The Actuary
The Newsletter of the Society of Actuaries

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FEGLI

by Edwin C. Hustead

The Federal Employees Group Life Insurance (FEGLI) Act of 1954, Public Law 83-598, was signed on August 17, 1954. Since that date the Act has been amended several times.

Before the FEGLI program was established there had been a number of beneficial associations providing insurance to Federal employees and annuitants. The original FEGLI Act provided that all of the liabilities of these associations would be combined into one Beneficial Association policy with the deficit to be covered by FEGLI funds.

The basic amount of regular life insurance for an employee participating in the program is annual salary plus $2,000 rounded to the next higher $1,000. The basic amount cannot be less than $10,000 nor more than the basic amount calculated for employees in Level II of the Executive Schedule. The Level II salary is currently $57,500 so the maximum insurance is $60,000. An employee participating in the regular program can also elect an additional amount of optional insurance generally equal to $10,000. In addition there is an AD&D benefit which is not continued after retirement or other termination.

Employees under several retirement systems may, subject to certain service requirements, continue the life insurance into retirement. The full amount of insurance is continued until age 65, or retirement if later, and then reduced by 2% per month until a reduction of 75% is reached.

Over 97% of the covered retirees are in the Civil Service Retirement System. Ten other retirement systems are considered qualifying systems for continuation of full coverage. These include the Tennessee Valley Authority and Foreign Service Retirement Systems and the systems covering the District of Columbia policemen, firemen, and teachers.

The employee contribution rate is two-thirds of the biweekly cost of $1,000 of insurance, as determined by the Civil Service Commission,* rounded to the nearest half-cent. The agency contributes one-third of the level cost. Agency and employee contributions stop at retirement. The optional insurance program is paid for entirely by the enrollees with the cost determined by age group.

The law provides that the Commission contract with one or more companies to provide the insurance. The Commission contracts with the Metropolitan Life Insurance Company to

*As of January 1, 1979, the Civil Service Commission is now the Office of Personnel Management.

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SOCRATES INTRODUCES PLATO TO NETHER WORLD OF EDITING

by John W. Tomlinson

*Recently Jack Moorhead, newly-appointed successor to Andy Webster as editor of **The Actuary**, called on Mr. Webster in that newspaper's sumptuous New York offices. The dialogue between those two giants of our profession having, like the initial Socrates-Plato dialogue, been mislaid, posterity will have to be content with one FSA's dream of what was said:*

Jack. (restlessly, to Andy's secretary) How much longer do I have to wait here in the vestibule?

Secretary. This isn't the vestibule. It's Mr. Webster's office. (Secretary exits).

Andy. (Enters). Welcome to the humble home of *The Actuary*. I hope I haven't kept you waiting more than ten minutes.
(They shake hands).

Jack. Thank you-all, Andy. Now, what's the first thing I should do as editor?

Andy. Work on your Scottish accent.

Jack. What's the second thing I should do?

Andy. Learn to quote famous people—like Descartes.

Jack. How do I know he's famous?

Andy. He will be after *you* have quoted him.

Jack. How can we arrange for an orderly transfer of power?

Andy. You pay your electricity bills and I'll pay mine.

Jack. On what day of the month do the members expect to receive *The Actuary?*

Andy. Between the first and the thirty-first of any nearby month.

Jack. But don't some months have fewer than 31 days?

Andy. Perhaps so, but I never heard it put quite so eloquently.

Jack. How is the budget?

Andy. Which budget? The Zero-Based Budget? Or the Absolute Zero Budget? You'll find that either is adequate once you've developed your Scottish "brrrr".

Jack. What is the inspiration for your editorials?

Andy. You know the old saying, "10% inspiration, 90% desperation."

Jack. Do the associate editors help with proofreading?

Andy. Yes, as long as it's 86 proof.

Jack. How do you ensure that all points of view are fairly represented?

Andy. I never write more than half of the articles myself.

Jack. You do some ghost writing then?

Andy. Only when the proof spirit moves me.

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The Actuary

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MAN FROM ABERDEEN

It has been reported, accurately so, that when Mr. Webster's twelve years in the Editor's chair were recognized at our annual meeting last October, "the assembled members leaped to their feet to give (him) a standing ovation." For actuaries to indulge in such a demonstration of personal sentiment is news in the man-bites-dog category.

What A.C.W. characteristics and achievements were those proverbially phlegmatic people acclaiming? It is safe to say that their thoughts were mainly on—

- his sense of humour, that unfailingly spiced the contents of our newsletter, that discouraged pomposity, that stimulated or provoked contributors to express themselves in ways that entertain as well as instruct;
- his ready aid and encouragement to those among us who have fumbled in putting our thoughts into words for his columns;
- his success in catering to the wide range of professional interests that nowadays are embraced by actuaries;
- his instinct for the bon mot, not, as some have alleged, inordinately favoring quotations from Burns and Gilbert over Longfellow and Tennyson.

In appreciation of Mr. Webster's dozen winters of editorial faithfulness, let us take the above as understood, and touch upon a trio of aspects that are more likely than these to be overlooked.

Let us reflect upon the unremitting burden, through more than one hundred issues, of attending to grinding details that most of us know nothing of — prodding procrastinating authors, fitting the month's raw material to the space and format, riding herd on routine pieces that somebody forgot to send, keeping mind and eyes on the alert for errors and solecisms. Andy accepted the drudgery of the post as willingly as its excitements.

Our outgoing Editor says he was fortunate in the talents and devotion of his associate editors, his competition editor (that shrinking violet, "C. E."), and his all-important production team. Indeed he has been — but let's not forget that he recruited these good people himself and inspired their loyalty and their fine work. So those blessings that he counts need not be attributed purely to blind luck on his part.

Finally, let's remember that occasionally he had to accept brickbats, a specially trying necessity for one whose labors through the burden and heat of those many days were solely for love. A cartoon in a recent *New Yorker* is relevant; the pageboy rushes in to his enthroned monarch, shouting,

"Good news, sire! Today's mail is all homage!"

Such a happy circumstance cannot always occur. But the messages we know he is now receiving from around the actuarial world are All Homage.

E. J. M.

LETTERS

Mortality Mensuration

Sir:

I wish to respond to the review of the recently published textbook, *Mortality Table Construction* by Robert W. Batten, in the October issue of *The Actuary.*

As a student of the construction of tables preparing for the Part 5 examination, I did not find that there was "undue emphasis on mathematical foundations." I contend rather that the inspection of the life contingent basis of the theory of table construction is relevant, indeed essential, to a well-founded, comprehensive understanding of the process of "measuring mortality." Since there is only one paragraph and a single associated exercise devoted to the Balducci assumption in *Life Contingencies,* I strongly disagree with the reviewer's statement that the implications of various mortality assumptions pertinent to the study of table construction are treated adequately in Jordan. The implications of the three major mortality assumptions are examined in Chapter one of Batten's text and explored through the exercises in a manner which provides the student a frame of reference for the study of construction. Professor Batten deserves credit for presenting the foundations of construction to the student rather than assuming the student is intuitively aware of the relation of this subject to the theory of life contingencies.

Concerning the reviewer's criticism that Professor Batten devotes "excessive and ill-advised" attention to the UDD-based formulas, it should be noted that Professor Batten introduces them very imaginatively as analogues to the Balducci formulas. They are derived and presented in general form, yet the analogy with the Balducci formulas can be readily appreciated by the student and renders them easy to master for practical application. With the innovative presentation in the new text, the student learns more about UDD-based formulas with less effort.

The remainder of the reviewer's criticism of the new textbook is based on pedagogical considerations. Criticism of the textbook on the grounds of pedagogical preferences must be recognized as a highly subjective area. Although the Gershenson textbook has long been an

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excellent guide for students, 17 years tenure for a textbook in a scientific discipline is almost unheard-of. There are sections in Gershenson's textbook, particularly in the early chapters, where the going is rather tedious and redundant for the modern student, especially in light of the difficulty and depth of the questions on the Part 5 examination today. Professor Batten's textbook offers much richer examples, some of which are drawn from recent examinations, than does the older textbook for the purpose of illustrating the intricacies of the problems of table construction. At the same time the Batten text treats many concepts more succinctly and in greater generality than does the older textbook. The reviewer essentially ignores the fact that the modern student is prepared for and desires a more modern, thorough treatment with detailed examples and contemporary illustrations. I contend that Professor Batten speaks as articulately to the student of the 1970's as did Professor Gershenson to the student of the 1960's, regardless of whether his style is "conversational."

In summary, Professor Batten's textbook succeeds in introducing the subject of table construction to the student with informative, illustrative examples and a high degree of generality so that it may be readily applied in many situations. Batten preserves the basic notation and nomenclature which are traditional in the subject while he presents the subject in sufficient depth to acquaint the student with the problems he is likely to encounter in practice and under current examination conditions. A simple perusal of Chapter six on counterpart formulas reveals that the new textbook, if it does not extend the scope, certainly enriches the literature of the subject. The textbook reflects a genuine concern on the part of Professor Batten to enlighten the student in all aspects of the subject as it is currently taught and practiced. I feel he has endowed the student with a full and modern coverage of the subject.

Roger F. Ray

* * * *

Sir:

With apologies to Mr. Richard L. London, I disagree with many of his criticisms in his review of *Mortality Table Construction* by Robert Batten, and especially with his conclusion that Harry Gershenson's is the superior Measurement text.

I sat for the May 1978 part 5 examination, which was the first incorporating Batten's text in the syllabus. Although I never took an exam using the Gershenson text, I am quite familiar with its contents. A critical comparison of the two books from the eyes of this student differs from the views presented by Mr. London in the following areas:

- Until the algebraic proof of the equivalence of counterpart formulas given by Batten is read, the only way for the student to intuitively understand this equivalence is to realize that both formulas seem to work. Failing that, an intuitive connection between individual and valuation schedule formulas, taken for granted by Mr. Gershenson, is not obvious at all until the introduction of Batten's proof and accompanying explanation.

- Mr. London failed to mention what was, in my opinion, the Batten textbook's greatest selling point, namely, his pedagogically superb method of teaching by example. The multiplicity of examples and illustrations in his text supplements his clear and forthright writing style and made it possible for me to finish the entire text with less than a handful of unanswered questions.

- I felt Mr. Batten was unjustly criticized by Mr. London on three major points. (1) The toll road analogy is helpful when trying to get a feel for the basic mortality study process, but it can't be thrown into every specific explanation without confusing the reader. I felt Mr. Batten was correct in using his more direct approach. Part 5 students generally do not apply for positions on the New York State Highway Patrol. (2) Mr. Batten deviated from the standard demographic notation only when he stated the reason for doing so. He also emphasized the demographic notation was far more standardized than the individual. (3) The limitations of the UDD valuation schedule formulas were clearly explained in Batten's text. Also, he limited his discussion of the UDD formula to a demonstration of the symmetry of opposing formulas versus opposing migration assumptions, a device which facilitated the handling and memorization of these formulas.

Incidentally, I'd like to thank Mr. London for his efforts in developing the Northeastern examination manuals. I'm sure that I am speaking on behalf of many students whose heads have been kept above water thanks to the outlines, problems, reviews, and practice exams contained in his publications.

Jacob Poleyeff

* * * *

Sir:

I was surprised by Mr. London's review of Professor Batten's *Mortality Table Construction* (in the October issue of *The Actuary*). I have read both Mr. Batten's and Mr. Gershenson's books on the subject. I agree that Gershenson should be used as a companion resource. Mr. Gershenson's book is an additional source of problems, and it is an excellent text. Mr. Batten uses many ideas from it (which he readily acknowledges). In addition, he develops many concepts which make the underlying principles of mortality table construction even more clear. Much time consuming algebra, associated with these principles, has already been worked out, giving the student extra time to sharpen his problem solving skills. Batten's text is a worthy successor to Gershenson.

Everyone is entitled to their opinion. For the student studying for the Part 5 examination, Mr. Batten's text is the best I have seen. Mr. London thinks Mr. Gershenson's book is better.

My main concern is that ASA's and FSA's (having already passed Part 5) may judge using Mr. London's opinion rather than Mr. Batten's text. I ask that they read the book themselves, and form their own opinions as to its worth, rather than depending on the opinion of any single reviewer.

Jonathan Rosenblith

* * * *

Sir:

In the October issue of *The Actuary,* Richard L. London reviewed *Mortality Table Construction* by Robert W. Batten. The text replaces *Measurement of Mortality* by the late Harry Gershenson as part of the study material for the current Part 5 examination.

In his review, Mr. London criticizes Batten's text on the grounds that it is too mathematical, is not mathematical enough, and is not Gershenson's.

London claims that there is "practically no difference in the scope of coverage of the Batten and Gershenson books." We disagree strongly. There are not only

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be the primary carrier with other companies participating as reinsurers. There are 225 companies participating as reinsurers.

Valuation and Rate Reduction

A valuation of the group was made as of September 30, 1977 and, as a result, changes were made in the premiums.

The regular premium rate for Federal Employees Group Life Insurance was reduced 28% and the optional rates were reduced an average of 25% effective September 1, 1978. These rates apply to 2,380,000 employees covered under the regular life insurance program for an average amount of insurance of over $20,000 and 660,000 people covered for optional in surance of $10,000 each. Including 1,000,000 annuitants who are covered by post-retirement insurance the total FEGLI insurance in force is now over $70 billion.

There were three reasons for the reduction in premium rates. The FEGLI rate valuation used dynamic economic assumptions for the first time. Since FEGLI benefits do not increase after retirement, the use of dynamic rates lowered the premium cost. Dynamic assumptions of 7% for interest and 5% for general salary increases were used in the valuation. Secondly, the average investment rate of the FEGLI portfolio has increased substantially over the last few years. Current interest rates average almost 8%. The third and most significant factor is the use of sharply reduced mortality rates.

Civil Service mortality rates had mirrored those of the private sector from 1950 to 1974 with a very slight reduction per year over that quarter century. A sharp decline in the mortality rates began in 1975 and increased through 1977. The reduction was observed for both sexes, all ages, and retirees and employees. The last valuation of FEGLI (1973) had been performed using the mortality experience in the late 1960s. Actual to expected ratios to this table had dropped to 95% in 1974; 88% in 1975; and 83% in 1976. Preliminary results indicate that the 1977 ratio was below 80%. The continuing decline obviously means that we have entered a new pattern of lower mortality rates for Federal employees and annuitants. Because it was unclear how much further the mortality might decline and because use of recent experience already sharply reduced the premium rate, we decided to use mortality rates from 1974 to 1976 rather than to assume a further decline.

Comparison with other sources showed that the decline in mortality was not limited to FEGLI. The National Conference of Health Statistics age-specific mortality rates were stable until 1969 but have dropped steadily since then to 85% of the 1968 base rate by 1975. The annual studies of individual insurance mortality published by the Society of Actuaries have also shown a substantial drop since 1969. Average individual insurance mortality declined by two to three percent a year in 1975 and 1976 with 1976 deaths being 82% of those expected based on 1965 experience.

There are about 2.7 million federal employees eligible for the FEGLI insurance program. Of these, 25% elect optional coverage and 12% choose not to have any coverage. An employee has to purchase regular insurance in order to be eligible for optional insurance. The federal employee has to pay two-thirds of the cost of regular insurance. Since the regular insurance premium is level at all ages with a large amount of post retirement coverage many employees, particularly under age 45, can purchase insurance elsewhere at term rates which are cheaper than the regular program rates. Federal employees also are well aware that the conditions for reentering the program after waiver are very liberal. As a consequence waiver rates are particularly heavy among younger employees and among females.

The optional program began with no pre-conditions which resulted, as had been expected, in high premium rates, low participation and heavy anti-selection. Mortality experience under optional in the first year was 180% of the mortality experience under regular but it declined quickly to 120% of regular by 1972. Today, with much higher participation and tighter controls, the optional mortality is only about 105% of regular mortality.

Introduction of the new optional and regular insurance rates should continue the trend toward higher optional participation and reduce the percentage who waive insurance. The former and current monthly rates per $1,000 are as follows:

	August, 1978	*September*, 1978
Regular insurance		
Employee	$.77	$.55
Employer	.38	.28
Total	1.15	.83
Optional insurance		
Under age 35	$.17	$.13
35-39	.26	.22
40-44	.41	.37
45-49	.63	.52
50-54	.97	.76
55-59	2.27	1.63
Over age 59	3.03	1.95

The Civil Service Commission and the Metropolitan Life Insurance Company have jointly developed a legislative proposal, which will be considered by Congress in 1979, to make certain changes in FEGLI. Several design problems were noted and are being corrected with offsetting cost effects. One is the competitive aspect of term insurance versus the employee contribution among younger employees and the second is the lack of required contribution from employees who retire early. The employees who retire before age 65 carry full insurance to age 65 at no cost. The competitiveness has been partially resolved by the premium reduction but an additional step will be to seek an increase in insurance below age 45. The increase would be to pay twice the basic amount of insurance at no additional cost up to age 35 with the added amount declining 10% a year through age 45. To offset this added cost the other recommended change would be to make employees retiring at 55 or later continue to pay premiums until age 65 or accept an immediate benefit reduction.

The major new recommendation is to introduce an entirely new optional program permitting election of one to five times salary at the employee's discretion. This will probably be offered at lower per thousand rates than the optional rates shown above because the new optional insurance will not include an accidental death and dismemberment benefit or permanent insurance after retirement.

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The following Table shows specimen mortality rates used in the valuation.

Regular Program Ultimate Mortality Rates Per Thousand

Age	Employee Male	Employee Female	Age Retired Male	Age Retired Female	Disability Retired Male	Disability Retired Female
40	1.8	1.2	3.0	2.1	16 0	10.0
50	4.5	2.3	6.8	4.3	23.2	11.7
60	9.8	4.0	15.7	7.8	34.8	19.0
70	21.5	8.1	37.0	17.3	60.0	31.6
80	51.0	25.9	88.0	55.0	116.4	67.5

Details are given in the 1977 FEGLI valuation report a copy of which may be obtained by writing:

EDWIN C. HUSTEAD
Office of the Actuary
Room 4303
Office of Personnel Management
1900 E. St. NW
Washington D. C. 20415 □

Socrates and Plato

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Jack. How do you see that women get a fair shake?
Andy. I take them riding in my 1937 Maxwell.
Jack. Do we have to print any more about Manhart?
Andy. Oh, have a heart, man.
Jack. Where do you get your better material?
Andy. I'm flattered that you ask. My wife buys the tweeds directly from MacGregor's-in-the-Highlands.
Jack. How do you decide what goes on the front page of *The Actuary?*
Andy. I don't. I plan pages 2 through 8, and see what's left over.
Jack. How do you fill up space?
Andy. There is no space—there are only quasars and black holes.
Jack. How do you decide whether a manuscript is libelous?
Andy. I publish it and wait for the phone to ring.
Jack. And how do you check for factual accuracy?
Andy. It's called *The Actuary*, not *The Factuary*.
Jack. Has anything happened recently that I should know about?
Andy. Two letters of complaint just arrived.
Jack. What does that mean?
Andy. That our readership has doubled.
Jack. And what about hate mail?
Andy. I haven't written any in over a year now.
Jack. Where do you think ERISA is headed?
Andy. She's trying to catch up with STOCHASTA.
Jack. How do you deal with the highly mathematical articles that new Fellows submit?
Andy. My practice is always to substitute Lidstone's Theorem. No reader has yet noticed.
Jack. Why are you giving me such funny answers?
Andy. Aren't you the casting director for "Comedians Unlimited"?
Jack. No, I'm the new editor of *The Actuary.*
Andy. What's the difference?
Jack. Andy, do you mean you're stepping down as editor to start being a comedian?
Andy. There are some who'd say I never was anything else.
Jack. Oh, go on, Andy, you're a top-notch actuary, a fine Society past-President, and a great, great editor!
Andy. My compliments to you also, Jack. I wish you all success as successor!
Jack. Thank you indeed!

(Here 18 minutes of the tape are lost)

(Again they shake hands. Once more a sense of serene Socratic accomplishment enlightens *The Actuary's* humble abode).

CURTAIN

WHAT IT'S LIKE TO RUN FOR CONGRESS

Ed. note: To have one of our members run for the U.S. Congress is possibly unique in the history of the Society of Actuaries and its predecessor organizations. Thomas P. Bowles, Jr. did this last fall. What follows is an interview of Mr. Bowles by a member of the editorial board of The Actuary.

Q. Tom, did you run for experience, for fun or in the belief that victory was possible?

A. I must have run for experience, because I got plenty of it. But it was an experience that taught me much and that I wouldn't have wanted to miss. Some of my actuarial peers suggested that I had more guts than brains to get involved in the political arena. From time to time, however, one is persuaded to take a stand. In his book, "A Time for Truth," William E. Simon reminds us that in the golden age of Pericles, the youth of Athens recognized public service as the noblest of the professions. Not so today, for either youth or elderly, but a duty nevertheless.

There were many difficulties. We could not afford television. We could not afford a full time campaign manager. I began as an unknown; after the primary, my opponent, the incumbent, had an identity quotient of about 98%, mine then being 3%.

But the result was not entirely disappointing to the party regulars in view of lack of funds and lack of identity, no full-time manager, and limited time for campaigning. Victory on a first attempt was outside the bounds of possibility, yet a first attempt is a necessary prelude to victory.

Q. Which, among your opponent's characteristics, gave him the largest advantage?

A. Far and away, it was the fact of being the incumbent. The odds, measured in economic terms, against the challenger are formidable. It is said that an incumbent has an initial economic advantage equivalent to about $500,000.

Q. How important, relatively, did you find (1) money, (2) hard work, (3) the popularity of your stands on particular issues?

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BOOK REVIEW

Donald S. Grubbs, Jr., *Integration of Plans with Social Security* and *Funding*, ALI-ABA Committee on Continuing Professional Education, Philadelphia, Pennsylvania, 1978

*by Jeanne Cullinan Ray**

These two pamphlets are part of "Pension and Profit-Sharing Plans," a comprehensive reference book on the laws applicable to qualified pension and profit-sharing plans, prepared under the auspices of the American Law Institute — American Bar Association ("ALI-ABA"). According to its editor, David C. Rothman, the publication is aimed primarily, not at pension lawyers but, at the many corporate and tax lawyers, accountants, actuaries, plan administrators, pension consultants, bank trust officers, insurance agents, brokers, corporate personnel department employees, and others whose frequent contact with the pension laws would make such a reference tool useful.

The genesis of "Pension and Profit-Sharing Plans" was a pension practice handbook written by Mr. Rothman in the mid-1960's. With the advent of the Employee Retirement Income Security Act of 1974, ("ERISA"), the scope and complexity of pension regulation caused a shift in emphasis from an abbreviated handbook to a series of folios on specific pension topics. At present, the work consists of seven major sections subdivided into forty-four folios. It was prepared by some forty contributing authors, with the editor, David C. Rothman being by far the most prolific contributor. The folio system should facilitate future revisions and amendments when new rulings or statutory and regulatory changes occur.

The two folios which constitute the subject of this review deal with the topics of Social Security Integration (Series C Folio 5) and Funding (Series D Folio 1). Both folios were prepared by Donald S. Grubbs, Jr., a former Director of the Actuarial Division of the Internal Revenue Service, who is now a consulting actuary. His extensive actuarial experience makes him well suited to discuss these issues.

The Integration folio is a 32-page pamphlet which presents a concise overview of the legal requirements attaching to a plan which attempts to correlate private sector pension benefits with those provided by the Social Security system. Since the folio is addressed to a general pension audience, it is written in a conversational style utilizing simple examples to illustrate technical mathematical formulae. Little or no attention is devoted to the philosophy behind integration or possible future trends. Despite the limited space available to him in the folio, the author has been successful in producing a thorough, readable introduction to the principles of integration. This work achieves its objective in that it constitutes a basic text explaining the rudiments of integration to pension generalists, although it would be considered too elementary for those actuaries steeped in the mechanics of integration.

The Funding folio is a 35-page brochure providing an easily understandable summary of the highlights of the funding standards of ERISA. It is presented in the form of a narrative description of the numerous factors to be considered in determining how much to contribute to a pension fund. About one-third of the article is devoted to defining certain actuarial terms. The author is adept at defining complex actuarial terminology, and in presenting the reader with statutory and regulatory citations. Particularly helpful to the pension generalist is the use of a sample Schedule B ("Actuarial Information") of a pension plan's annual report on Form 5500. In short, this booklet is an intelligent and literate summary of funding standards, but, practitioners faced with complex technical funding problems can use this folio only as the starting point of their research.

The two folios are worthwhile introductions to the subjects of integration and funding for those interested in acquiring an overview of a pension plan's actuarial requirements. The works will be most helpful to those readers who are not actuaries, and each contains a complex index for easy reference.

The subjects dealt with in the "Pension and Profit-Sharing Plans" publication have obviously been chosen with great care to cover all of the important aspects of pension planning, and I believe that the series will serve as a good basic reference tool for pension plan practitioners. The contributing authors are experts in the pension field and can bring in-depth knowledge and variety of viewpoints to the reader. Numerous new pension publications have flooded the market since the enactment of ERISA. "Pension and Profit-Sharing Plans," while not a substitute for the multi-volume pension treatises prepared by Prentice-Hall and Commerce Clearing House, is, nevertheless, an informative and useful review of the fundamentals of pension planning.

The address of the American Law Institute — American Bar Association is 4025 Chestnut Street, Philadelphia, Pa. 19104. The price of each Folio is $6.00. □

*Mrs. Ray is Assistant General Counsel with The Mutual Life Insurance Company of New York.

GOLDEN ANNIVERSARIES

The year 1979 sees the following reach their 50th anniversary as Fellows:

Elgin R. Batho	Walter Klem
Max S. Bell	Walter O. Menge
Otto J. Burian	Carroll E. Nelson
Joseph A. Christman	Harry M. Sarason
Alfred N. Guertin	John L. Stearns

Willard A. Thompson

May we hope that some of these gentlemen, seeing their names here, will be moved to write to *The Actuary*, reminiscing, reviewing the current scene, or prophesying.

These eleven stalwarts join sixty-four members who have previously marked their golden anniversaries. The deans of this group of seniors are, if we have our facts straight, John S. Thompson (1908) in the United States, John M. Laing (1912) in Canada.

Associates

Congratulations also to the following Associates who likewise have completed their half-century this year:

F. Arthur U. Goodwin

Joseph Linder	Herbert A. Winters
Joseph T. McNeely	Robert A. Wishart

It would be a pleasure for the rest of us if as many as possible of these eleven Fellows and five Associates were to come to our meetings this year, to mark their anniversaries and to renew their friendships of so many past years. □

Actuarial Meetings

Mar. 8, Baltimore Actuaries Club
Mar. 8, Kansas City Actuaries Club
Mar. 8, Actuarial Club of Indianapolis
Mar. 15, Actuaries' Club of Hartford
Mar. 17, Seattle Actuarial Club
Mar. 20, Chicago Actuarial Club

Letters

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practical, but also theoretical differences in the scope of coverage between the two texts.

Batten's text covers both mathematical concepts (such as "Comparison of Assumptions" in Chapter 1) and intuitive descriptions (such as "Practicality of Assumptions" in Chapter 2) which Gershenson's text omits entirely. Batten demonstrates the equivalence of individual record and valuation schedule formulas (Chapter 6) by using both rigorous mathematics and intuitive reasoning. Gershenson devotes but a single exercise to this important concept.

We could continue, but the point is made. The *only* material covered by Gershenson in depth but ignored by Batten is the toll road analogy, the absence of which is so lamented by London. Although the toll road analogy was historically significant, a student familiar with Kellison's *Theory of Interest* (the required Part 3 text) gains little new insight when faced with the same concept in Part 5—and yet Gershenson's text contains more than thirty pages related to this device.

Mr. London also comments that the two texts "should be compared on the basis of pedagogic effectiveness," and lauds Gershenson's "conversational" style. Gershenson's off-hand, loose, and vague style is not as effective as Batten's more rigorous, careful, and precise mathematical formulations.

Mathematical manipulation without intuitive understanding is sterile; but mere intuition without sound mathematical formulation is dangerous. Batten integrates the mathematical and intuitive development in an extraordinarily effective manner. His book has shortcomings, but at least he makes scientific the concepts which Gershenson "proves" by analogy (toll road) or by example (counterpart formulas). Gershenson's more serious failure is that his loose and easy manner deceives the student into thinking that the subject matter is loose and easy.

Batten's text is more meaningful to the contemporary student, contains greater coverage and depth, is more practical from a problem-solving point of view, incorporates more effective discussions, and has far, far better examples and exercises than does Gershenson's.

Z. Samuel Bernstein
David P. Rigby

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Actuarial Research By Non-Actuaries?

Sir:

The article "Actuarial Research at North American Universities" in the October *Actuary* provides a useful supplement to the concurrent session on Actuarial Research which took place at the Society's annual meeting on October 23. I would like now to call attention to yet another source of research which might be of interest to actuaries — papers presented at meetings of statisticians.

The Society maintains liaison with the American Statistical Association, which is the largest and probably the best known of the associations. I attended a recent meeting of the American Statistical Association as liaison representative and noted more than a dozen sessions of potential interest to Society members. Some of these were listed in my discussion at the October 23rd concurrent session on research.

The following list of topics will give the reader some idea of the extent of what might be called common ground between the statistical associations and the Society. Papers were presented on demography, mortality of impaired lives, tests of significance of results, and developments in actuarial and other effective techniques of studying longevity and comparative mortality. Others discussed obesity, policyholder awareness of health insurance coverage (Answer: most were not knowledgeable), automobile insurance, economics (including a paper on life insurance company cash flow).

In these days when we are being called upon to justify our underwriting and other practices, it might be helpful to get better acquainted with the statistical world. The recent publication "Medical Risks" offers some evidence of the amount of useful material that can be gleaned from the proceedings of other organizations.

While a closer liaison with the statistical associations appears desirable and beneficial to both actuaries and statisticians, it is not easy to devise a workable procedure. A preliminary effort is currently under way and in the meantime I would be glad to hear from members with any comments and suggestions of how we might improve our relationship with the American Statistical Association and make known to our membership what the statisticians are doing.

For example, the "Journal of the Institute of Actuaries" regularly cites papers appearing in the "Journal of the Royal Statistical Society" and publications of other associations which they consider might be of interest to actuaries. However, the effectiveness of this procedure rests on the premise that a number of members of the Institute may also be members of the Statistical Society and so have ready access to published material.

Robert J. Johansen
Liaison Representative

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Actuarial Research

Sir:

Unfortunately, the University of Western Ontario was not one of those universities surveyed for the report in the October issue. We are currently active in a variety of actuarial research problems. They include:

(i) Statistical Methods of Graduating Multiple Decrement Data;

(ii) Statistical analysis of the financial and mortality risks in individual contracts with applications to policy reserve, premium, and contingency reserve calculations;

(iii) Mathematical relationships between the premium, contingency fluctuation reserves, and dividend strategies in group life insurance.

We laud your support of actuarial research.

Harry Panjer

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Actuarial Passion Research

Sir:

Occasionally an uninformed author will make an irresponsible statement about actuaries. I take most of these with a grain of salt, but Mr. Thompson's letter in the November 1978 issue reported a denigration of something every actuary holds sacred: his or her lovability.

I petition the Committee on Research to conduct a rigorous scientific inquiry to refute the author's contention and ask that the Public Relations Committee publish and distribute the anticipated favorable results.

Frank D. Repp, Jr.

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Running For Congress

(*Continued from page 5*)

A. All three of these mean a great deal; I rank their importance in the same order as in your question. Money talks! Even though money can't buy what the public must seek: integrity, experience, intellectual capacity and commitment, it can buy the essentials for getting elected: name recognition (who one is), position (what one stands for), and organization. My experience with penury suggests the need for a look at the broad area of financing elections.

Q. On what national issues did you decide to major during your campaign?

A. The thrust of my message was that the Congress, not the President, is responsible for our economic troubles. This was one matter on which my opponent and I agreed.

Q. In your speaking engagements, which issues did you find of interest to your listeners? What national issues turned out to be the most difficult to explain?

A. The issues of greatest interest were inflation, taxes and big government, in that order. The public only vaguely relates excessive government spending and deficits to inflation. This was the most difficult issue to explain.

Q. Coming back to money, how much did you have, and how did you budget your penury?

A. Professionals say that to win a Congressional race in my District, the campaign fund needs to be at least $200,000. We spent about $30,000, 15% of which came out of my own pocket. As contributions from actuaries and others came in, we increased the frequencies of our four 60-second radio commercial messages, all of which were confined to the 10 days prior to the election.

Q. What next, Tom?

A. Undaunted, we have committed to prepare for the 1980 Congressional race. A happy thought is that this gives us two years, not eight weeks. My big, immediate task is to build a high identity quotient, essential to having any chance of winning.

Q. Was the fact that you are an actuary a plus or a minus with the electorate?

A. In most cases I just created confusion by attempting to identify my profession. One newspaper article described me as "a compiler of insurance rates for a railroad"; a television interviewer told listeners that I am a "clerk in an insurance company."

Although it was clear as ever that few have any idea what an actuary is, my being an actuary was a plus with enough of the initiated to be pleasing. Several times I heard the welcome words, "We need an actuary in the Congress."

(*Ed. note: Mr. Bowles offers a copy of his four radio scripts to any reader interested enough to get in touch with him at his address in the Society Year Book*).

SOCIETY OF ACTUARIES MINORITY SCHOLARSHIP PROGRAM

by Michael R. Winn

Two years ago the Society of Actuaries, in conjunction with the Casualty Actuarial Society, initiated the current Minority Scholarship Program. The purpose of this program, is to provide financial assistance, through scholarships, to individuals currently underrepresented in the actuarial profession. A committee composed of members of the Society of Actuaries and the Casualty Actuarial Society administers the solicitation of scholarship funds and the granting of awards.

Scholarships are granted at both the undergraduate and graduate level with the committee receiving a great deal of cooperation and support from colleges and universities throughout the United States. For the 1978-1979 academic year, seventeen scholarships to highly qualified students for amounts varying between $250 and $4,500 were granted. totaling $22,000. All awards are reviewed annually with respect to renewability to determine financial need, academic, and actuarial examination progress.

A problem which faced this committee in the past was publicizing our program to a sufficiently large number of qualified minority students. We addressed this problem in 1978 by reaching an agreement with the American College Testing Program (ACT) whereby they agreed to mail the Society of Actuaries' booklet "So Your Good at Math" to minority students scoring well on the mathematics test administered by (ACT). Students expressing interest will be sent further information regarding the Scholarship program and the profession generally.

In addition to awards from the Society's general scholarship fund, the program offers scholarships from several separate funds established by individual companies. The purpose of allowing private organizations to establish separate funds is to grant large contributors the right to determine the eligibility requirements and general guidelines related to their individual recruiting objectives. Any organization wishing to establish a separate fund to be administered by the Society is encouraged to contact the Society's office. Scholarships granted from a separate fund will be identified with the particular organization establishing the fund.

SOCIAL SECURITY

Kevin Wells, *Estimated Amount of Life Insurance in Force as Survivor Benefits under OASI*, 1975-77, Actuarial Study No. 79, Social Security Administration, Baltimore, Maryland, November 1978, pp. 17.

This Study presents estimates of survivor's benefit protection under Social Security by sex of insured worker and by type of benefit. The 1977 estimate is further distributed by age of insured worker. A rough estimate of the total amount for 1978 is presented. Tables also present estimated average amount and estimated average annual cost per insured person. Also presented is a comparison of life insurance protection under OASI, under other government programs, and under private insurance.

Copies of this Study may be obtained free of charge from the Office of the Actuary, Social Security Administration, Baltimore, Maryland, 21235. □

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Employers of actuaries who desire a list of current scholarship participants as a source of potential employees are encouraged to contact the Society's office. □