The Actuary

The Newsletter of the Society of Actuaries

VOLUME 7, NO. 3 MARCH, 1973

## JOINT SPONSORSHIP

*by E. Sydney Jackson*

As most actuaries in North America know, for a number of years Parts 1 and 2 of the Actuarial Exams have been jointly sponsored by the Society of Actuaries and the Casualty Actuarial Society.

For several years, a Joint Committee on Review of Education and Examination, composed of three representatives from each of the six recognized professional actuarial organizations in the United States and Canada — viz., the American Academy of Actuaries, the Canadian Institute of Actuaries, the Casualty Actuarial Society, the Conference of Actuaries in Public Practice, the Fraternal Actuarial Association, and the Society of Actuaries—have been reviewing policy matters relating to the Education and Examination of actuaries. As a result of the Joint Committees' deliberations and recommendations, the actuarial examinations in May 1973 will be jointly sponsored by all six actuarial organizations.

The purpose of this article is to explain what is meant by Joint Sponsorship and outline its rationale.

One form of Joint Sponsorship, which the Joint Committee initially considered, was an extension of the Joint Sponsorship already in existence. Specifically, it considered recommending that each actuarial organization would sponsor each exam which would count towards membership in it. On this basis, the American Academy would be a joint sponsor for the first seven Casualty exams and the first eight Society exams; the Canadian Institute and the Fraternal Association for all nine Casualty and all ten Society exams; the Conference for the first six Society exams, and the Casualty Actuarial Society and Society of Actuaries for the first two "common" exams.

*(Continued on page 8)*

## AUDITS OF PENSION FUNDS

The American Institute of Certified Public Accountants has just issued an Exposure Draft of an Audit Guide for Pension Funds. (This covers both insured and self-insured plans). Interested members can obtain a copy from

Edward M. Musho
Auditing Standards Division
American Institute of Certified
Public Accountants
666 Fifth Avenue
New York, N. Y. 10019

The American Academy of Actuaries is reviewing the Exposure Draft and will file comments with the Institute before the deadline of May 1. Any comments from the members should be sent to

Frederick P. Sloat
Coopers and Lybrand
1251 Avenue of the Americas
New York, N. Y. 10019

Copies of comments should also be sent to the President of the Academy, Morton D. Miller. □

## Social Security Notes

R. Harris and R. King, *Distribution of Medicare Benefit Disbursements By Type*, Actuarial Note No. 82, December 1972, Social Security Administration, Washington, D. C.

This Actuarial Note presents tables showing the estimated annual distribution of cash disbursements by type of benefit for both the Hospital Insurance and Supplementary Medical Insurance Programs.

*Free copies available from Social Security Administration.*

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## OLD TESTAMENT WITNESS

*by Michael J Cowell*

*"And should not I be sorry for the great city of Nineveh, with its hundred and twenty thousand who cannot tell their right hand from their left, and cattle without number?"* Jonah 4:11 (*New English Bible*).

This was the cryptic title that E. J. Moorhead gave to his address to the regular quarterly meeting of the Actuaries' Club of Boston on March 2. (It should be pointed out, that in selecting this title, Jack committed himself to nothing as far as his text was concerned!)

Tempering his occasionally cynical remarks with that unique brand of Moorheadian wit, Jack once again carried the banner for meaningful net cost comparisons, pointing to the misrepresentations that are so frequently made to the public whenever the element of compound interest is involved. He expressed his concern that so few of us, in the one profession qualified to explain this subject, have taken a firm position on the use of price comparisons in sales literature.

On the subject of "splitability" of the life insurance premium into its "pure insurance" and "savings" elements, Mr. Moorhead suggested that actuaries are far too ready to adopt the industry platitudes of "inseparability" of these elements than to admit to the possible theoretical alternatives. He particularly deplored the type of sales literature that misrepresented term coverage by making misleading contrasts between term insurance and level premium permanent plans.

He also felt that the traditional argument against the application of probability to individual situations had been greatly misused to discourage the inclusion of this element in life insurance cost

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The Actuary

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*Published monthly (except July and August) by the SOCIETY OF ACTUARIES, 208 S. LaSalle St., Chicago, Illinois 60604, Thomas P. Bowles, Jr., President, William A. Spare, Secretary, and John T. Birkenshaw, Treasurer.*



## EDITORIAL

BUFFETED by the winds of change said to be howling around the insurance industry, the actuaries may well be taking refuge in techniques rather than building a shelter of basic principles. Adjusted earnings, adjusted costs, and the like are all matters of technique. Before we acquire adjusted principles we might well listen to the words of Henry H. Jackson talking to the Association of Life Insurance Presidents some thirty years ago. These words need no apology.

"First, the entire structure of life insurance is peculiarly valuable in a democracy. This delicate machinery might almost have been invented for exclusive use in a state where the way of life emphasizes freedom of thought, freedom of speech, and freedom of initiative for the individual. Unless the citizen feels that he is a responsible entity in and of himself, with a personal stake in the future of his community and his country, there would seem to be little enough reason for him to safeguard a little slice of immortality for the financial interests dependent on his life through joining in a thoroughly democratic co-operative venture—democratic in the truest sense, since each member benefits not through the rule-of-thumb scheme of "representation per capita," nor through the still cruder device which has been characterized as "representation by scenery," but actually by proportionate mathematical participation in benefits in accordance with his own definite and willing contribution. Public relations are always of the utmost importance, but surely in a public like that of the United States and Canada, where relatively few in the whole population are not directly or indirectly concerned with the benefits of life insurance, it is inconceivable that the mission and place of that institution, soundly established and managed with integrity, can be so misrepresented and so misunderstood that the present scheme of things, with its demonstrated efficiency through wars and epidemics and depressions, will be rashly upset or abandoned in pursuit of some untried will-o'-the-wisp, the merest effluvium of wishful thinking.

"Second, and to sum up the matter, this institution, in its essence democratic, based on patiently observed laws of nature, needs of the race and necessities of the individual meets better, I think, than any other invention of the last two centuries that requirement of all inventions which are to be ranked as great—the bestowal on those who use it of a true mastery of the fruits of time. And a special beauty of this invention and of all the brillant subsidiary devices that go with it, so long and so successfully practiced on this continent, lies in the fact that all patent rights, all royalties and special inventors' perquisites whatever have been resolved in favor of the policy owner. The purchaser of life insurance today has at his disposal, within his own policy, benefits and safeguards representing all that the great mathematicians, all that the eminent actuaries, all that the skillful administrators of earlier years have inventively contributed to make the history of this highly co-operative and self-reliant and democratic enterprise a record which should fill you who are responsible for its present conduct with pride and with humility."

*A.C.W.*

**Deaths**

James A. Hamilton
Morton Armstrong Laird
Edward E. Scribner

## Old Testament

(*Continued from page 1*)

comparisons.

Relating his experience at Senator Hart's recent subcommittee hearings on the life insurance industry, Mr. Moorhead felt that the Senator had given the industry adequate warning in 1968 to improve its practices in the area of policy cost information or to have Congress take action instead. Mr. Moorhead expressed his dismay that a small minority of life insurance executives prevented adequate discussion of the ALC-LIAA Joint Committee Report in 1970 on life insurance cost comparisons.

He again called on the industry to explain to the consumer in clear terms the nature of the life insurance product and challenged us as actuaries to speak out whenever we encounter sales material and sales comparisons that are questionable or misleading. We must be careful not to employ yesterday's conditions in making today's comparisons.

On balance, he did not consider that the actuarial profession had done nearly as much as it could have in this area. Without making specific reference to the text of his title, Mr. Moorhead gave many of us the impression that if, like Nineveh, the life insurance industry did not soon learn its right hand from its left, then it would be sorry for the wrath which Congress and the consumer would bring down upon it. He did not specifically allude to the significance of the "cattle without number," unless that was an oblique reference to the statements that were being attributed to Messrs. Denenberg and Nader to the effect that our industry had been a sacred cow for some 70 years, over which period we had fed the American public a lot of bull.

Though not everyone might share Mr. Moorhead's degree of concern, we all welcomed his candor and, just as Jonah convinced Nineveh of its bad ways, Mr. Moorhead hopes to convince many of us that the industry still has a whale of a job to do to improve the presentation of our product to the public. □

## ANNUAL STATEMENT HEALTH INSURANCE INDICES

*by Clayton A. Cardinal*

The only indices set out in the Annual Statement are (1) the ratio of net investment income to mean assets in Exhibit 2, and (2) those ratios in Schedule H and the Accident and Health Policy Experience Exhibit (the Exhibit). The impropriety of the Schedule H and Exhibit ratios as meaningful indicators is discussed below.

It is assumed in the discussion that statutory accounting principles and considerations are operative, and the superiority of indices based on generally accepted accounting or economic value principles is not advanced. The statutory indices adjusted and unadjusted are used and referred to by regulators, industry groups, trade journals, and others. Thus, within the context of statutory accounting, the indices should be properly determined.

### Expense Ratios

The condition that the ratios purport to measure is the adequacy and reasonableness of premiums in relationship to the value of insurance provided. One element in that measurement is the determination of the relationship of expenses (commissions and other expenses) to premiums.

In the Analysis of Operations by Lines of Business (the Analysis) in the Annual Statement, the increase in the gross unearned premium reserves may be taken either as a deduction from incurred premiums (collected premiums plus increase in due and uncollected premiums minus increase in advance premiums) or as an addition to increase in reserves. Since few life companies (except for Ohio policies) provide a refund of unearned premium to a policyowner who terminates his policy during a period for which premium has been paid, most life companies treat the increase in unearned premium reserves as an addition to increase in reserves. Commissions and other expenses must be reported in the Analysis on an accrual (incurred) basis, which is consistent with the way premiums are reported since the accrued commissions and other expenses imputable to the unearned premiums are included in such reported expenses.

The earned premiums reported in Schedule H are defined as incurred premiums minus the increase in active life reserves including unearned premium reserves. The accrued commissions and other expenses have the same definitions given in the Analysis and are divided by the earned premiums to give the Schedule H expense ratios. It should be evident that these ratios fail as meaningful indicators in that they overstate the expense ratios. This overstatement results because the denominator—that is, the earned premium—used in determining the ratio is inconsistent with the accrued concept embodied in the numerator. For a growing insurer the inflated levels of these Schedule H expense ratios are greatest for the "collectively renewable," "non-cancellable," "guaranteed renewable," and "non-renewable for stated reasons only" individual policies because of the effect of the increase in active life reserves deduction in the denominator. Even where active life reserves are not a factor, the increase in unearned premium reserve deduction can cause distortions.

The data in the table below illustrate the inflated levels of the Schedule H expense ratios. This table and that presented later are based on Schedule H data of the 1971 annual statement of the writer's company for "non-cancellable" and "guaranteed renewable" individual policies.

### Claim Ratios

Level premium funding of an insurance risk which increases with increase in age serves two purposes which are important to and within the context of this discussion. One purpose is to fund in the early policy years the value of benefits incurred when the premiums accrue; the other is to fund the present value of the excess of the value of future benefits over future "premiums." Were the insurance risk constant during the period of insurance, or were the insurance limited to one year, the premium would need only suffice to fund the benefits incurred in that period. In these situations a simple comparison of incurred claims to incurred premiums, in conjunction with an expense measure, would give an indication of the adequacy of those premiums.

Because of the purposes served by level premium funding, the adequacy or reasonableness of such premium in relationship to both the current and future excess value of insurance provided should be indicated by comparing the sum of incurred claims and the increase in the active life reserves to the incurred premiums for that period. Again, expense levels must be considered.

How do these measurements which are inherent in the Analysis compare to those in Schedule H and the Exhibit? In the Exhibit the term incurred losses is used in place of but is given the same definition as the Schedule H term incurred claims. The only index set out in the Exhibit is the "ratio of incurred losses to premiums earned." In Schedule H the claim ratios are determined by one of two expressions. For group policies and "other accident only" and "all other" individual policies, the ratio is obtained by dividing incurred claims (settled claims plus increase in unaccrued claim reserves and in accrued claim liabilities) by earned premiums. For "collectively renewable," "non-cancellable," "guaranteed renewable" and "non-renewable for stated reasons only" individual policies the sum of (1) incurred claims, (2) the increase in advance premiums and (3) the increase in active life reserves is divided by written premiums (incurred premiums plus increase in advance premium), giving the so-called supplemental loss ratio.

Most health insurance premiums are not guaranteed, so it is impractical to offer discounts on premiums paid in advance. This practice represses the amount of advance premiums and results in a small increase in advance premiums. Since this increase is small and included in both the numerator and denominator

(Continued on page 8)

**Expense Indices**

| *Expense Category* | *Schedule H (Earned Premium Basis)* | *Analysis (Incurred Premium Basis)* | *Ratio* |
|---|---|---|---|
| Commission | 24.91% | 22.24% | 1.12 |
| General insurance expense | 15.80 | 14.10 | 1.12 |
| Taxes, Licenses, fees | 1.85 | 1.66 | 1.11 |
| Total expenses | 42.56 | 37.99 | 1.12 |

## LETTERS

### Time Sharing

*Sir:*

Mr. Giles' article, "Tomorrow's Actuary", in the January 1973 issue, explores very briefly some of the major advantages of making time sharing available to today's Actuary.

Because these advantages are dependent upon a number of variables not mentioned in the article, and because each advantage has an associated disadvantage (e.g., cost), it seems timely to remind Actuaries that a Teaching Session on Time Sharing will be part of the program(s) for the St. Paul and San Francisco Regional Meetings. The Teaching Session(s) will not only define and demonstrate time sharing, but will be devoted, in part, to a time sharing language developed specifically for Actuaries, ACT (in *The Actuary*, January 1972). I strongly encourage Actuaries who are interested in this subject to attend the session(s).

*John D. Kirkman*

* * * *

### Actuarial Notation

*Sir:*

I should like to comment on Mr. Boermeester's *Notes on Notation* in your December issue. There are two distinct issues which frequently are confused, firstly the need for standardised notation for sickness etc. functions and secondly the need for a computer-compatible notation. The differences between the existing standard notation and the four published notations (together with many other unpublished new notations) can be best understood in the light of these two issues.

Using the metaphor of air-travel to describe computer implementation, the existing notation was designed before air-travel was even thought of, and will not fly until someone invents an "anti-gravity" device.

Boehm's notation, as can be seen from the example, is elegant and comprehensive. Unfortunately it would be very difficult (in my view) to bring the computer implementation to a successful conclusion (rather like an SST project?).

The other three notations have primarily been designed with a view to practical implementation. They are all capable of extension to include new functions but sacrifice elegance for ease of implementation. Jamieson's ACT has in fact been in practical use for some time. It has been heavily influenced by the APL language and can be viewed as a special purpose flying machine not necessarily suitable for general use.

The ANZ notation is again a special purpose notation with a number of awkward features influenced by design considerations of the computer language upon which it is based.

My own notation was an attempt to formalize the kind of thinking typified by Jamieson, ANZ and many others. It attempts to be easy to implement, logical in construction; and easy to understand. The trade-off is that it is not as elegant as either Boehm or the existing notation.

*P. J. Turvey*

* * * *

### Nohow

*Sir:*

I want to commend Charles Dodgson for exposing in the February issue the conspiracy within the Society of Actuaries to undermine the consulting actuarial firm of Bandersnatch and Jub Jub by deleting our address from the list of Society Members by Business Affiliation. This letter is in response to his request for help in locating us.

Our problem began when I submitted to the Committee on Papers my newest treatise, "The Effect on Life Insurance and Annuities of $Q_x$ Becoming an Imaginary Number." The Committee on Papers, composed of reactionaries, immediately reject any new idea. A few committee members snickered, but others imagined my treatise as a threat which could undermine the entire establishment of life insurance and annuities. It was for this reason that the Committee on Papers persuaded the Board of Governors to exclude our address from the list.

Similarly, the telephone company disconnected our service after the appearance of my paper, "The Need to Accommodate Irrational Numbers on the Telephone Dial."

Providing our address would not help Mr. Dodgson, since the inflexible postal service insists on using the outmoded system of street addresses, rather than locating organizations by the polar coordinates we use. I am therefore forwarding directly to Mr. Dodgson for his personal use one of our courier pigeons.

*Jeb Jub Jub*

* * * *

*Sir:*

Having once been associated with Bandersnatch and Jub Jub, I would like to help Mr. Dodgson. I fear, however, that the firm may be bankrupt at this time since they were in quite a hole even before I joined them. If not, they may have been forcibly merged into Jabberwock & Co.

Perhaps some other former associates of B & JJ might be able to help if they could be traced. The office supervisor was one Regina Cordum and her assistant was a Blanche Hare. Two others that I remember well were Marlene Chair and Madeline Hatter (Mar and Mad to their friends).

Mr. Dodgson might also be able to reach B & JJ through their former Far Eastern representative, Lu King Glass.

*Al Liss*

* * * *

*Sir:*

Mr. Dodgson (*The Actuary*, February 1973) inquires after the firm of Bundersnatch and Jub Jub. The full name of the firm is Frumious, Bandersnatch and Jub Jub. They are located at 1 Boro Grove.

*L. Carroll*

* * * *

*Sir:*

Please inform my old friend Charles Lu*t*widge (not Lu*d*widge) Dodgson that Frumious Bandersnatch is dead.

He and an associate J. B. Wock had gone to the Tulgey Wood for a spot of Whiffling when they were brutally attacked and cut to death by a gang of young hellions known as the "Beamish Boys."

Jub Jub promptly closed the firm's offices and has moved to the Wabe where he is now a partner of Gyre and Gimble.

They are now working on the following problem:

A man starts towards Saint Yves carrying a bag that contains 50 pennies. When half way there he meets a man and trades a penny with him; proceeds another half of the distance and trades a penny again; repeats the process each time he covers half the remaining distance. When he

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## Letters

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finally reaches Saint Yves, does he have 50 pennies, no pennies, or some other number of pennies?

Jub Jub holds strongly to the theory that there will be no pennies, because if you take any particular penny such as X it can be clearly shown that the chance that X will reach Saint Yves is infinitesimal.

*Percy*
*(Sir Percival Boojum-Snark)*

* * * *

### Fellowship Exam Questions

*Sir*:

Jacques Dallaire has submitted some very interesting examination statistics in his recent letter to the editor (*The Actuary*, February 1973.)

The fact that the Fellowship examinations have in the past contained more Type B questions (U.S. topics only) than Type C questions (Canadian topics only) is probably a result of the nature of the educational material and the nationality of persons working on the education and examination process.

In 1968 a specific and detailed report concerning the Canadian content on the Society of Actuaries examination syllabus was prepared by a committee of the Canadian Institute of Actuaries. Many of the recommendations to update and expand Canadian content have already been instituted. In dealing with Parts 9E and 10E, the report recognized that the material for these examinations was greatly deficient from the standpoint of Canadian content and recommended that considerable additional material be prepared. Obviously the preparation of such material would be the responsibility of Canadians and this project has not been entirely completed as yet.

The report also recognized that on subjects of general knowledge, there should be both Canadian and United States material as prescribed reading for all students and that questions on both might well be required of all students (Dallaire's Type A questions). On subjects involving detailed knowledge, the examiners might decide that alternate questions should be available, and the report suggested that this might be necessary in parts 9E and 10E, once the new material was prepared.

Mr. Dallaire's statistics indicate that the balance between Type B and Type C questions is improving. I believe that those persons in the Society who have the responsibility for setting the examinations are conscious of the continued need for fair treatment and respond eagerly to any assistance which is offered in this regard. The Society's system is under continuous review and currently there is a proposal under study for restructuring the Fellowship examinations which may lend itself to the type of improvements hoped for by Jacques Dallaire. This presents an opportunity for Society members in both Canada and the United States to continue to increase their participation in the examination system available through the Society in order that it may be responsive to the needs of present and future members.

*L. Blake Fewster*

*Note: Mr. Fewster is Chairman of the Advisory Committee on Education and Examinations.*

* * * *

### Clarity

*Sir*:

I certainly agree with your comments in the February 1973 Editorial concerning readability of policies and the need for more clarity in our life insurance policies. However, even in the absence of "required" provisions spelled out by statutes, we are sometimes forced to include language in life insurance policies which makes them unintelligible to the average reader, and perhaps even to many actuaries.

We recently submitted a variable life insurance policy for a client to the Insurance Commissioner of one of the larger states. In this variable life policy, we spelled out exactly (in words, rather than in notations) how the insurance amount would be redetermined, and, in fact, verbalized the redetermination formula. Our client did not quibble with the accuracy of our statements, but in a meeting with the Insurance Department raised the question of whether our technical language was really required in the policy. In order to improve both readability and clarity, the client wished to simply include in the policy a brief statement of what would make the insurance amount go up or down, so that the policyholder could at least understand why his insurance amount was moving in a given direction. We, of course, offered to furnish the Insurance Department with a verbal description of the redetermination formula, and more importantly, with all actuarial formulas.

The attitude of the Insurance Department, which probably is not surprising, was that the technical language would be required so that the insured would have a complete description of how his policy worked, even though the Insurance Department conceded that the typical policyholder could not possibly understand this language.

The Insurance Department did, incidentally, liken their requirement for this technical language to the Sandard Nonforfeiture Law, which they also conceded no policyholder could understand, but which was "required" by law. It appears we are being forced to include unintelligible language in an area not covered by the law, because the law requires that we use unintelligible language somewhere else. Perhaps our major problem is that we are writing our policies for consumption by the Insurance Departments, rather than for consumption by the public.

There are some who may suggest that the answer to the problem is Federal Regulation, and to those I suggest that they pick up any prospectus which is handy, to see the degree of understandability which is a result of regulation in another area involving intangibles.

Perhaps the best answer is to let the states regulate only what types of policy forms may be sold, and outlaw those particular types which they might find offensive, but remove from the states the power to approve or disapprove the actual contract language. I am well aware this probably sounds like heresy to many, but it very well could result in policy forms which were both briefer and more understandable.

*Henry K. Knowlton*

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## Letters

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### Professional Conduct

*Sir:*

I am disappointed to read an opinion to the effect that many members rarely think of the "Guides to Professional Conduct." We are only a small body. If even a few of our members are careless of observance or are ignorant of the professional obligations of being an actuary, it can be vastly harmful to the rest.

In an era when life insurance merits are judged by consumerists and pension legislation is dictated by demagogic factions, it behooves us all to be genuinely concerned with the published guides. I, for one, hope that the Guides will become more extensive and explicit.

*James B. Germain*

* * * *

### Male Chauvinist Actuarial Notation

*Sir:*

In accordance with recent Government edicts eliminating distinctions between sexes, I have been advocating the use of the title "Mx" for both males and females, as a replacement for Mr., Ms., et al. When I suggested this to our colleague, Mx. Bartlett, she responded that while "$M_x$" might be proper for males, "$M_{x-3}$" would be more appropriate for females.

A delightful difference!

*Howard H. Kayton*

*Mr. Boermeester please note.* Ed.

* * * *

### More Gloss for the Glossary

*Sir:*

Congratulations! The December issue of *The Actuary* was quite informative and most delightful.

I predict that you will receive a spate of addenda to the Glossary. Here are a few that have occurred to me (and I apologize for the indelicacy of the first).

*Asset*: Petite Derrière.

*Liability*: Capacity to tell an untruth.

*Reinstatement*: Moving back to Texas.

*Joseph W. Hahn*

* * * *

## "WE THE PEOPLE"

*People of the United States in the 20th Century* by Irene B. Taeuber and Conrad Taeuber. U.S. Department of Commerce, Bureau of the Census, Government Printing Office, Washington, D. C., 1971, pp. xxxvii + 1046, $5.75.

*by Robert J. Johansen*

This book, prepared in cooperation with the Social Science Research Council, is the fifth and final report in the 1960 Census Monograph Series. With over a thousand pages, 336 tables and some 70-odd charts, it is a monumental compilation and analysis of population characteristics and trends.

The early chapters review the growth of the U.S. population, its spread westward and early tendencies toward increasing urbanization. The effects of immigrations and migrations during the nineteenth and twentieth centuries are traced and analyses are made of in-migrants, out-migrants and stable populations by region, state and subdivision. Extensive use is made of correlation coefficients throughout the book in order to show the relative importance of observable factors and to establish relationships. Wherever possible, explanations are suggested for the correlations observed.

A sizable portion of the book is devoted to a study of population characteristics, their effect on population growth and distribution and their usefulness in attempts to forecast future population trends. Changes in the economic status of the population are analyzed including changes in the distributions of the employed population by occupation and the changing levels of education and incomes by region, sex, color; and other characteristics of the population.

The authors trace the growth of metropolitan areas, analyzing their decade to decade characteristics and the growth of central cities and their surrounding areas in order to explain what has happened in the older SMSA's (Standard Metropolitan Statistical Areas) and to give some insight into the future of the newer SMSA's.

The book should be useful to anyone concerned with population analysis or trend prediction, or whose interests lie in marketing and market predictions. Its content and organization recommend its use as a handy reference. The authors have succeeded well in making the subject matter interesting and fascinating, largely through the manner of presentation, and especially because of the analyses drawn. This is a book that one puts down with reluctance because the hour grows late.

*Note: There is a typographical error on page 528, Table X-11, where the sub-column headings "SMR- 25 to 29 years" should read "SMR- 25 to 59 years."* ☐

## WHO PAYS?

John A. Brittain, *The Payroll Tax for Social Security*, pp. xiv + 285, The Brookings Institution, Washington, D. C., 1972, $3.50.

*by Francisco Bayo*

This Study argues that, ideally, the payroll tax should be eliminated as a source of financing of Social Security on the grounds that it is regressive and is especially burdensome to the poor. In lieu, the financing would be accomplished by an increase in the personal income tax rates—averaging a mere 45 percent.

As a secondary point, the author asserts that the employer tax is really payable specifically, with complete allocation, by the employee from whose wages it was determined. And thus the regressive situation is twice as bad, the author believes.

An analysis of the relation between benefits and taxes is made. The conclusion is reached that the young worker gets a reasonably good buy from his taxes (including those of his employer), but that this is of little avail to the poor, who need their money now for current needs.

*Note: A detailed review of this Study prepared by Robert J. Myers (who disputes several of the author's approaches and conclusions) will be published in the* Transactions.

## Social Security Notes

(Contnued from page 1)

Charles L. Trowbridge, *Quantity-Price Relationships in Health Insurance*, Actuarial Note No. 79, November 1972, Social Security Administration, Washington, D. C.

This Note is an attempt to explore the relationships between quantities of health services performed under conditions of no insurance, full insurance, and varying degrees of coinsurance. A theoretical framework is attempted first, followed by a discussion of some of the possibilities for quantification.

*Free copies available from Social Security Administration.*

## COMPARISON SHOPPING

Joseph M. Belth, *Life Insurance: A Consumer's Handbook*, Indiana University Press, Bloomington, Indiana, 1973, pp. 248, $6.95.

*by Gordon H. Leavitt*

Professor Belth has written a penetrating and well-balanced manual for the intelligent layman. Similar in scope to the Consumers' Union "Report on Life Insurance," this book is more positive on the virtues of permanent insurance, and describes the agent's point of view of some of the problems. Since Belth spent five years as an agent himself the point of view is unique: a leading consumerist advocate who understands from the inside the industry's position.

For example, instead of assuming that buying term insurance is the only way the average person can afford all the life insurance he should have, Belth gives a fairly thorough description of the differences between Straight Life and Five Year Term, and suggests that his reader estimate how much he wants to save in his policy cash values, as a way of determining how much permanent insurance he should buy. The "forced saving" argument, generally given short shrift by consumer advocates, is realistically developed. One advantage of permanent insurance is not mentioned, however: the low guaranteed interest rate on policy loans.

Policy costs of major companies are compared using Belth's rather sophisticated method of separating the present value (using mortality, lapse rates and interest) of the premiums into the cost of the death benefit, the surrender value, the dividends, and as a balancing item, the company retention. The author is adroit in hiding the technical difficulties in the appendices and only presenting the end results of his computer runs to his readers. Rankings of the companies on this method are about the same as on the interest-adjusted method.

A philosophical objection can be raised to the use of any lapse rates in projecting costs, however. Since keeping the policy in force is something that the policyholder has under his control, why should probabilities be used to complicate the picture, especially since the purpose is to make the cost understandable to the layman? Belth is on strong mathematical grounds, though, since his method does have the advantage of isolating the mortality and surrender costs and treating them consistently.

Mathematically, this method implies that the dividend is an element built into the premium. Taxwise, we all know that the concept of the dividend as a mere return of premiums is so advantageous that it cannot be taken lightly, but, in a larger sense, the intelligent layman should appreciate that once his policy has been in force a few years, adjustments to his policy dividends will depend on company earnings (and to that extent the word "dividend" is not a misnomer). Belth recommends buying from a participating company if one expects interest rates to continue high or improve, and buying from a non-participating company if one expects interest rates to go down. This is quite sound advice, but an even more explicit discussion of how and why dividend scales are adjusted after issue would have been in order. Presumably the author was put off by the difficulty of making any general statements helpful to the buyer.

Actuaries are briefly taken to task for not doing a better job of educating the public in the complexities of life insurance. Rather than referring to the actuaries' legendary inscrutability, the author somewhat weakly falls back on the fact that many actuaries "are not in a position to affect company policy." Evidently the professor is looking to the profession to pick up the gauntlet . . . Realistically though, much more emphasis is given to the apathy of the public in not wanting to know about life insurance.

In summary, this can be a valuable guide to the insurance buyer who wants to make his own decisions and has a little basic understanding of the economic facts of life. Actuaries who fall heir to the difficult job of "educating the public" can profit from Professor Belth's consumer-oriented but nicely measured approach. □

## NEW ORLEANS WORKSHOP TRANSCRIPTS

The sizable job of interpreting and editing the transcripts of various workshops conducted during last year's New Orleans Symposium on Retirement Plans has now been completed and copies may be obtained in Chicago from the Society's office.

The price per transcript is $1.50. and they are available for the following workshops:

| *TOPIC* | *Work-Shop Number* | *DISCUSSION LEADERS* | |
|---|---|---|---|
| | | *Chairman* | *Co-Chairman* |
| Measuring and Comparing Investment Performance | 1A | Ronald P. Giesinger | Philip J. Feuer |
| | 1B | Douglas C. Borton | Leonard Mactas |
| Setting Investment Policy, Selecting Investment Managers, and Setting Investment Performance Goals | 2A | Allan B. Roby, Jr. | Leroy B. Parks, Jr. |
| | 2B | Harvey M. Leister, Jr. | Kenneth K. Keene |
| Compulsory Vesting, Portability, Funding and Reinsurance | 6A | David A. Daniels | Daniel F. McGinn |
| | 6B | Thomas H. Jolls, Jr. | James A. Curtis |
| Communication of Benefits | 12A | Jerry L. Brockett | Neil R. Cronquist |

When placing your order, please be sure to identify by number and letter (e.g., 6B) the particular workshop for which you wish to receive a transcript.

### ERRATA

(February Issue)

Mr. Myers' address is
*Silver Spring* not *Silver Springs*
and Mr. Shur's Committee is to *Cooperate* not *Corporate* with Governmental Demographic and Statistical Agencies.

## Joint Sponsorship

(*Continued from page 1*)

While this form of Joint Sponsorship had much to recommend it, the Joint Committee recommended — and all six actuarial organizations accepted the recommendation — a broader concept of Joint Sponsorship. Commencing this spring, *all* examinations will be Jointly Sponsored by all six organizations, although some exams are not used for membership in some of the organizations.

The advantages of this overall Joint Sponsorship are:

(1) The fact that there would be "all the names on one piece of paper" recognizes a fundamental unity in the profession. Such unity would encourage a profession with similar standards and one more likely to meet the needs of all actuaries.

(2) It would support and add credibility to the efforts of the American Academy and the Canadian Institute to achieve national accreditation of actuaries.

(3) It should facilitate a valuable interchange of ideas in curricula. It might encourage the development of a syllabus that tested principles rather than practices. It might also reduce confusion by encouraging a common or similar terminology among actuaries.

One argument against this form of Joint Sponsorship was that it would be misleading, because the applications for examination and the examination result lists will show the list of all sponsoring organizations on the masthead. To help overcome this objection the application forms and examination lists will have a footnote stating: "These examinations are Jointly Sponsored by the actuarial organizations listed above. Information as to the specific requirements for membership in a particular organization can be obtained from the office of that organization." The Year Books of the organizations (as they are reprinted) will cover in detail exactly what their own current requirements are.

It is recognized that Joint Sponsorship means different things to different organizations and with respect to different examinations. For example, Joint Sponsorship on Parts 1 and 2 for the Casualty Actuarial Society is very much a working partnership with the Society of Actuaries, whereas for the later Parts it is more of an endorsement. However, it is clear that actuarial exams will change in the future and Joint Sponsorship gives a broad framework within which these changes can evolve.

The six actuarial organizations do not intend that Joint Sponsorship be "an empty gesture" and to that end each organization has appointed liaison delegates to the Advisory Committee on Education and Examinations of the Society of Actuaries, and to the Education and Examination Committee of the Casualty Actuarial Society.

Liaison delegates do not need to have membership status in the Casualty Actuarial Society or the Society of Actuaries. Joint Sponsorship must inevitably reflect the needs and desires of each participating organization, so it is imperative that each Joint Sponsor be given the opportunity to be represented by whomever it wished in the setting of policy for the Jointly Sponsored examinations. Only in this way can it be adequately informed as to the background of the policy and bring before the policymakers its own views and needs.

The question has been raised whether participation of the Joint Sponsors in the examination process should extend beyond the *policymaking* area into the area of *implementation* of this policy—in other words, whether it was necessary at this time for official representatives of the Joint Sponsors to become involved in the work of actually setting and grading the examinations. The current view is that although such participation might be attractive to some of the Joint Sponsors and might become increasingly appropriate over the long run, it was of varying importance to the various organizations and probably not essential initially to any, and might most properly be considered by the expanded policymaking "Advisory Committee." This view takes into account the already existing participation of many members of the Joint Sponsors in the examination process, albeit as members of one of the administering organizations.

It should be again stressed that the development of Joint Sponsorship is evolutionary in nature. Indeed it is quite possible that Joint Sponsorship will have a different connotation if the current proposal for restructuring the Fellowship examinations of the Society is adopted by the six organizations. □

## Actuarial Meetings

April 9, Chicago Actuarial Club
April 12, Baltimore Actuaries Club
April 18, Seattle Actuarial Club
April 18, Actuaries Club of Des Moines
May 10, Baltimore Actuaries Club
May 16, Seattle Actuarial Club
May 16, St. Louis Actuaries Club
May 16, Nebraska Actuaries Club
May 21, Chicago Actuarial Club
June 14, Baltimore Actuaries Club
June 21 & 22, Actuaries Club of Southwest (Spring Meeting)

## Health Insurance Indices

(*Continued from page 3*)

of the supplemental loss ratio, this Schedule H ratio does not greatly differ from that based on incurred premiums. In the "total" column of Schedule H and the exhibit, however, the increase in active life reserves is taken in the denominator rather than the numerator, resulting usually in an overstatement of the adequacy of premiums. The data in the table below set out the claim indices determined on the various bases and compare them to that index determined on the basis of the Analysis.

| *Basis* | *Claim Index* |
|---|---|
| Schedule H | 57.41% |
| Exhibit | 52.29 |
| Analysis | 57.39 |
| (Ratio of Schedule H index for Analysis index) | 1.00 |
| (Ratio of Exhibit index to Analysis index) | .91 |

In this day of consumerism the insurance industry cannot ignore statutory prescriptions which require it to exhibit indices which overstate its costs of acquiring and administering its health insurance policies and understate the percentage of the premium dollar returned to or set aside for policyholders in the form of benefits. It is not enough to say that premiums received or written would be a basis more appropriate than earned premiums for determining these indices.

*Editor's Note: Schedule H, and its ratio methods, are derived from casualty practice; perhaps some of our casualty actuarial readers might wish to comment on the author's analysis.* □