw-back.

C/QPP have several advantages that justify their importance in the retirement income programs. These include

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# The Actuary

The Newsletter of the  
Society of Actuaries

Vol. 28, No. 4  
April 1994



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

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Nonmember subscriptions: Students, \$6; Others,

\$15. Send subscriptions to: Society of Actuaries,

P.O. Box 95668, Chicago, IL 60694.



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

## EDITORIAL

# Issues similar on both sides of the border

by Mike McGuinness

As I sat in sessions at the spring meeting of the Canadian Institute of Actuaries (CIA), held in Toronto on March 10 and 11, I couldn't help noting the overlap between the Canadian issues being addressed and the health care and retirement discussions now flooding the U.S. press. On both sides of the border, our citizens' future in these two areas partially rests on the influence actuaries' recommendations have on the industry and governmental bodies. This responsibility was well articulated at the Toronto meeting by Christopher Daykin, president-elect of the Institute of Actuaries in the United Kingdom. He proposed the ethic that "actuaries turn promises into reality."

The CIA meeting provided stimulating, knowledgeable speakers, much useful discussion, and almost an overload of information. My only disappointment was the low attendance. Presumably in these straitened times, employers and actuaries themselves are reluctant to spend the time and money for actuaries to attend these meetings. If this is the case, it seems to be a very shortsighted point of view.

One of the most encouraging developments announced at the meeting was that Lloyd Axworthy, Canadian human resources minister and a prominent member of the Canadian government, has taken Past President Walt Rugland's advice to "ask an actuary." The CIA is one of the bodies the minister has asked for help in rebuilding Canada's social security network. The CIA will respond by summer.

In this issue, Bill Bluhm's article describes the help American Academy

of Actuaries and SOA members have been able to give staff members of the House Energy and Commerce Committee as it starts to draft parts of President Clinton's Health Security Act. Like the work Canadian SOA members will be doing for the Canadian government, this is welcome recognition for the expertise of actuaries.

The keynote speaker at the CIA meeting was Dr. Jane Fulton, an Ottawa professor of health economics. She has managed her time effectively enough to have taught at Harvard and the University of Southern California among other U.S. universities, has advised Hillary Rodham Clinton on health care reform, and has appeared on the Phil Dohahue show. By her own admission, her political views are left-leaning. She buttressed her talk with an impressive array of data and, unlike some keynote speakers I have heard, remembered what audience she was addressing.

Her message was that the Canadian health care system is very good and perceived to be so by the country's population, but that it is not cost effective. In contrast, she said, U.S. citizens perceive the U.S. system to be very poor. A major cause of the excessive cost, she said, was the fee-for-service basis of remunerating health care professionals, especially doctors, with its built-in incentives to over prescribe. Another was tying up acute care beds in hospitals with chronic care patients, especially the elderly, who really needed a different and less costly form of care. Advocating better control of health care provision and greater use of HMO-type organizations, she said costs could be cut dramatically with no real loss in standard of care.

One of her interesting comments was that Canada should export some health services to the United States. Saying that some procedures could be performed just as well and at much lower cost in some Canadian hospitals than in corresponding U.S. hospitals, she advocated that any excess capacity should be made available to any U.S. residents willing to pay for it.

Bruce Cohen, a journalist with *The Financial Post* of Toronto, was another outside speaker providing valuable insight. He appeared on a panel with CIA members Kit Moore and Rob Brown to discuss the

publicity the CIA generated for its "Report of the Task Force on [Canadian] Social Security Financing." (Bruce MacDonald discusses the report more fully in the front-page article of this issue.) Cohen said he had found the report most helpful, and he had been pleasantly surprised that the report's press coverage, resulted in mostly informative and well-balanced articles. He stressed that actuaries should never slacken their efforts to inform the public, and they should remember that the average journalist is comfortable describing immediate crises, not long-term, complex questions.

CIA members spent much of the meeting wrestling with their proposed new consolidated standards of practice. A discussion draft was published in February. In presenting the draft, Ken Clark said he hoped the approval process would be complete by January 1, 1996. Judging by the volume of work to be done and its complexity, this may be optimistic.

In this issue, Editor Mike Cowell reports on the responses to the readership survey last November. I echo his request to readers to keep their responses coming.

## C/QPP's uncertain future (continued from page 1)

virtually full coverage of the working population, portability of benefits, inflation protection, and low administrative costs.

### Comparison with other countries

The report compares the Canadian system to the others in the seven top industrial nations, known as the G-7 countries (United States, Japan, Great Britain, Germany, France, and Italy), plus Australia. Canada's benefit levels usually are somewhat less generous, but about the same as in the United States and Great Britain and much more generous than in Australia. Current contribution rates, however, are much lower than in any of the G-7 countries, all of which have more mature populations than Canada, some with a normal retirement age of 60. The long-term contribution rates in Canada will be comparable to current rates elsewhere.

### Rate of return on contributions

The Canadian social security system provides about 45% of the income for elderly single men, about 55% for elderly single women, and about 40% for elderly couples. Private pension plans provide less than 20% of income. Thus, these government plans are an important income source for retired Canadians, with OAS/GIS providing more than C/QPP.

The report considered whether C/QPP was a "good deal" for Canadians. Will Canadians be satisfied with a real rate of return of only 1.5%, when the combined employer/employee contribution rate exceeds 13%? If the employee contribution ignores the employer contribution, as may well occur, the returns will look much better.

The real problem with C/QPP contribution levels is that Canada is one of the most highly taxed countries in the G-7, with a very high deficit. To reduce it requires higher taxes or reduced government spending.

The estimated cost for Medicare, Unemployment Insurance (UI), Workers' Compensation, OAS/GIS, and C/QPP is 18.6% of GNP. Many of these programs' costs will increase as the population ages. At some point the combination of income tax and social security costs may reduce overall economic activity and employment, thereby reducing the tax revenue available.

### Future availability

A recent survey indicated that less than 30% of Canadians believed that C/QPP benefits would be available to everyone at retirement. However, 60% expect to rely on social security and private pension plans after retirement. Yet only about 45% of working Canadians are members of private pension plans. Only about 35% contribute to a Registered Retirement Savings Plan, a tax-assisted form of retirement savings. Of this 35%, many are sole proprietors or partners (which include most professionals such as doctors, lawyers, and accountants) who cannot, under Canadian tax laws, establish a pension plan.

### Increased contribution rates necessary

Large increases in contribution rates will be necessary to maintain the status quo for C/QPP. The scheduled increases are gradual, and in no one year should be great enough to produce a public outcry. With reduced wage increases, however, they will be much more noticeable than in earlier years. A large increase in UI rates two years ago caused no great outcry; benefit cutbacks resulted in more complaints. With the many objections to the substantial increase in 1994 UI rates, the level of contributions finally may have reached the stage where a tax revolt may be brewing.

The report points out that most social security schemes are financed on a pay-go basis, and it rejects full funding for

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# To our readers

by Mike Cowell  
Editor of The Actuary

Many thanks to our readers for your responses to the survey last November. We received almost 2,000 responses, representing about 10% of our readers, distributed across all groups by areas of practice, experience, and geographic location. A summary of the responses to all 63 questions is available on request.

Most who responded said that they read some or most of *The Actuary* (89%). Almost 65% of you said you read 9 of the 10 issues of 1993 cover to cover. The front-page story led the topics that are “always” or “usually” read by three-quarters of the respondents. Other high scoring topics in the “usually” or “sometimes” read categories are the editorial, the Section corner, international news and, somewhat surprisingly, given the negative comments elsewhere, task force and committee reports. At the bottom of the popularity list were the two word-puzzle sections — Actucrosswords and Actucrostics — which 70% of respondents say they “never” read.

As to what you’d like to see more — or less — of, current news events affecting our profession came in with the most votes for “more.” That is exactly what we at *The Actuary* have been trying to provide and will continue to focus our attention on in the months ahead. Closely related are debates of the issues, a strong second choice, followed by job market and career outlook.

Specific requests for general interest articles included:

- The effects of government regulation on actuarial employment
- Political, economic, social policy, and health stories with an actuarial slant
- Actuarial involvement in legislation and regulation at the state, provincial, and national levels

Again, at the other end of the scale, more than one-half of you want fewer crossword and acrostic puzzles, or none at all.

Of the 26 features about which we asked whether you wanted “more coverage,” “the same amount,” or “less coverage,” you voted for the same amount on 22 features. This encourages the editorial staff to retain most of the current distribution of content and focus on quality of material.

In the areas of actuarial practice articles, you want more emphasis on management and business ethics and, in the technical area, articles on information technology, asset/liability management, and applications of operations research and stochastic modeling to practical actuarial problems.

You’d like more professional articles on what “upper level” actuaries are doing, trends in nontraditional

employment, hiring of minorities, standards of practice, including new areas of practice and ways to apply knowledge and, a perennial favorite, a survey of salaries by exam level and experience.

General comments, both positive and negative, included a suggestion that our readers need more knowledge of economics, that we have more human interest stories, more topics of interest to Canadians (note this month’s editorial by Mike McGuinness and Bruce MacDonald’s article on pensions), and more international coverage. Several readers want us to “lighten up” a bit, and include more humor, while others want no attempts at “humor that isn’t funny.” We are exploring the possibility of an extra issue this summer devoted to the lighter side, but we will give you ample warning, so that those of you who don’t like actuarial humor (or consider it an oxymoron) can simply ignore that issue.

Forty-one of you mentioned the thing you most disliked about *The Actuary* was that stories did not continue on consecutive pages, but jumped to back pages. We began correcting that problem with the February issue and now indicate next to the “jump” headline the page on which the story began.

Other requests included “brief obituaries of deceased members” (we promise not to run lengthy ones on living members!). One respondent, who seems to enjoy this feature, added, “Keep the obits going.” So, in the event we run low, we’ll check to see if he or she is interested in volunteering.

Perhaps most interesting to those of us who sifted through all your comments were those on *The Actuary*’s new look. It would have been difficult to have come up with a wider gamut of opinions if we had tried. Those who like it are effusive in their praise: “Excellent improvement;” “Much more professional looking;” “First-class newsletter now has first-class visual appearance;” “It’s come a long way in the 25 years that I’ve been reading it.” At the other extreme, those who didn’t approve of the change had no hesitation in telling us: “This is terrible and ancient;” “Simply awful;” “Boxy and old-fashioned;” “Simplistic and trite.” Some expressed neutrality, or damned the change with faint praise: “Format doesn’t matter, content does;” “Neither better nor worse;” “No effect on me.” A few gave us technical suggestions such as “Use Helvetica font for the text to match the headlines,” and “Don’t go to the expense of color photos like the U.K. *Actuary*.” Not to worry; our budget simply wouldn’t allow it.

Inevitably, the expense of producing *The Actuary* arises each time we conduct such a survey. This time, it elicited such comments as “*The Actuary* should be discontinued as

an unnecessary waste of money, time, and paper. There is nothing useful that I don't get earlier and better from BNA, etc."

Fortunately, almost nine out of ten of our readers disagree with this view and claim that for them, *The Actuary* is the "most useful" or "a useful" professional newsletter. Negative opinions like the one cited represent the views of only 1% or 2% of our readers. We would volunteer to remove from the distribution list those few readers who feel this way, if it didn't add to the cost.

For the record, each run of *The Actuary* costs approximately \$5,800 to print. This works out to about 28 cents a copy for the 21,000 copies we currently mail. At 46 cents a copy, mailing actually costs more than printing, while the allocated cost of Society office staff labor and overhead runs about 27 cents. Thus, the cost of each of the 10 issues we

currently produce each year amounts to just over \$1 per copy. Eliminating *The Actuary* completely would reduce dues by about \$14 per year. (More than 10 times \$1, because *The Actuary* goes to wider audiences than dues paying members.)

It is obvious from reading your responses that *The Actuary* can't possibly be all things to all our members, but we do strive to achieve the greatest value for the greatest number. To further paraphrase Mr. Lincoln, we renew our resolve that this shall continue to be a publication of the actuaries, by the actuaries, and for the actuaries.

If you would like a complete tally of all 63 questions of the survey, please contact Cecilia Green at the Society office, 708/706-3561. Again, thanks for sharing your views, and please keep those comments coming.

## SOA staff changes in research and management

Recent Society of Actuaries staff changes have been made to enhance research efforts for the profession and to bolster membership services and support.



*Harry Panjer, Ph.D., FSA, FCIA  
Director of Research*

Waterloo, Panjer has worldwide experience as an actuary, a researcher, and an academic. He will help expand the well-established base of research efforts that former Research Director Mark Doherty, SOA research staff, and volunteers have helped build.

With Panjer concentrating on the broader scope of research efforts and the newly established Foundation, Warren Luckner, FSA, has been named managing director of research. Luckner, who was an education

### Research

Harry Panjer, Ph.D., FSA, FCIA, will be joining the staff as SOA director of research starting in May. He is a past SOA vice president. As a professor in the Department of Statistics and Actuarial Science, University of



*Warren Luckner, FSA  
Managing Director of Research*

research management coordinator position. Lois Chinnock will assume Yore's responsibilities with Sections.



*Jack Luff, FSA, FCIA  
Experience Studies Actuary*

actuary for three years and has been a research actuary for five years at the Society, will have responsibility for all research activity in the financial and investment management practice area, as well as overseeing research staff. Judy Yore will assist Luckner in a

Experience Studies Actuary Jack Luff, FSA, FCIA, will add the life insurance practice area research activities to his duties, as well as the experience studies in the health benefit and retirement systems area.



*Linden Cole, FSA  
Managing Director*

management of the Society.

"In my 15 years as executive director," O'Connor said, "the Society's budget has grown almost tenfold, and the staff has more than tripled. The staff structure, the profession, and the industries we serve have become so complex it was time to have a managing director. I have the utmost confidence in Linden's ability."

Cole has served in various staff roles over the past 14 years. He will oversee the continuing education, operations, education, information services, and communications areas. O'Connor will continue to work with the Board and oversee the research and finance areas and the SOA Foundation.

### Management

Linden Cole, FSA, education actuary, has been named to the newly created position of managing director for the SOA. Cole's main responsibilities will be working with Executive Director John O'Connor, Jr. and assuming much of the day-to-day

# Actuaries advise Hill staffers on health insurer solvency

by Bill Bluhm

One of the American Academy of Actuaries' roles is to be the actuarial profession's liaison with governmental bodies. It provides technical advice to policymakers on the implications of their policy decisions. The Academy's Government Information Department maintains close links with key decision makers on Capitol Hill and in federal agencies, which gives actuaries the opportunity to respond to requests for assistance.

On January 11, four actuaries met with Democratic and Republican subcommittee staff members from the House Energy and Commerce Committee. I represented the Academy's work group on health insurer solvency, one of 17 Academy groups recently established to analyze components of health care reform issues. Other Academy members at the day-long meeting were Alan Ford, head of the Academy's Health Practice Council work group on transition rules, Geoff Sandler, member of the work group on solvency, and Mike Thompson, president of Managed Care at Prudential.

The subcommittee staffers requested this meeting and asked the Academy to discuss two aspects of President Clinton's Health Security Act: guaranty funds for health insurers and issues arising from the transition to a reformed health care system. These topics are under the purview of the Energy and Commerce Committee, and its subcommittees will draft the legislative language pertaining to those issues.

## Guaranty funds

As introduced by President Clinton, the Health Security Act requires that each participating state establish a guaranty fund to protect "providers and others" in case of a health plan insolvency. Our discussion of guaranty funds took an interesting turn. Some of us started the day believing guaranty funds were an important and necessary element for the protection of consumers under reform, but we ended the day by defining certain entirely feasible circumstances under which they might not be necessary at all.

Our group of actuaries told the subcommittee representatives that guaranty funds might not be necessary for consumer protection because of three aspects of reform:

- 1) Guaranteed issue and continuation of insurance coverage
- 2) An assumption that providers will not be permitted to charge consumers for money owed them by a bankrupt plan
- 3) The assumption that state insurance commissioners will be given authority to transfer covered participants from insolvent health plans to solvent plans, which then would be responsible for all claims

Thus, the main purpose of a guaranty fund would be to insulate medical providers and other creditors from the business risk of not being reimbursed for services rendered before the insolvency. Our group stressed that establishing guaranty funds to protect providers is a public policy issue, not an actuarial question.

## Transition rules

The staffers asked about several perceived weak spots in the administration's language on transition rules, especially concerning risk pools and their regulation. Alan Ford's work group is preparing a monograph that will examine risk pools, and he will brief the staffers when the monograph is completed. The actuaries defended the broad need for transition rules, citing, for instance, the need for regulations that would allow companies short-term flexibility in setting premiums during transition.

The discussion turned to the question of which entities should be the focus of solvency regulation that protects the public. Our group suggested that solvency standards be applied to all entities that had pledged to meet the risks of insuring health coverage, usually health plans.

As the discussion continued, the Capitol Hill group also asked our advice on payment priorities in case of bankruptcy. We offered the opinion that in bankruptcy, priority be given to providers still providing services to insured individuals.

The staffers who met with our group were very knowledgeable about the issues. They seemed honestly interested in what we had to say and appeared to value our input. I was impressed with their ability to weigh the truthfulness and technical correctness of the information they receive and to balance it against the political considerations that necessarily permeate their work.

The time and expense the four actuaries spent in the meeting was an important investment in building the profession's reputation and relationship with Capitol Hill. This is a uniquely opportune time for health actuaries to make an impact on the future of health care in America. I was pleased to contribute to the legislative process, and to further our profession's growing reputation as a source of impartial analysis among our nation's policymakers.

**Bill Bluhm is a principal and consulting actuary at Milliman & Robertson in Minneapolis. He is the chairperson of the SOA's Committee on Health Benefit Systems Practice Education and a member of the SOA Health Section Council. He also is a member of the Academy of Actuaries Board of Directors and chairperson of the AAA's Health Practice Council work group on health insurer solvency.**

## C/QPP's uncertain future (continued from page 3)

social security. It correctly points out that if the fund were in government bonds, it merely redirects part of the cost from identified contributions to income tax.

The pragmatic objection is that full actuarial funding would lead to even greater increases in contribution rates than are now proposed.

### Suggested changes

The report suggests four possible changes to C/QPP that would reduce costs:

**1. YBE** — No contributions are being made on the first 10% of maximum covered earnings, known as the Year's Basic Exemption (YBE), which was \$3,400 in 1994. If earnings are below the YBE, no contributions are made nor benefits earned. If earnings are above the YBE, no contributions are made on this tranche, but benefits are earned. This was done to reduce administration and to subsidize lower income workers. The result is that part-time workers don't receive benefits, and it has created inequities between workers earning just over and under the YBE.

The report suggested the YBE be eliminated. This could reduce ultimate contribution rates by up to 2%. The change would be highly regressive, as it would result in a 17-fold increase for a worker earning only \$200 more than the YBE, while the increase would be only 11% for someone with maximum covered earnings. Obviously, such a change would have to be phased in.

**2. Contributory period** — Currently, the 15% of years with lowest earnings can be dropped out in calculating benefits. Ultimately the maximum contributory period will be 47 years, from 18 to 65, so full benefits will require contributions for only 40 years. This provision makes sense, because many individuals do not start working until they reach their twenties or they have periods of unemployment. Consideration, however, could be given to changing the drop-out period to 10%.

The treatment of early retirement is more important. In this event, the contributory period stops at the date of early retirement. Thus at age 60 the maximum contributory period will ultimately be only 42 years, so a full pension can be earned after only 35.7 years of contributions. If 40 years of contributions were required for a full pension, it could

reduce the cost by .5%. Early retirement pensions are reduced by .5% for each month between the date of early retirement and age 65.

**3. Survivor's benefits** — With more two-income families and financial autonomy of spouses, the report suggested current survivor's benefits are, in large part, redundant. In 1992, survivor's benefits amounted to 14% of all CPP benefits paid. The report's only suggestion for change was to replace the current survivor's benefit with a temporary pension if death occurs before age 65 and to transfer 50% of the deceased's earnings to a surviving spouse based on years of cohabitation.

**4. Retirement age** — The normal retirement age is now 65 under all programs. The report suggested the normal retirement age be raised to 70 by increasing the retirement age by either two or three months every year, beginning in 1994. This ultimately would reduce the combined costs of C/QPP, OAS, and GIS by about 4.5% of contributory earnings and of CPP by itself by almost 3%. Economic conditions today encourage early retirement. The report suggests, however, that by the time the baby boomers have retired, incentives for delayed retirement may have become the norm.

### Public discussions beginning

The report should make a valuable contribution to the public discussion of C/QPP changes. Three actuaries, two of whom are over age 60, told me they think drastic action to reduce the level of benefits is needed. Another actuary, in a letter to the *Toronto Globe & Mail*, wrote that the current problems were brought on by the "profligacy" of the current generation of seniors by spending more than they took in on retirement programs and by tax reductions for savings programs. (No mention was made of education, health care, or infrastructure.) He suggests those who are too young to collect will refuse to pay for the financial excesses of the previous generation and will tell seniors that they are on their own. He compares this to dealing with out-of-control children and calls it "tough love."

**J. Bruce MacDonald, retired, does some consulting work for the Senior Citizens Secretariat of Nova Scotia.**

## IN MEMORIAM

James G. Bruce	FSA 1946, MAAA 1965	Kenneth G. Gustafson	FSA 1978, MAAA 1970, MSPA 1980
Rebecca Burell	ASA 1979, MAAA 1982	James F. McJohn	FSA 1978, MAAA 1979, FCA 1986
Peter L. Durbin	ASA 1970, FIA 1969	Thomas D. Pitts	FSA 1971, FCIA 1971
Joseph T. Gannon	FSA 1936, MAAA 1965		



## THE COMPLETE ACTUARY

# Reengineering: Here today, gone tomorrow?

by Angelica Michail

“Reengineer your business” is the new mantra of management experts. Michael Hammer’s article, “Reengineering Work: Don’t Automate, Obliterate,” in the *Harvard Business Review* (July/August 1990) and the bestseller, *Reengineering the Corporation*, which Hammer co-authored with James Champy, outlines this concept, which has hit a nerve with corporate America. With the survival of many companies in question, is reengineering the answer? Or, is it another management theory that is here today and gone tomorrow?

In John Sardelis’ review of the Hammer/Champy book in the November 1993 issue of *The Actuary*, he raised the same question, “Is reengineering the latest idea destined for the management theory junkyard?”

### Asking the right questions

Reengineering promises to deliver dramatic improvements in performance. One way this is accomplished is that reengineering forces companies to rethink the fundamentals of their businesses. It is easy to be so immersed in day-to-day tasks — making decisions, following procedures, completing reports — that often no one takes the time to ask, “Why are we doing this?”

Peter Drucker, the management guru, teaches a course on “The Effective Decision” at the Peter F. Drucker Graduate Management Center in Claremont, California. He observes that American companies take pride in making quick decisions. Unfortunately, the decisions are often wrong, because the right questions were not asked.

### Nurturing innovation

Companies acknowledge that innovation can be a major source of dramatic improvement in performance. Few succeed in nurturing and sustaining innovation, however. Reengineering involves redesigning business processes, using tools made available by modern technology, and encouraging employees who actually perform the work to participate in decisions. This could encourage the type of creativity and energy necessary for innovation.

### Continual self-evaluation

Insurance companies with a culture steeped in tradition and with a tendency to follow time-tested procedures are not able to respond quickly and adapt to the many changes in the industry. They soon lose their competitive edge. An ever-changing environment demands a company continually evaluate where it is, where it wants to go, and how it is going to get there.

Reengineering may get you there, but the trip will not be easy. It can be very disruptive and unsettling for a company. It is hard for a company to question its traditions, culture, and assumptions. It is difficult to discard outdated management ideas and work processes, to embrace new technology, and to adopt a new way of thinking and doing things. It is not easy to pursue a vision and to have that vision shared by employees and believed by customers.

With one crisis coming after another, many companies may find reengineering more acceptable because it promises a way to avert or resolve a crisis. In that way, it may persuade a company that it is all right to ask difficult questions, that it is not too difficult to change, and that it has the resilience to bounce back and leap forward.

### Society meeting sessions offered

How does a company reengineer? Why and when should a company reengineer? What does a reengineered company look like? Look in your spring programs for sessions at Society of Actuaries meetings to help you with these questions.

For example, the Committee on Management and Personal Development and the Computer Science Section are sponsoring two sessions at the SOA spring meeting in Orlando, April 20-22: “Optimizing Your Efforts: Reengineering Process” and “Reengineering through Team Syntegration.” These sessions will teach the basic concepts, while recognizing the human costs and benefits. They will help actuaries develop techniques to increase the chances of their companies’ successfully reengineering. The Computer Section also is offering a session, “Reengineering Actuarial Systems,” at the Orlando meeting.

The teaching session, “Optimizing Your Efforts,” provides practical insights and case study examples from the hands-on experiences of the faculty. Elaine Miller and Michael Keane teach the session and are consultants in Peat Marwick’s General Insurance Practice. Both specialize in business process redesign and organizational change.

Understanding the theoretical aspects of engineering — its concepts, principles, and tools — is not difficult for actuaries. Reengineering a corporation, however, goes beyond understanding the theory. It involves the human factor, which poses the greatest challenge.

Joe Truss, president of Team Syntegrity, conducts the workshop on “Reengineering through Team Syntegration,” which is a model for structuring teams for more effective





**ON THE LIGHTER SIDE**



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Inspired by this recent DILBERT comic strip, *The Actuary* has created its own buzzword bingo. Here's how you play. At your next staff meeting, listen for today's popular buzzwords. Refer to the sample game for comparison or make up your own. Everytime you hear the buzzword or overused phrase on your card, mark it. Five in a row makes you a winner.

If more than one person wants to play, you can reorder the buzzwords in random fashion (easy to do on your PC) to produce distinct cards. To heighten the competition, make substitutions from the Buzzword Bonepile (see list). First player in the group to get five in a row claims the win by quietly repeating the *non sequitur* previously agreed on, such as "That sounds like something I read in one of those Attila the Hun books," or more simply, "Afghanistan Banana Stand." Important note: Keep your resume up-to-date.

**Entering the Actuary competition**

Send us your 25 favorite buzzwords in the card format. We'll publish the top cards in time for use at the annual meeting. Ranking will be based on cleverness and mix. Of course, points will be taken off for originality. Contest deadline is May 15, 1994. Send entries to the Buzzword Research Group, Communications Department, at the Society office.

BUZZWORD BINGO				
Hidden Agenda	Hedging Our Bets	Strategic Realignment	Public Policy Question	This'll Be Win-Win
Winning Game Plan	Downsizing Is a Must	Go for That in a Heartbeat	Power Side of the Ledger	Economies of Scale
I Hear What You're Saying	It Was Purely a Business Decision	Free Space	We Feel Your Pain	It's a World Economy Now
Lean and Mean	Pull the Plug (on that Issue)	Any Reference to Robert Solow	Corporate Culture	This'll Get Their Attention
We Need to Be Proactive on This	Now in the Pipeline	It's a Zero Sum Game	Let's Do the Right Thing	Any use of the word "Guru"

**Buzzword Bonepile**

*Review our priorities*  
*One size fits all*  
*Reinvent the system*  
*Pricing pressure*  
*We're going for market share*  
*Public policy wonk*

*Loss leaders not on the table*  
*Bottom line consideration*  
*Let's consider the options*  
*Reengineer the process*  
*Regulation in a growth market*  
*Time is money*

*Sharing the pain*  
*(Profits) will take a hit*  
*Research is market driven*  
*It works for me*  
*We got a winner here*  
*Go for it*


 E&E  
CORNER

### Intensive seminars

Plans are underway for the August Intensive Seminar sessions. The seminar on Applied Statistical Methods (Course 121), a five-day session, will be held in four locations, including the University of Connecticut and University of Wisconsin-Madison (August 8-12), University of Iowa (August 8-12 and August 15-19), and University of Toronto (August 15-19).

The Intensive Seminar on Risk Theory (Course 152) is being offered at Drake University and the University of Waterloo. The seminar will be run at both locations the weeks of August 10-14 and August 15-19.

To be eligible, candidates must have passed the Course 120 or Course 151 exam within the past two years, between November 1992 and May 1994. The 10 credits earned by passing the Intensive Seminar may be used as elective credit toward either the ASA or FSA designations.

The seminar is called "intensive" because participants have lots of work on the computer and homework assignments at the end of each day. In addition to an examination, candidates are evaluated on a project for which they are expected to select and apply appropriate analytical tools, as well as present and defend their findings and conclusions. Real-life actuarial applications are used as examples throughout the course.

### New exam locations

SOA examinations now are being given at Beijing, Changsha, Shanghai, and Taichung. The exam center in Taipei, Taiwan, is among the top ten in number of candidates writing, with

the top five centers being New York, Toronto, Montreal, Chicago, and Philadelphia. In November 1993, 361 candidates wrote exams at the Taipei center.

### FAC news

A milestone has been reached for the Fellowship Admissions Course (FAC), with the 1,000th successful participant, Timothy B. Maloney, Life Insurance Company of Georgia, attending the Atlanta FAC in February. All 185 participants at this FAC and the Dallas FAC in March completed the course successfully and became new FSAs.

### Courses offered for first time in May

Several courses are being offered for the first time with the May 1994 exam administration:

- Course F-585, Applied Corporate Finance, is a required course for candidates in the Finance Track. With this course, the Finance Track is now fully operational after an intense developmental effort over the past three years.

- Courses P-359C (Principles of Pension Valuation I-Canada) and P-462C (Principles of Pension Valuation II, and Accounting Standards for Pension Plans-Canada) are required courses for Canadian candidates in the Pension Track. These two courses replace the single larger Course P-460C (Principles of Pension Valuation and Accounting Standards for Pension Plans-Canada), which was previously required for Canadian Pension candidates.

- Course 230, Principles of Asset/Liability Management, is a 15-credit course now required of all candidates

to complete Core. The course previously had been offered as V-380, and V-380 can be used to satisfy the Core requirement for Course 230. With Courses 220 (Introduction to Asset Management and Corporate Finance) and 230, in concert with the changed ASA requirements (that include Core), all future members will have a considerable grounding in financial and investment topics.

### Exam changes

These changes will be effective with the November 1994 exam session:

- The guessing correction will be eliminated on the multiple choice examinations for Course 130 and for all courses numbered 140 and higher, with the exception of 141, P-360U, and P-365U (the EA examinations). With this change, the effective strategy for candidates will be clear: candidates will obtain the highest score by answering all questions. This change gives candidates the opportunity to concentrate on the content of the exams and show what they know, without the need to engage in gamesmanship or to gauge their degree of certainty for each answer.
- The triple-true-false question is being eliminated as a multiple-choice question type. Simple true-false questions, at a reduced point value, will be used instead. This change provides another opportunity for candidates to demonstrate more precisely how much they know about a topic.

## BOOK REVIEW

# Book recaps 1991 pension research symposium

by Steven McKay

*Demography and Retirement in the 21st Century.* Anna M. Rappaport and Sylvester J. Schieber, editors. Published by Praeger Publishers, 88 Post Road West, Westport, Connecticut, 1993. Telephone: 1-800-225-5800. 328 pp.

**A**s stated in the overview: "This book presents the papers and comments from the Pension Research Council's Spring 1991 Symposium. It focuses on those issues related to the age structure of the population and patterns of retirement, as well as our ability to anticipate how these might change in the future."

Each of the seven sections after the overview has a paper and discussions of the paper, with 24 total authors represented. The organizers of the symposium made an effort to involve a wide variety of participants to provide "a rich diversity of perspectives on the issues considered."

The section on demographic change describes the factors involved in projecting the U.S. population into the 21st century. The various authors have minor disagreements over the projected path of some of the factors but agree that the aged dependency ratio will increase dramatically after 2010 with the retirement of the baby boomers.

The following sections deal with the implications of the forecasted demographic change on the workforce and labor markets, social insurance, capital formation, retirement programs, and health among the American population. The last section compares projections for the United States to actual and projected international experience.

The participants in the symposium must have foreseen the interest in health care that was to blossom in the next few years. Although health has its own section, it recurs throughout the discussion. Half the social insurance section deals with health care, especially for the elderly.

In the section on the workforce and labor markets, the authors go to some effort to show how previous projections of labor force participation rates have been flawed, usually by projecting continuation of then-current trends when those trends were about to change. They describe a more comprehensive model that would theoretically be better, but do not actually build such a model. Instead, they consider what such a model might show. Models often produce unexpected results. This reader was left unsatisfied that the authors did not present more concrete results.

The section on social insurance deals with some complex issues, usually successfully. The nature of the Social Security

trust funds is widely misunderstood. The paper presented by Sylvester Schieber repeats a statement by Charles Schultz with which I agree: "The mere accumulation of financial assets in social insurance trust funds does not, of course, mean that one generation is financing its own retirement and relieving the next of any burden." Unfortunately, a few pages later, the author is not sufficiently careful when discussing the various patterns of payroll taxes that could fund Social Security. The unstudied reader could come to an opposite conclusion.

The section on capital formation discusses models of saving to be used to predict the pattern of savings rates in the 21st century. The authors test them against actual experience during the 1980s and find that none of them do very well. They attempt to account for the reasons the models have difficulties and then project savings rates as best they can. There also is a qualitative discussion about factors that cannot be quantified easily. I was disturbed by the following statement: "...The trust fund accumulations ... represent a powerful government saving program, as households currently alive are being forced to help pay the cost of future benefits." This appears to be in opposition to the previous quotation concerning the nature of the social insurance trust funds. It deserves clarification.

There is a lively discussion in the section on retirement programs between John H. Biggs and Anna Rappaport. Biggs sees the defined contribution form of pension plan emerging as preferable to the defined benefit plan in the 21st century. Reasons given range from regulatory excess to attractiveness to certain age groups. Rappaport agrees that defined benefit plans will not be appropriate for small employers, but argues that such plans meet large employers' needs much better than defined contribution plans.

The book raises many more questions than it answers. For example, what will happen to early retirement patterns? Workers have been retiring earlier, but the trend is slowing. Projections from a decade or two ago have erred by projecting continuation of then-current trends, but what is the correct projection today? It would be helpful to the Social Security program and to the economy if people worked longer, but will workers see it that way?

It is necessary to point out the below-average quality of the proofreading evident throughout the book, with many spelling and grammatical errors, beginning with a misspelling of the council's name in the preface. There are

also distracting inconsistencies in punctuation and table format from section to section. To a degree, these deficiencies could be explained by the understandable tradeoffs involved in getting a book to publication in a timely manner. In my opinion, however, a few days with a good proofreader would have been time well spent.

In summary, the Pension Research Council and the editors are to be congratulated for presenting important questions and discussions about our future. There may be few answers now, but we can all help develop the answers over time if we begin paying attention to the issues today. I agree with the editors, however, that "we may be stuck with dealing with necessary retirement program adjustments only when there is a greater sense of crisis."

Steven F. McKay is chairperson of the SOA Committee on Review of Literature. He is an actuary with the Social Security Administration in Baltimore, Maryland.

## Math Awareness Week has medical theme

The Joint Policy Board for Mathematics has designated April 24-30 as Mathematics Awareness Week. The 1994 theme is "Mathematics and Medicine." Each year, colleges and universities nationwide help promote mathematics activities on their campuses. Others, such as the Public Broadcasting Service and the Smithsonian Institution's National Air and Space Museum in Washington, D.C., have joined in the efforts.

For more information on how you or your organization can get involved in Math Awareness Week, call the Joint Policy Board for Mathematics at 202/234-9570.

## SECTION CORNER

### Nontraditional Marketing

Richard Bergstrom, chairperson of the Nontraditional Marketing Section Council, is calling 1994 the "Year of Education." Goals are to sponsor a seminar, to improve communications with and encourage feedback from members, and to continue to enhance meeting programs and the newsletter, *NewsDirect*.

The Section offers an "I am nontraditional" T-shirt to newsletter contributors. The Spring 1994 issue of the newsletter includes a preliminary report from the task force assembled to study mortality and persistency experience of direct marketed life and supplemental health contracts. This article, focusing on persistency information, will be followed by a mortality report expected to be released in the newsletter's summer issue. More detailed analysis on persistency and mortality results will be published in the next *Transactions Reports*.

This spring, the Section is concentrating its meeting planning efforts on the San Antonio meeting, June 15-17. One highlight is the USAA Quality Journey, a one-and-a-half-day program limited to 40 participants at USAA's campus. The tour will include a look at USAA's planning, quality assurance, research and development, customer service, and systems. Company culture and keys to success also will be covered.

### Product Development

The Product Development Section Council is striving to continue

offering quality programs to members. Efforts in 1994 will focus on:

- *Product Development News* under the direction of new editor, Ed McKernan
- A May 25 seminar in San Francisco on "Insurance Marketing in the '90s." The program will provide unique insights into the marketing plans, decisions, strategies, and thinking that are considered when developing insurance products.
- The Section is planning new formats for some sessions offered at the San Francisco spring meeting. William Freund will speak at the Section luncheon May 17. One of his many professional accomplishments is serving as senior vice president and chief economist of the New York Stock Exchange.

The Section recently sponsored a project on the implications of proposed changes to the annuity standard nonforfeiture law. The group is looking for input on other topics to pursue.

February 1994 *Product Development News* articles included "Last Survivor Insurance Antiselection" by Craig W. Reynolds, "How to Deal with Changes in the Valuation Interest Rate" by Richard B. Lassow, "Report on the NAIC Life and Health Actuarial Task Force Meeting" by Raymond T. Schlude, and "Variable Annuity Minimum Death Benefits — a Monte Carlo Pricing Approach" by G. Thomas Mitchell.

## SOA second spring meeting in San Francisco

The Society of Actuaries is gearing up for its second spring meeting in the city famous for its cable cars — San Francisco. The meeting will be at the Westin St. Francis, May 26-27, with an emphasis in product development and financial reporting topics.

The keynote speaker will be Richard Jay Solomon from the MIT Center for Technology, Policy, and Industrial Development. A leading researcher, Solomon will offer insight into the communications technology infrastructure of the future. He is co-author of *The Gordian Knot: Political Gridlock and Communications Revolution*.

More than 60 sessions will feature such topics as international actuarial qualifications, managing technical professionals, the life-cycle of a Fellowship exam, the latest news from the NAIC, Far East markets, the Americas after NAFTA, updates on illustrations, and reinsurance regulatory and tax issues. Other sessions will help participants stump the investment experts, figure out how to best utilize consultants, and discover what they have to do to be a valuation actuary.



A highlight of the meeting will be a presentation at the Product Development Section lunch, May 27, from 12:15-1:45 p.m., by William Freund, a nationally known economist who had the position of senior vice president and chief economist of the New York Stock Exchange for 18 years. Freund is author of the bestseller, *Investment Fundamentals*, and his report on "Productivity and Inflation" was published by the Joint Economic

Committee of the U.S. Congress.

In between meeting sessions, participants can enjoy the area restaurants, boutiques, and unlimited activities near the meeting hotel, located on Union Square in the heart of San Francisco.

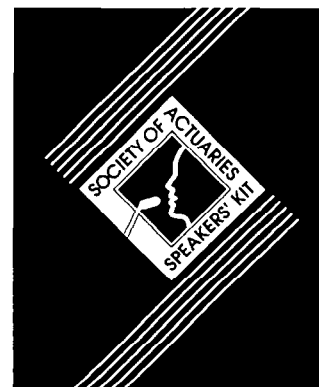
For more information on the meeting or to register, please call the SOA Continuing Education Department at 708/706-3545.

## New speakers' kit available

You've been asked to speak to a group about the actuarial profession or on an issue related to the profession. You know your subject well, but aren't sure how to get started on preparing your presentation. The new updated Society of Actuaries "Speakers' Kit" is now available to help you. It contains tips on putting together your remarks, a

summary of some of the issues important to our profession, and a variety of dates, statistics, and quotations you can include.

The "Speakers' Kit" is available to members at no cost through Pat Garrity, 708/706-3515, at the Society office.



## DEAR EDITOR

### International life insurance accounting paper available

Regulations governing life assurance company accounts have changed in many countries in recent years, but they are inconsistent. New rules are to come into force in the European Community. In 1995, the requirement applied to noninsurance companies that accounts conform to certain standards and be "true and fair" will be extended to insurance companies.

A key issue for stock life companies is the calculation of profit, where the actuarial assumptions in the valuation for solvency purposes will generally be too conservative for the new accounting rules.

In a paper presented to the Institute of Actuaries in London in January, I used standards developed by the International Accounting Standards Board to put forward a new set of principles for life assurance accounts. Entitled the "Earned Profits" method, it aims to calculate the profit realistically earned by the company. It uses the market value of assets with a corresponding liability calculation without capitalizing profits which reflect the future performance of the firm.

The paper also uses economic principles to provide a new analysis of the embedded value and appraisal value of companies and defines a calculation of the rate of return believed to be consistent with noninsurance companies.

If anyone would like a copy of the paper, "Profit, Capital and Value in a Propriety Life Assurance Company,"

please contact me at Royal Life Insurance, P.O. Box 30, New Hall Place, Liverpool, L69 3HS, England; Telephone: 011 4451 239-4009; Fax: 011 4451 239-3363.

Chris O'Brien

### Qualified actuaries in Hong Kong

I refer to the response to a letter on ways to become a qualified actuary in Hong Kong (February 1994). Hong Kong is an international center with insurers from 28 countries represented here. The prescribed qualifications for "actuary" under the legislation are Fellow of the Faculty of Actuaries, FFA (Scotland); Fellow of the Institute of Actuaries, FIA (England); Fellow of the Society of Actuaries, FSA (North America); and Fellow of the Institute of Actuaries in Australia, FIAA.

About 70 qualified actuaries and more than 100 associates work in Hong Kong. Most are members of the Actuarial Society of Hong Kong, a local actuarial professional body. The appointed actuary system has been in place since 1983 and the role of the appointed actuary for life insurers is in the process of being strengthened.

Raymond Tam

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A more appropriate response to the February letter from a parent asking about a son's professional status would be as follows:

The designations Fellow of the Society of Actuaries (FSA) and Associate of the Society of Actuaries (ASA) are conferred based on passing

examinations administered by the Society. We believe people achieving these designations have demonstrated the skills and knowledge necessary to pursue successfully a career as an actuary. Because of the high standards the Society has set for achieving these designations, they have earned a high level of respect, both within the profession and among the public.

However, these designations are not recognized by any governmental or regulatory body as definitive of who is an actuary. In fact, unlike the medical and legal professions, there is no legal definition of an actuary. Other actuarial organizations confer professional designations according to their own standards. Many governmental and regulatory bodies prescribe standards for actuaries who work within their jurisdictions. Such standards may or may not be consistent with those the Society sets for its own professional designations. Therefore, while you have every right to be proud of your son's accomplishment in attaining the ASA designation, it is not the Society's place to determine whether or not he is an actuary.

Eric J. Klieber

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#### *Editor's note:*

*The statement in Klieber's letter that there is no legal definition of an actuary is not quite correct. A few obscure pieces of legislation in some U.S. states and Canadian provinces have not been brought up to date and still refer to the FSA as the legal definition of an actuary.*



# ACTUCROSSWORD

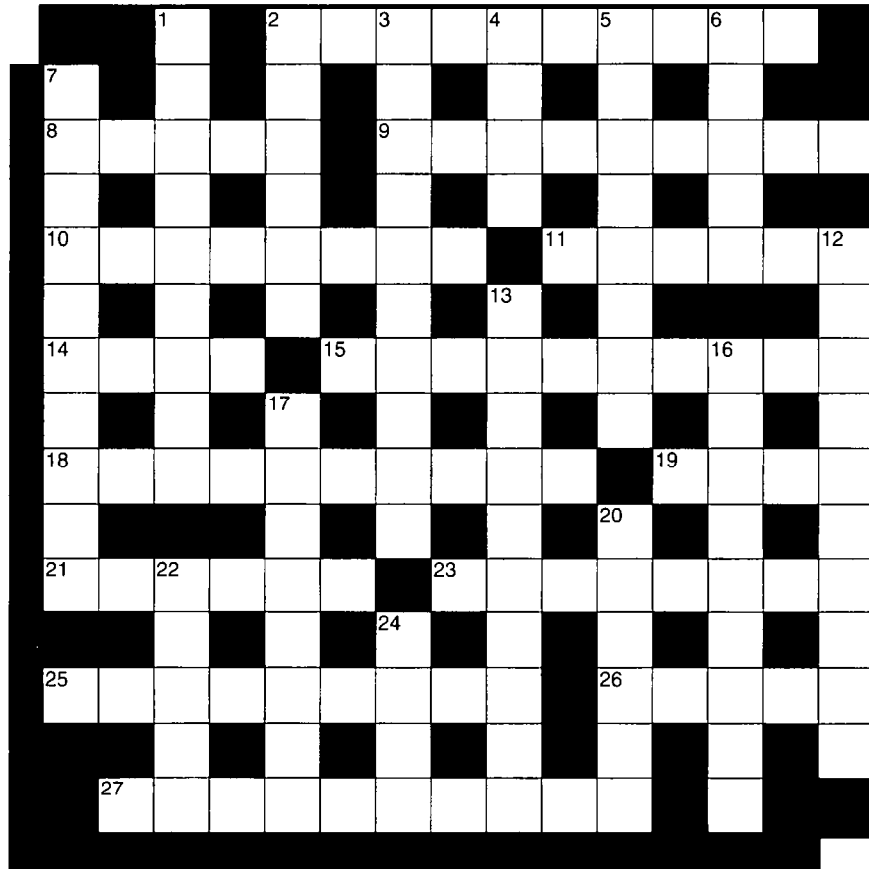
by DON BAILLIE

## Across

2. Drunken Australian in orgy (10)
8. Ha! Note maiden's debut in seraglio (5)
9. One on a couch in exotic Nyasaland (9)
10. Donor to outdo debtor (8)
11. Macho six annoy (6)
14. Italian river cartoonist (4)
15. Arbitrary, like a royal flush? (4-6)
18. Doctor certainly clutching ring and liturgical book (10)
19. Daze returning lunatic (4)
21. Mr. Rice, next to bus, comes back to surrender (6)
23. Insurance Vera gets in company (General Electric) (8)
25. Keep nice man away from soap (9)
26. Return it to the church allowance (5)
27. Y chromosome: villain (10)

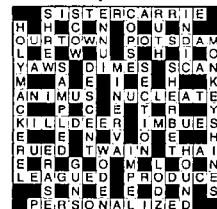
## Down

1. Saint Roch, unfortunately, is bragging (9)
2. No married Greek character's turned over page (6)
3. Some actors and elderly in derailed trains (10)
4. Bum housed in there, a rattrap (4)
5. Strange — I playact in tatters (8)
6. Mid-Easterner, Levin and I take in Qatar's capital (5)
7. Four musicians disrupted tale in Thebes (3,7)
12. Threatened with extinction, died suppressing rage (10)
13. A heat gauge the fink confiscates the greatest number of (10)
16. Diverted action without tact, retaining right (9)
17. Girlie dances framed by iron ornamental work (8)
20. Unusual street dog (6)
22. Abbot happily presents prime minister (5)
24. Goddess enveloped by the radiance (4)



**100% Solvers - September:** M Grover, O Karsten Jr, M&D Williams **October:** L Abel, B Alexander, A Amodeo, A Atrubin, S Colpitts, R Fleckenstein & P McEvoy, B Fortier, C Godfrey, P Gollance, R Harder, P Hepokoski, G Horrocks, C Joyner, R&J Koch, D Leapman, W Lumsden, D McGarry, M MacKinnon, R Martin, G Mazaitis, B Mowrey, L Oxby, J Palmer, J Roszkowski & M Neumeier, G Sherritt, H Tate, E Thompson, B Tomper, M Vandesteeg & A White, C Velasquez, F Zaret

January's Solution



Send Actucrossword solutions to: Puzzle Editor, 35 Smithfield Court, Basking Ridge, NJ 07920