Vol. 17, No. 8

Остовек, 1983

MY LIFE AND OTHER CONTINGENCIES

by Catherine Roberts

Ed. Note: Mrs. & Mr. (F.I.A. 1980) James Roberts live in Southampton, England. This article comes from FIASCO, July

Pondering why I, the wife of an actuary, can count so many other actuaries' wives as friends, I suppose it is comforting for us to meet and not have to spend an inordinate amount of time explaining exactly what it is that our husbands do. I doubt that there is an actuary's wife alive who hasn't faced blank expressions as she tried to explain her husband's occupation. I long to find a simple definition of an actuary, something that rolls easily off the tongue without use of any technical jargon.

But what else have we wives in common? Well, many of us have suffered through the exams, the tensions, the passing, and, of course, for the majority of us, the failing. The studying naturally accustomed us to spending our evenings alone. Naively, we thought this would end when the exams were finally over-but no, it was mere training for the wife of a Qualified Actuary who, due to pressure of work, is rarely able to leave the office. Goethe once said, "Work makes the companion": if so, the actuary must never have cause to feel lonely.

One wife recently told me that if she'd known what it was going to be like, she'd never have married an actuary. Is this why we do it-ignorance?

I suspect many actuaries marry young. They catch their wives before they suspect what they are letting themselves in for. I myself was the victim of such tactics. I married in total innocence and ignorance, and became suspicious only when, one week after the honeymoon, studying for the first exam began.

Some actuaries don't find a wife in

BOARD MEMBERS' ACQUAINTANCESHIP

Now that our 161 welcome New Fellows from the May examinations have raised the Society's total Fellowship roster beyond the 5,000 mark, it's timely to see how many of our Fellows are personally known to a readily identifiable band of Fellows who can be said to have "been around"-the members of our Board of Governors.

To this end, we prepared a methodically selected random list of 61 names spread throughout our 1983 Yearbook, and, through the good offices of Ardian C. Gill, submitted it to the Board members with the request that each proceed thus:

"Against those names you are familiar with, please mark F if you have first-name acquaintance; R if you know that person just reasonably well; S if only slightly."

In due course Mr. Gill came through with responses from 26 of the 29 Board members; it would be cavilling of us to point out that all the three he missed were among the Society's top officers. In summary, a total of 219 names were marked F, R or S, distributed thus:

First-Name Acquaintance

Reasonably Well Acquainted

Per Board

5.0

1.2

Total Member

129

32

Slightly Acquainted	58	2.2			
Total	219	8.4			
Number of Acquaintances Per Board Member 15 or more acquaintances 1 Bd. Member					
10-14 acquaintances 5-9 acquaintances		Members Members			
2-4 acquaintances		Members			
Total	26 Bd.	Members			

The mode of this distribution was 6, the median 7.5. We chose the names by a uniform rule from every yearbook page exactly divisible by three.

(Continued on page 8)

MUTUAL COMPANIES IN CHAINS

Ed. Note: Many actuaries, particularly those who teethed on Henry H. Jackson's 1932 paper, "The Wisdom of Mutual Life Insurance" (T.A.S.A. 33), may observe with dismay that what is called "Demutualization" is being seriously discussed. This is an abstract of notes from a June 1983 meeting of the New York Actuaries Club at which major participants were John J. Marcus, Douglas Thornsjo (General Counsel for Union Mutual), Alvin Alpert (until recently Chief of the Life Bureau, New York Insurance Department), and Gerald Goldsholle (Assistant General Counsel, Metropolitan Life). Notes on the session are courtesy of Robert Burr (Vice President, Research, at Prudential).

How Mutual Companies See Themselves Handicapped

Perceived disadvantages suffered by the mutual form of organization, perhaps always there but starker in today's increasingly competitive, economically windswept and foreseeably deregulated environment, fall into five categories. In addition to the federal tax problem which these panelists didn't dwell upon, these are:

- 1. Constraints upon engaging in non-insurance activities.
- 2. Limited capital for such activities.
- 3. Handicaps in competing for employees.
- 4. The burden of the traditional policy dividend system.

The essence of each of these four is:

1. The legal constraints imposed by many states on the types of businesses that a life company may engage in, pose no problem for a stock life company owned by a holding company which can raise the needed capital and invest it as it sees fit. But this route is denied to mutual companies.

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The Actuary

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The Society is not responsible for statements made or opinions expressed herein. All contributions are subject to editing. Submissions must be signed.

EDITORIAL

NEXT ON THE U.S. AGENDA... MEDICARE

To help focus our profession's attention on Social Security's large piece of unfinished business, we devote this space to excerpts from the closing section of the 1983 Annual Report of The Board of Trustees of The Federal Hospital Insurance Trust Fund. (In addition to compressing, we have taken minor liberties with the text.)

"Even though the...fund is expected to be able to pay benefits and administrative expenses as they become due, until 1990 under the II-B assumptions and until 1991 under the II-A assumptions, any significant adverse deviation from these projections could (sic) result in inability of the fund to meet its obligations much sooner than projected....

"The prospective payment provisions of Public Law 98-21 have made the outlays of the program potentially less vulnerable to excessive rates of growth in the hospital industry by providing the Secretary of Health and Human Services with some discretion over the level of payments to hospitals.

"It is difficult to anticipate the level of discretion which the Secretary will exercise over the 25-year projection period in determining payments to hospitals (emphasis added). However...even assuming reasonable use of this new discretionary authority, the present financing schedule is inadequate to provide for the expenditures anticipated over the entire 25-year valuation period if the assumptions underlying the estimates are realized. Tax rates currently specified... are sufficient, along with interest earnings and assets in the fund, to support program expenditures only over the next six to seven years....

"In order to bring the program into close actuarial balance, either outlays will have to be reduced by 30 percent or income increased by 43 percent.

"The quadrennial Advisory Council on Social Security will be addressing the financial status of the Fund. The Council's report is due by the end of 1983. The Board recommends that Congress study carefully the Advisory Council's recommendations as it takes further action to curtail the rapid growth in the cost of the program which has occurred in recent years and which is anticipated."

The tenor of the companion Annual Report on the Supplementary Medical Insurance Fund (SMI) naturally is different. As the accompanying Summary points out, SMI is essentially yearly renewable term insurance, hence the concept of its actuarial soundness is similar to that of private group insurance. Since the financing up to December 1983 is sufficient to cover current benefits and administrative costs and to build a level of assets adequate to take care of a moderate degree of projection error, "The SMI program can be said to be actuarially sound". This mustn't, though, cause actuaries to forget that the government's contribution to SMI, \$5 billion in 1977, had climbed to \$12 billion by 1982, and is expected to be \$20 billion in 1985.

What does all this suggest that our profession, and its members individually, ought to be doing that we aren't already doing?

E.J.M.

ACTUARIES AT WORK IN OTHER LANDS: SWITZERLAND

by Dr. Josef Kupper

Ed. Note: This is one of a series. Dr. Kupper is Director and Chief Actuary, Life Insurance Society of Switzerland, Zurich.

Compared with other European countries, an organised insurance industry in Switzerland developed relatively late. The first foreign companies began operations here in 1830; in 1840-41 the first Swiss companies were formed, but none of these survived for long. The oldest existing Swiss life insurance company is the Swiss Life, established in 1857. The ensuing year saw the founding of the Helvetia, the oldest Swiss casualty insurer, and in the early 1860s there followed the first reinsurance company, the Swiss Re. Later in the 19th century, growth in all branches of insurance accelerated.

Though several mathematicians found their life-work with insurance companies, many years went by before they formed themselves into a professional body. The Association of Swiss Actuaries was founded in Basle in June 1905 with a membership of 36. One of its first goals was to create an organ for publication of actuarial papers; the "Bulletin" has been published since 1906—twice yearly since 1936. In two of its issues, 1955 and 1980, papers were devoted to evolution of the Association and of our Swiss insurance industry.

The Association and Its Activities

When mentioning these activities, one inevitably recalls the 21st International Congress of Actuaries held here in 1980, which we hope some of our Canadian and U.S. colleagues remember as a pleasant and rewarding experience. Unfortunately the 12th Congress, planned for 1940, was thwarted by the ravages of war, though its scientific papers were printed.

The Association today numbers about 650 individual members, including 140 from abroad; 25 are Honorary Members and Corresponding Members, among them our Honorary President known to many overseas, Prof. Hans Ammeter. Our affairs are conducted by a 10-member Board, now under the presidency of Prof. Hans Bühlmann.

In the absence till recently of any examination system, the Association's mem-

(Continued on page 8)

LETTERS

Common Denominator

Sir

Several topics and observations in your June issue seem directly related to three underlying questions:

- 1. What are the characteristics of today's actuaries?
- 2. What should, or might, those characteristics become some day?
- 3. How can characteristics considered desirable be realized?

Items bearing on these questions in that issue were:

- language aptitude tests.
- Ph.D.'s in mathematics.
- the Society's syllabus.
- the general math exam prizes.
- graduating in the top half of a good business school.
- success in our profession.
- preferences by employers of actuaries.
- who should be welcomed into the profession and who should be discouraged.
- the use of the Society as a forum for promoting the industry's partisan viewpoints.

To offer just a comment on the last of these: Since the industry does employ us, conflict between a purely professional and an industry viewpoint seems inevitable, but surely we can arrive at a shared viewpoint in the best interests of the insurance and pension needs of the people of our countries.

It's great to have a forum such as *The Actuary* where matters such as these can be aired.

Donald P. McMahon

Gone Astray

Sir:

Something's wrong in Statisticsland! Specifically in the most recent (1982-83) Statistical Abstract of the United States, the values of q_x for the later ages in Table 107 on page 72 are in error. This has been confirmed to me by the Census Bureau.

Readers may obtain corrected figures from: Scientific & Technical Information Branch, National Center for Health Statistics DHHS, 3700 East West Highway, Hyattsville, MD 20782.

Lawrence J. Rupp

Language Aptitude

Sir:

Chui C. Chang (June issue) is right—the Society should "concentrate upon developing creative capacity and problemsolving ability".

But an essential part of the actuary's job is to communicate results to an often skeptical audience with limited technical knowledge. This requires skill at language, and is partly why the best actuaries are likely to have strong liberal arts backgrounds and to have read widely and written extensively.

Paul E. Buell

Sir:

With thoughts of Einstein and Pascal pounding in the analytical side of my brain I ask for facts, sir, and demonstrations, to support Mr. Chang's extraordinary assertion that "studies have shown that those who are analytically-minded are usually not good at language". Who authored such studies and where can I find them?

I do agree with his conclusion that an English_aptitude test would be "an unnecessary burden". But not, I think, on the analytically-minded; rather on those whose native language is not English, and that includes some of our best actuaries.

Ardian C. Gill

From Mists of the Past

Sir:

In the 1860 census records for Philadelphia appears a William Hamilton, age 70, "Actuary of the Franklin Institute". Since that Institute which was, says a Philadelphia almanac, founded in 1824 "to provide a meeting place for the study of and the resolution of scientific problems", seems never to have been connected with insurance or commerce, and today is best known for operating the city's science museum and planetarium, I conclude that Mr. Hamilton was a statistician rather than an actuary in today's sense, hence isn't a fresh entry to your list of our forebears.

Paul G. Schott

Ed. Note: Franklin Institute happens, though, to have been pictured—p. 4 of our Nov. 1982 issue—as the locale of the Actuarial Society's 1893 fall meeting.

Puzzlement

Sir:

The 1978-79 Experience under Individual Loss-of-Time Policies (1981 TSA Reports Number) gives us data by duration for the first time, and at least one unexpected result. Tables 7, 10 and 13 show that for the 14 and 30-day elimination periods, claim costs in most attained age groups are higher in the first five durations than thereafter.

Perhaps some of your readers would interpret this reverse selection effect in a way that would calm disability underwriters' fears that they may be making matters worse.

Gerald A. Fryer

Echoes from Overseas

Sir:

While in London in early August, I read a newspaper piece in "The Mail on Sunday" discussing the same matters that we did not so long ago. Here's an excerpt:

"Some internal forecasts among Ministers speak of effective tax rates of 70-80 per cent at the turn of the century unless urgent action is taken on the Welfare State, unemployment and social security benefits and pensions, including possibly ending the all-embracing index-linked pension.

"One problem is that under the present pensions system no one can forecast how much it is all going to cost us.

"The Government Actuary—whose job it is to make pensions forecasts—has assumed that families are going to have more children—increasing from 1.9 to 2.1 children on average. The jobless will average 6 per cent as against 13 per cent now, and real earnings will grow by two per cent a year.

"If one—or all—of those optimistic assumptions is fundamentally wrong, the effects will be enormous. For example, an average family remaining at 1.9 children will mean fewer workers around to support the rest of us when we are retired.

"Whitehall says no one need worry until the year 2008. But people should know one fact about their pay packets: the amount they and their employers pay in State pension contributions is not being turned into gold bars and put under a bed ready for when they retire.

(Continued on page 4)

Letters

(Continued from page 3)

"The contributions are paying pensions for those who are retired today. When today's workers retire they will have to rely on the workers who are then in jobs to pay for their pensions.

"And that could mean a quarter of earnings going in pension contributions. So it's no use tinkering with a system in danger of swamping us."

I felt quite at home.

George W. Harding

Help Wanted

Sir:

In a Washington, D.C. radio talk show on unisex pricing, Ms. Judy Goldsmith, the "NOW" president, replied to the moderator's question whether it's true that women live longer than men: "Some women do. It's approximately 15%. But because the 15% live longer than men, 100% of women are penalized."

Would a reader please explain how that 15% figure was calculated.

James P. Walsh

The Transactions

Sir:

Surely J. Calvin Winter III errs in believing (June issue) that the *Transactions* has lost ground as a worthy professional journal in two specific respects.

Its disclaimer clause, now immediately below the copyright notice near the front of each volume (and, starting with Vol. 34, to appear at the top of the following Table of Contents page), cannot justifiably be labelled inconspicuous.

To my personal knowledge, authors do not now exercise any control whatever over what discussions of their papers get printed. The only right authors have is to respond as they wish to those discussions. Nor can the Editor prevent any discussion from being printed; his right is limited to abridgement and editing and to seeking the assistance of his Committee (Yearbook, p. 66).

Jonathan L. Wooley Editor, TSA

Canadian Actuaries

Ed. Note: If there were an award for the best answer to the challenge in our May issue, to name twelve early Canadian actuaries, this writer would have won it.

Sir:

Here is an indicative rather than a comprehensive list of early actuaries in Canada:

- In the earliest days, Elizur Wright was consulted, infrequently, by companies that operated with no actuaries on staff, e.g., London Life and Mutual Life of Canada.
- Hugh Baker, Canada Life's founder (and actuary) was followed there by the Scot, Alexander Ramsay, in 1859 (not 1858 as your table in the April issue showed).
- In 1871, Prof. J. B. Cherriman, a founder of Confederation Life, became its first actuary.
- In 1881, young Thomas Bassett Macaulay, son of Sun Life's Secretary, Robertson Macaulay, became that company's first actuary.
- When North American Life was founded in 1879, William McCabe, an actuary who had been General Manager at Confederation Life, was its first General Manager. McCabe was the first Canadian to serve on the Actuarial Society's council in 1889.
- In 1883, a self-taught actuary, John George Richter, was appointed Manager at London Life. And in the same year George Wegenast started his career at Ontario Mutual, now Mutual Life of Canada.

R. Alastair Rickard, Editor, The Canadian Journal of Life Insurance.

Mr. Rickard, although unaware of this editor's challenge, named seven Canadians. The other five were Messrs. William Hendry, Charles Carpmael, Alfred K. Blackadar, William C. MacDonald and Leopold Goldman.—Ed.

(Continued on page 6)

DEATHS

Wayne E. Allsteadt, F.S.A. 1971 Delos H. Christian, F.S.A. 1949 George Kenigson, F.S.A. 1932 Neil J. Omvedt, F.S.A. 1976

NEW SOUTH LIFE—THE SEQUEL

Ed. Note: This contributor's identity is known to the Editor.

Your Editorial (June issue) didn't tell what happened after New South Life was discovered to be insolvent. It gives food for thought.

A rescue operation was begun with the intent of restoring stockholder and policyholder values from profits on new business. Although it is axiomatic that life insurance may not be sold, even by a charity or church, without financial and other statutory requirements being met, court intervention at New South permitted years of such sales by an insolvent insurer!

The immediate losses that life insurance sales create were initially to be financed out of the company's cash and invested assets and by deferring loan and surrender payments. New policyholders presumably were protected against sharing the deficiency arising from the insufficient premiums on the old policies.

The solution, commendably, provided full payment of death claims and maturities; persisting policyholders would eventually have surrender and loan values restored, although the rate of interest granted on deferred surrender values may have been too low to compensate for the risk taken.

Who lost? Policyholders who sought the liquidation values of their policies; they received extended insurance or the promise of, eventually, their cash value with interest. Any intangible loss? Yes, old policyholders risked the plan's failure after the assets had been diminished rather than enhanced by investment income.

On the positive side, the agency force, an asset that alone might not be saleable, was used productively in relieving the insolvency. And fortunately the rescue took place in a period of rising interest rates, and probably benefited from the efforts of a stockholder management keen on recouping the value of their investment.

Now for the outcome. The top state court acted several years later. It allowed the rescue, which progressed well, to continue till another insurer would find it worthwhile to take over the business. Stockholders were wiped out.

(Continued on page 8)

THE BRAGG SMOKER AND NON-SMOKER MORTALITY TABLES AND HEALTH INSURANCE REPORT

by W. Allan Keltie

Actuaries are indebted to colleagues at Sun Life of Canada for their foresight in inserting, in 1965, a question about smoking in their life insurance applications for both U.S.A. and Canada. By 1980, sufficient experience (over 2000 deaths) had emerged to permit calculating trustworthy mortality ratios; years must pass till inter-company statistics can accomplish this as satisfactorily.

Furthermore, the Sun Life figures appear to suffer from minimal applicant bias in answering the smoking question; the answer was recorded by a medical examiner, and didn't affect terms of issue because the company then had no non-smoker rate differential, and the applicant's declaration did not apply to the question on smoking.

Mortality Table Construction

John M. Bragg used the Sun Life mortality ratios, supplemented by other data from life companies, from the Cancer Society, and from the U.S. Surgeon General, to construct his non-smoker and smoker mortality tables and to produce his Health Insurance Report. The basic experience is 10-year select and ultimate, sex-distinct. These tables, loaded for contingencies by the Society's 1980 CSO formula (TSA 33, 643), seem worth considering as an improvement upon the valuation tables circulated for comment by the Society Task Force in March 1983.

Mr. Bragg's mortality tables were the starting point for his Report to companies that have introduced smoker/nonsmoker differentials for health insurance. He compared mortality rates for these two classes by cause of death with medical cause of disablement, and developed an analytical method for splitting known (blended) claim costs into those applicable to smokers and non-smokers, regarded as usable in either group for individual health insurance.

The Bragg Tables and Report—available as described in the Society Yearbook, p. 74—have been well received and are now in use by companies headquartered in Canada, United States, Europe and Japan. The basic data, brought up to date, were reported upon in a paper by Donald L. Gauer at the Fifth World Conference on Smoking and Health, held in Winnipeg in July 1983.

SOCIETY TASK FORCE ON SMOKER/NON-SMOKER MORTALITY: AN UPDATE

By Peter A. Marion, Chairman

The charge originally given this Task Force was to "gather together whatever experience is available on non-smoker mortality and to prepare a report analyzing that experience". This was later amended to call for development of "a set of interim scaling factors from the data available to the Task Force by March 1, 1983, which, in the opinion of the Committee, will produce better valuations than not recognizing the smoker/non-smoker differential at all".

On March 1, 1983, the Task Force issued an Exposure Draft of its report, including a summary of the intercompany mortality experience currently available and the scaling factors which the Task Force developed. These scaling factors define a division of the 1980 CSO Male and Female Tables into component Smoker and Non-Smoker Tables. This Exposure Draft was distributed to all Society members, with a request for comments by June 30th. The Task Force is now reviewing the eleven comments that came in, and revising its report to reflect valid criticisms and suggestions. All comments, along with the Task Force responses thereto, will be printed in the final report which we hope to release before the 1983 Annual Meeting.

The Exposure Draft was presented to the Society Executive Committee in March, and to the NAIC in June. We hope that our final report will receive Board acceptance in October, facilitating its acceptance by the NAIC in December.

GARFIELD SOLUTION MANUALS— PARTS 2 & 4

Solution manuals, prepared by Ralph Garfield, Ph.D., F.I.A., A.S.A., Chairman, Actuarial Science Div., College of Insurance, New York City, are now available. These give 100 solutions from Nov. 1981 and May 1982 Part 2 questions, and 200 from Nov. 1981-May 1983 Part 4 (EA-1) questions. For information, write to Actuarial Study Materials, Box 522, Merrick, NY 11566.

SIGHTINGS

James E. Hoskins and John Donohue both spotted the following in a Hartford Courant (Conn.) column about computerized Fitness Evaluations:

"The computer also calculated my basal metabolism...That's how many calories I'd burn if I stayed inert (by lying in bed all day, or, say, taking a job as an actuary)."

Paul G. Schott sent us the following from the Philadelphia Inquirer:

"...people living longer...collect more Social Security before they visit the Great Actuary in the Sky."

It seems that not becoming an actuary, although a very common occurrence, is at times newsworthy. Kiran Desai found an article in Executive World Magazine profiling economist Milton Friedman. Friedman had been planning an actuarial career when he was sidetracked by economics.

US magazine says of Australian actor Bryan Brown (Breaker Morant, A Town Like Alice, The Thorn Birds):

"After high school, Brown turned down a university scholarship and took a job as an insurance actuary."

It must mean something different in Australia.

Arthur C. Garwood, Jr. saw the following in an Omaha World-Herald article about life in Florida:

"Year round residents...claim the only people who die young in Florida are insurance actuaries and bookies who give the Dolphins points over the Redskins."

I must admit that I don't understand what this is supposed to mean. D.A.P.

E. & E. STAFF EDITION

We welcome Marta Holmberg, Ph.D. who just joined the Director of Education's staff at headquarters. She recently earned her doctorate in experimental psychology at McMaster University. One of her immediate assignments will be to standardize and improve examination procedures. Dr. Holmberg is no stranger to our profession; her brother, Randall D. Holmberg, is an F.C.A.S.

Letters

(Continued from page 4)

The Case Of The Base Canard

Sir:

Your readers surely feel kinship for the detective who outranks all others in actuarial soundness of reasoning. Actuaries therefore should help to squelch the calumny associating Sir Arthur Conan Doyle with the 1912 Piltdown hoax, on the absurd supposition that he aimed to get even with scientists who differed with him about spiritualism. The dates don't fit, and anyway "it is a capital mistake to theorize before you have all the evidence".

Ralph E. Edwards

Ed. Note: This writer is one of about 15 living recipients of the Two-Shilling Award of the Baker Street Irregulars.

And more on Lipkin!

Sir:

Mr. Lipkin poses the wrong question. It is not how fast one must go. It is how fast one must stop.

Lawrence Mitchell

BOOKS AVAILABLE

Another retired actuary is offering his library to somebody willing to pay just shipping cost. Volumes except those in parentheses are hardbound.

T.A.S.A.: (1930-35 except May '32), 1937-49. Indexes: 1889-1949.

R.A.I.A.: (1930-35), 1936-49. Indexes: 1927-49.

T.S.A.: 1949-81. Indexes: 1949-78.

T.S.A. Reports: Incomplete set, years between 1951 & 1981.

Academy Journal: (1970), 1977-82.

Society Record: (Oct. 1976-Oct. 1982).

Write to Robert C. Bailey, Yearbook address or Phone (301) 530-1961.

ARCH 1983.1

This just released issue of our Committee on Research publication includes these items:

Several Responses to Hilary L. Seal's "Attempt to Convert American Actuaries", *The Actuary*, March 1981 issue.

Teacher's Corner.

Adjusting Life Tables To Incorporate Personal Profile Information, by Patrick L. Brockett & Samuel Cox.

Balducci and the 'Uniform Distribution of Deaths' Hypotheses, by Hung-ping Tsao.

A More General Presentation of Pension Funding, also by Hung-ping Tsao.

Simplified Credibility Mathematics, by Joseph L. Tupper III.

Immunization Theory: A Simplified Example, by David C. Wu, Laura L. Schumacher and James C. Hickman.

PART 4 SOLUTIONS MANUAL

United Consumer Services offers an Illustrative Solutions Manual for Part 4 (EA-1) Actuarial Exams, Nov. 1979 to May 1983. For information, if not already in your company, write: United Consumer Services, Box 954, Dallas, TX 75221.

Truman K. Pennell, Jr.

SEEKING TESTS OF ANNUITY MORTALITY MARGINS

By Robert J. Johansen

Ed Note: Mr. Johansen is Chairman of the Committee to Develop a New Mortality Basis for Individual Annuity Valuation.

The NAIC Technical Staff Actuarial Group has asked our committee to develop an objective test to determine when the mortality margins in an existing annuity mortality valuation table have eroded to such extent that a new table is needed. Comments and suggestions from readers will be welcomed.

Tests might be built from the Society's own periodic studies, or might reflect improvement rates in United States population mortality or other sources such as Medicare.

Our committee is also studying the need for annuity valuation tables separated by sex.

SYDNEY, OCTOBER 1984

Word is out that registration forms for the 22nd International Congress are now going out to IAA members who have expressed interest in attending that stellar actuarial event.

And we hear that in the U.S.A. expressions of interest came in from 143 members, most of them ahead of the deadline. Our Canadian source of such information has not been heard from.

E.J.M.

EXAM STATISTICS UPDATE

		Part 1			
	Passed	G.R.E. Credit	Total	New Associates	New Fellows
Nov. 1979	567	42	609	357	90
May 1980	664	40	704	393	186
Nov. 1980	586	30	616	277	226
May 1981	641	32	673	212	87
Nov. 1981	584	23	607	230	178
May 1982	667	43	710	225	146
Nov. 1982	670	28	698	197	118
May 1983	813	36	849	187	161

Mutual Companies in Chains

(Continued from page 1)

- 2. State insurance laws sharply restrict the amount of a life company's general account assets that can be invested in subsidiaries, placing mutual companies at a competitive disadvantage with stock companies which can acquire new businesses through issuance or exchange of stock and other means. A mutual insurer must get its risk capital from its divisible surplus—likely to prove an insufficient source if policyholder dividend distribution is given adequate priority.
- 3. Stock life companies enjoy greater scope than do their mutual brethren in offering their employees profit sharing, stock options and other incentive plans. In the dynamic, less regulated, environment of tomorrow, the winners may be those who, through such rewards, can attract and retain top-flight management and other key employees.
- 4. Whether the traditional annual dividend system has outlived its usefulness now that indeterminate premium policies, universal life and variable life approaches are available, warrants consideration. And, how different groups of policyholders perceive themselves should be given a fresh look: Are they owners, voting members, or just contractholders? In any event, don't the policyholders and insurance company managements have the right and the duty to decide whether the company might better be of the mutual or the stock type?

Ways to Remove These Handicaps

Happily, changing from mutual to stock is not the only possibility for alleviating these difficulties. One way, already in limited use, is for the mutual company to acquire a subsidiary ("downstream") holding company, and to give its policyholders at least a choice between traditional annual dividends and stock in that subsidiary. Another alternative—difficult to undertake because of the hurdles of insurance department and policyholder approval—would be by means of an external management contract using the pattern successfully introduced in the mutual fund industry.

Yet another (remotely possible) route would be through a bulk reinsurance contract.

A New York Insurance Department Viewpoint

A regulator's duty is to put the policyholders' interests first—bringing up questions such as these:

For whose advantage is this change? Does it benefit the policyholder, or is it born of desire for sheer bigness?

Will it result in a more competitive product? Or will the policyholder gain nothing but, for example, minuscule termination dividends from distribution of the existing surplus?

Will the policyholder remain a participating policyholder?

If the existing surplus is distributed in the course of the change-over, what safety margins will the new operation have?

The New York Department nevertheless recognizes that a problem exists, that without a change of some sort the mutual companies are likely to become noncompetitive.

IOWA WE FLUNKED ON

In our article on Prizewinners (April issue), we credited Iowa State and Iowa with perfect records; 2 for 2 in the former, 1 for 1 in the latter.

One of those winners, Thurston P. Farmer, Jr., has set us straight by pointing out that all three winners graduated from the same school. Said he:

"It is the State University of Iowa, located in Iowa City, and is often called 'Iowa'. The other major state school, located in Ames, is often called 'Iowa State'."

Mr. Farmer went on to answer a query we put to several prizewinners, by saying that, as he suspects is true with many others who attended schools that offer specialized actuarial courses, the prize award played no part in his decision, already made, to pursue an actuarial career.

E.J.M.

FOR YOUR READING

Journal of the Institute of Actuaries, Vol. 109, Part III, Dec. 1982.

Contains texts and discussions of several papers already noted in this newsletter, including Bernard Benjamin's "The Span of Life", and R. B. Colbran's "Valuation of Final-Salary Pension Schemes", also comments on G. B. Saksena's linear notation.

Invite any nearby Institute member to lend you a copy.

Adjusting Pensions for Inflation: Is the "Excess Interest" Method the Answer?, by Geoffrey N. Calvert. Published by Housser & Co., Toronto. 18 pp.

Mr. Calvert speaks to a question "that has caused much confusion of thought among employee benefit people, including some good actuaries, especially in Canada recently".

Copies obtainable free from Housser & Co., 60 Yonge St., Toronto M5E 1S1.

A Fortran Program for Computing Primary Insurance Amounts, Actuarial Note No. 116, by Stephen F. McKay. Social Security Administration, 33 pp., Dec. 1982.

Available free from SSA Office of the Actuary, Altmeyer Bldg., Ste. 700, Baltimore, MD 21235.

Disability Newsletter, DN 35, Nov. 1982 & DN 36, Jan. 1983, John H. Miller, Ed.

Continuation, inter alia, of the examination of, history, and outlook for disability insurance on this continent, noted in our Dec. 1982 issue.

Enquire to John H. Miller, 451 Russell Ave., Suffield, CT 06078.

ARCH 1982.2, Journal of our Society's Committee on Research, 82 pp.

Nine articles on as many actuarial mathematical topics by William S. Jewell, James Broffitt & Stuart Klugman, F. Y. Chan & E. S. W. Shiu, Richard L. London, Beda Chan, Thomas O'Brien, Ralph Garfield, Brian Fortier, Warren Luckner.

See subscription information in our May issue.

Spanish Mortality Tables P.E.M.-70 and P.E.F.-70, Institute of Actuaries of Spain.

First mortality tables for Spain's population. In several volumes, giving functions at 4, 5 and 6%. Includes descriptions of calculations, biometric functions, premiums for single and joint lives.

Send cheque for equivalent of 7,000 pesatas to the Instituto De Actuarios Espanoles, Calle del Barquillo, 29 Madrid-4, Spain.

Actuaries in Other Lands

(Continued from page 2)

bership requirement is that the applicant be either a graduate actuary (some of our universities offer courses in actuarial science), or possess adequate experience qualifications. In 1974 a high-level examination for pension fund experts was created under the aegis of the Association; successful candidates obtain a diploma recognised nationally and become Association members. This diploma has added weight in the context of our Federal Occupational Pensions Act.

A positive financial balance from the 1980 Congress has permitted a fund to be created for promoting professional training at the international level. This year's international summer school is the second to be offered.

A significant part of the Association's work is undertaken in study groups, first set up in the 1960s. Devoted to research and continuing education, there are now three of these: Pension Funds, Data Processing, and ASTIN (Actuarial Studies in Non-Life Insurance).

Playing its full part in this country's actuarial activities is the Chamber of Independent Consulting Actuaries, an independent body that maintains close contacts with the Association. A Professional Committee as central authority watches over the observance of a jointly formulated code of conduct.

The Actuarial Profession Today and Tomorrow

The great majority of our actuaries are engaged in life insurance business either in company employment or as independent consultants. Another substantial proportion are concerned with reinsurance. In non-life insurance, well founded mathematical models were slow in gaining ground; only in the last twenty years have changing attitudes led to more and more actuaries finding employment in this fairly complex field. Other important spheres of actuarial activity are university teaching and research, and work in government services.

The pension system here rests on three pillars: social security, occupational pensions, and private provision. The Federal Law on Occupational Retirement, Survivors' and Disability Pensions implementing the mandatory second pillar will become effective in January 1985; it pre-

scribes minimum standards to ensure that the combined benefits from the first and second pillars enable the employee to maintain close to his accustomed standard of living. By assigning specific functions to a "qualified occupational pensions expert", the law confers a quasi-official status upon the actuary, which should extend our profession's scope and enhance its prestige.

More lies ahead. Both the new Accident Insurance Law to be implemented in January 1984 and the sickness insurance legislation now under parliamentary consideration provide scope for using the tools that modern risk theory puts into the actuary's hands. In property insurance the actuary must deal with risks growing in size and diversity and tending towards unmanageable accumulation. And throughout the insurance scene, narrowing premium margins seem likely to make additional demands on the actuary of the future.

My Life and Other Contingencies

(Continued from page 1)

time, and have to resort to interrupting their studies—it may cost them a couple of exams, but so long as they make their courtship a speedy affair, the effect need not be too detrimental.

Many of us wives once had useful occupations and careers of our own, but succumbed to the temptation of having children (probably for the company!). The children of course grow up more or less without a father, and then the independent little mites have the nerve to turn round and say, "When I grow up I want to be an actuary". Perhaps they think being an actuary is like being an astronaut—they are both similarly remote.

I have so far failed to mention the plight of Husbands of Actuaries. I know they exist, though I suspect they are few. Due to paucity of data (as an actuary's wife I have at least learned to respect statistics), I'm unable to comment on their predicament.

Ed. Note: If this doesn't bring us mail from some actuaries' spouses on this side of the Atlantic, we will conclude that our readers timidly avoided taking this article home.

Board Members' Acquaintanceship

(Continued from page 1)

Breadth of Acquaintance By Sample Member

One actuary in our sample was known to 22 of the 26 Board members; we suspect that person of having recently been summoned to appear before the assembled Board. The whole distribution in these terms was:

Known to 10 or more
Bd. members
6 Sample members
Known to 5-9 Bd. members
Known to 3-4 Bd. members
Known to 1-2 Bd. members
Known to no Bd. members
7 Sample members

Total 61 Sample members

Of the seven Fellows who aren't known to any of the 26 Board members, five became Fellows in 1978 or since, one is a Fellow of more than half a century who hasn't attended a meeting in many years, and one is not in the insurance or pension field.

E.J.M.

New South Life

(Continued from page 1)

Among points for actuaries to ponder: The rescue operation might have failed, especially if new policyholders had understood that the company might, as it did, go out of business. Collectively, policyholders fared well, but some who would have preferred to take cash and accept their loss, and were entitled by statute to do so, suffered for the common good. What, one wonders, is a policyholder's obligation to other policyholders?

"ADDING IT ALL UP"

The Society boasts a new brochure, titled as above, which our Director of Communications Linda M. Delgadillo describes, accurately we think, as a nifty quick explanation of our profession.

It tells who we are, what at least some of us do, how to become a member, and what services members receive.

Request a copy from our Itasca office so you can decide how you can put it to good use.