



SOCIETY OF ACTUARIES

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# The Actuary

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## THE 1983 TABLE *a*

by Robert J. Johansen

*Ed. Note: This is the second of three articles. The first (April issue) told how the 1973 Experience Table was constructed.*

Outlined here are two steps: (i) projecting the values in the 1973 Experience Table to produce the 1983 Basic Table, and (ii) reducing the 1983 Basic Table *q*'s to arrive at the recommended annuity valuation table called the 1983 Table *a*.

## Mortality Improvement Factors 1973-1983

Because the most recent annuity mortality experience was centered on 1973, the Committee had to rely substantially on recent improvement rates observed in the U.S. white population through 1979 in projecting annual improvement rates for 1973 to 1983. A comparison over earlier periods indicated that such reliance was reasonable.

*Annual Improvement Factors*

Ages	U.S. White Population		Used for 1973-83 Males & Females
	Males	Females	
57-72	2.50	1.97	2.25
77	1.57	2.45	2.00
82	1.12	1.99	1.75
87	2.17	2.85	1.50

Improvement rates for various population, insured life, medicare and annuitant experiences are shown in Table 9 of our Committee's October 1981 report to Society members to be published in *TSA XXXIII*.

## Margin for Fluctuation and Contingencies

To produce an annuity valuation table it is necessary to reduce the pro-

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## NEW ACTUARIAL SCIENCE PROGRAM AT HOWARD UNIVERSITY

by Robert J. Randall

An actuarial science program, started at Howard University in Washington, D.C., may be of special interest to actuaries because Howard is the largest and generally recognized as the most prestigious predominantly black university in the U.S.A., and its actuarial program works closely with the Society's Subcommittee on Minority Recruiting. I am on loan from The Equitable Life Assurance Society to serve as its Program Director, with the title Visiting Professor of Actuarial Science.

A unique aspect of this program is its joint sponsorship by the School of Business and the College of Liberal Arts Mathematics Department. An actuarial science major may be in either of these schools. Dr. Adeniran Adeboye, Professor of Mathematics and Chairman of the Actuarial Science Committee, has demonstrated his strong interest by taking and passing the first three actuarial exams. The Mathematics Department furnishes the needed math instruction,

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## THE INSTITUTE OF ACTUARIES STUDENTS' SOCIETY

by Gary Chamberlin,  
*London Correspondent*

One characteristic of a true student will be that he knows he has more to discover. Keeping eyes and ears open, he will learn from those around him, from books, libraries and journals, from present conditions and past events. His world is open; he will ever be ready to expand and deepen his knowledge. Particularly will he be fortunate if in these endeavours he can enjoy good companionship. It is for such purposes—widening the view and providing companionship—that the Students' Society of the Institute of Actuaries exists. During its 71 years it has contributed substantially to actuarial life.

## The Information Gap

The Society's beginning was in 1910, when Steuart Macnaghten—then a tutor, later to become President of the Faculty of Actuaries—saw the difficulties under which students laboured, and resolved that something be done about this. The problems were the state of information and lack of facilities. In some subjects particularly, students found it hard just to discover what knowledge was needed for the examinations. Even text-books were frowned upon; there was no official tuition or reading list; it was only by massive reading of actuarial papers and by kindly assistance from actuaries in his own office, that the student could hope to prepare for what the examiners would require of him. It was as if a cloak of mystery shrouded our profession: even today some evidences remain.

Formed later that year, the Society launched its first session early in 1911 under the chairmanship of that renowned actuary W. P. Elderton. A vigorous

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## Fiftieth Anniversary of New York Club

Reminiscences by some of its past leaders, and a keynote address by fiscal and Social Security authority Wilbur Mills, will be among the features of the Golden Anniversary two-day gathering of the New York Actuaries Club at the Sands Hotel in Atlantic City, N.J. on June 11 and 12. Actuaries not members of the Club who would like to attend should ask Charles Carroll at his Yearbook address.

**ARCH****Actuarial Research Clearing House****1981.2 Issue**

In addition to the customary departments: "Problems and Solutions" (two items), and "Teachers' Corner" (three items), this issue contains:

Synopsis of Sixteenth Actuarial Research Conference, Ernest R. Vogt

Bayesian Graduation of FHA/HUD Single Family Home Mortgage Insurance Contracts, Thomas N. Herzog

The Intersection of Portfolio Theory and Risk Theory, James C. Hickman

The Simplex Algorithm and the Exchange Method, Hans U. Gerber

In Defense of Minimum-R, Linear Compound Graduation, and a Simple Modification for Its Improvement, Richard L. London

Installment Premiums, Richard L. London

Actuarial Applications of Techebyshew's Inequality, Murray Silver

Student's Note: King's Z-Method and Compound Statuses: An Algebraic Approach, Joseph L. Tupper, III

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**Students' Society**

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programme of discussions and lectures was given during the run-up period to the exams. Subjects ranged from Approximate Summation and Force of Mortality to Life Assurance Bookkeeping and Indian Railway Securities. Many gatherings were led by men who themselves had yet to qualify.

**Vigour and Diligence**

These programmes, interrupted only during the two World Wars, have continued with unabated vigour, though

their focus has shifted from needs of the exam-writing student to those of the younger qualified actuary. That turning point came when the Actuarial Tuition Service began in 1937; it was the fulfilment of the Students' Society's original mission, and the moment when it began to evolve into a postgraduate body. The path to the Tuition Service had been well laid; anyone who follows its history in Frederick A. A. Menzler's "The First Fifty Years" will appreciate the diligent and painstaking labours put in by Society members.

Of particular note is the "Consolidation of Reading" series, on essential actuarial matters such as Valuation and Surplus, Life Assurance Premiums and Extra Risks, texts brought out during the 1930's. Their authors were men such as J. H. Gunlake and C. F. Wood, both later Presidents of the Institute; their works indeed were text-books in all but name; prejudice against permitting students such a luxury persisted even through those days.

**L'Episode Seal**

After the Second war ended came the most heroic episode of the Society's history. Hilary Latham Seal, who had been an Admiralty statistician, became aware of our profession's considerable ignorance of the power of modern statistical techniques. Taking over the Society Journal (JSS) in 1946 as Editor, he forthwith "fraudulently converted the sum of £500 entrusted to him, by using it to edit and publish a highly abstruse mathematical periodical of no interest or value to members of the Society"; so reads the indictment against him in a famous trial at the Prudential's Conference Hall in December 1947 before Mr. 'Justice' Phillips, F.I.A.

Seal was duly convicted of the 'crime', but his only punishment was to have to serve two more sessions as Journal Editor. He proved himself totally unrepentant, continuing to publish high-powered statistical papers unintelligible to most of the readership. Nevertheless, he and his colleagues performed a valuable service to the profession, forcing it to accept the rightful place of statistics in actuarial work, a subject much neglected since the later years of the nineteenth century.

In case prospective JSS readers might

be discouraged by this, let it be said that since Seal's time its content has reverted to a balanced mix of special and general interest actuarial papers. The Alden Press, Osney Mead, Oxford, maintains a subscribers' list on behalf of the Students' Society; readers of *The Actuary* are cordially invited to join that list by direct application to Alden Press. The current volume of JSS, No. 25, to be published soon, contains a paper about advanced simulation methods, intriguingly entitled "Should Actuaries Be Random?", which qualifies for Mr. Hilary Latham's Seal of Approval.

*Ed. Note: An amendment in 1966 to the Students' Society rules permits a Society of Actuaries member to join the Students' Society. For information about this agreeable prospect, write to E. J. Moorhead at this newsletter's masthead.*

**Actuaries in Hong Kong**

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erance pay, and there are minor benefits for residents who are disabled, over age 70, or on very low incomes.

**The Actuarial Association of Hong Kong**

Founded in 1967 on the initiative of the two actuaries then resident, their associates and certain people in the Government Statistics Department, the Actuarial Association of Hong Kong started with 12 members, since when it has grown five-fold. In 1981 the Association held five meetings with papers or discussions on such subjects as Reinsurance, Actuarial Education and Evaluating Investment Performance.

The Association's membership includes about 16 Associates and 25 Student Members of the Institute or Society. Most students are taking the Society examinations, some preparing for exams through actuarial courses at the University of Hong Kong.

Hong Kong, like other Far East countries except Japan, is still unsophisticated in life insurance and employee benefits; nevertheless, rapid economic development in this part of the world seems highly likely to lead to expanding use of actuarial skills and influence. □