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# The Newsletter of the Society of Actuaries

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#### **REORGANIZATION REVISITED?**

Ten individual actuaries made an important and interesting presentation before the March meeting of the Council of Presidents. Their memorandum, entitled "Greater Unification of the Profession in the United States", suggests that the unification efforts of the mid-1970's be revived. These ten propose as a vehicle for looking into this matter a 12-member Task Force, made up of two Board-level individuals appointed by each of the six North American actuarial organizations, with the COP appointing one of the 12 as Task Force Chairperson, and becoming e body to which the Task Force reports.

The ringleaders in this new effort are Allan Affleck, currently a Vice-President of the Society and a member of the Academy Board, and Harold Ingraham, the current Society President. The other eight are Bob Astley, Norm Crowder, John Fibiger, Ardian Gill, Curtis Hamilton, David Hartman, Jim MacGinnitie, and Jack Turnquist, all of whom are or have been leaders in some segment of the profession. The memorandum includes an important proviso: "While some of us occupy formal positions within the leadership of

(Continued on page 6)

#### **Special Supplement Enclosed**

Enclosed with this issue of *The Actuary* is a Special Supplement. It is a report from the Committee on Planning on the highlights of results of the *Actuarial Profile Survey*. The supplement also includes commentaries by several members of the Committee on Planning and by a distinguished observer not involved with formal Society governance.

#### **BOOK REVIEW**

Dick London, *Graduation: The Revision of Estimates*, pp. 183, published by ACTEX Publications, Abington, CT, 1985.

Reviewed by Robert M. Beuerlein and William B. Frye

London's Graduation: The Revision of Estimates, supersedes the graduation monograph of Morton D. Miller and T.N.E. Greville's Study Note on the Society of Actuaries' syllabus. For those whose only exposure to graduation of data came from Miller and the Study Notes, there is much in Mr. London's book which is familiar. There are also several new topics and different presentations of old topics. The text covers graduation using movingweighted-average formulas, Whittaker's method, the Bayesian process, parametric functions, and twodimensional techniques. Additionally, statistical considerations and smoothjunction interpolation are covered.

The most significant change from prior texts is the emphasis on the Bayesian process in graduation. Bayesian graduation involves using a multivariate version of Bayes' Theorem for conditional probabilities and requires a formal expression of "prior opinion" regarding the "true values" being estimated. The prior opinion takes the form of a probability distribution for the true values. Whittaker's method is shown to be a formal application of Bayesian statistics to graduation. The Kimeldorf-Jones method is also examined in detail.

While Bayesian graduation has not yet achieved great use in practice, its inclusion in the text offers an interesting addition to the traditional graduation

(Continued on page 5)

### NON-FORFEITURE COMMITTEE IS FORMED

The Unruh Committee report of 1975 was a comprehensive review of the actuarial principles and practical problems associated with non-forfeiture requirements. That Committee had been formed in recognition of the fact that more than 30 years had elapsed since the last such review.

May, 1987

In an interesting example of the quickening pace of change, the need for another comprehensive review has arisen just 12 years later. Many of the principles underlying the current non-forfeiture legislation are difficult to adapt to the wide range of newer products. There is a need for more consistency in the application of non-forfeiture principles to newer products, and the current business and economic scene is quite different than when the Unruh Committee did its work.

The NAIC Life and Health Actuarial Task Force and its Standing Technical Advisory Committee have asked the Society to form a new committee to review the underlying principles elicited by the Unruh Committee, and to consider the appropriate concepts of equity and solvency in light of current and anticipated conditions.

Such a Committee has now been formed, with the target date (for their report) 1988. The members of the new Committee on Non-Forfeiture Principles are:

Walter N. Miller, Chairman Douglas C. Doll, Vice Chairman Gregory J. Carney Shane A. Chalke Arnold A. Dicke Harold Leff Michael E. Mateja Daniel J. McCarthy Robert E. Schneider William T. Tozer

Mav. 1987

THE ACTUARY

Page Five

#### Book Review: Social Security

#### (Continued from page 4)

Part Five's three papers are concerned with Social Security programs in other countries. In the first paper, William Yoffee shows the impact of Social Security standards as set forth in International Labor Conventions on developed and developing nations. Vladimir Rys reflects on past, present, and future developments in Social Security as seen by a sociologist. Giovanni Tamburi writes about future cost patterns as viewed by an actuary.

Biographic and professional data, as well as selected publications of Robert J. Myers, are contained in an appendix. It is a real service to scholars and friends for this to appear.

An addendum paper, "Components of Trends in Social Security Costs," by Francisco R. Bayo, Milton P. Glanz, and C.L. Trowbridge, expands and complements the sixth paper with empirical work. This paper also appears in The Transactions of the Society of Actuaries, Vol. 38, 1986.

The co-editors, Yung-Ping Chen and George Rohrlich, prepared a lengthy Introduction to the Proceedings, and their "guide through the 27 chapters" was very helpful in the preparation of this review.

This has turned out to be a long review. However, I found the book to be fascinating reading and feel that it should be beneficial to all actuaries. It contains an absorbing description of the genesis of the Social Security program, insiders' thoughts on the administration of the program in recent years, and a description of how Presidential commissions on Social Security are appointed, their tasks, their accomplishments, and their concerns for the future. The book captures the intense public debate about the long-term role of Social Security at a point in time when public confidence in its future was at its lowest point. The restoration of that confidence is occurring, partially because of the 1983 Amendments which were helped greatly by the long experience, expertise, and service of Bob Myers as Executive Director, National Commission on Social Security Reform.

As the Introduction says (p. xii),

#### **Book Review: Graduation**

(Continued from page 1)

techniques, and brings to mind the fact that graduation of data is not a static field.

From an educational viewpoint, the text admirably presents material and reinforces it in the exercises at the end of each chapter. Many of the exercises are derivations of the theory presented in the text and are important to the understanding of the material. At times the text becomes a bit "chatty" and the consistency of notation fails. Overall, the text covers an amount of material appropriate for a one semester course and the student should be able to follow the material as long as he/she takes the time to work through the exercises. Though the text does not provide an exhaustive discussion of the subject, an extensive bibliography is provided to assist in an in-depth study of a particular topic.

From a practical viewpoint, some of the graduation methods are highly computer oriented and lend themselves well to actual situations encountered by a practicing actuary. For example, while the calculations involved in a twodimensional graduation or a regression method are extremely onerous when done manually, the computer greatly simplifies the calculations and allows the theory to be applied. In the final chapter of the text, each method of graduation is analyzed and critiqued. This chapter is very important for the practitioner.

Overall, the text is needed because of the computer revolution and the extensive amount of research that has taken place in this field since the publication of prior texts. The text presents a modernized view of the subject of graduation over that contained in prior texts.

these proceedings "express our and all the conference participants' love, respect and admiration for Bob and for what he has wrought in this half century of zealous and sustained effort on behalf of Social Security in this country and abroad." This reviewer would agree completely in that expression, and is thankful that these proceedings are available.

#### UNIVERSITY OF TEXAS ACTUARIAL STUDENT REUNION

Over the last 30 years some 30 students have passed through the ac tuarial science program at the Universi ty of Texas. The first-ever reunion o UT Actuarial Science students will bheld in Austin on the weekend of Jun-5-6, immediately following the spring meeting of the Actuaries' Club of the Southwest.

After World War II, Dr. Ralph Land of the UT Math Department began the teaching of actuarial science courses but it was not until 1958 that a forma degree program in Actuarial Science was established. Byron Cosby was its first professor.

Since 1958 the Texas Life Convention and its successor, the Texas Life Insurance Association, have supported the program financially. The actuarial consulting firms of Texas have also provided financial support, while the Actuaries' Club of the Southwest has supported students through a scholarship program.

The UT Actuarial Science Class of 1977 is organizing this "weightaverage" ten-year reunion, but all past UT actuarial students and their families and friends are invited. Based upon an earlier survey-of-interest, the expected attendance is more than 100.

#### ACTEX COMPETITION RESULT

The results of the grant competition sponsored by ACTEX Publications (November), to encourage the writing of a comprehensive textbook on the theory and practice of determining the financial values associated with individual life insurance and annuity products, are these:

The winning proposal was that of Professor R. Neil Vance, University of Pennsylvania. The first runner-up was Professor Frank G. Reynolds, University of Waterloo.

The Board of Editors of ACTEX Publications was assisted in the judging process by a panel of five distinguished actuaries: Derek Eckersley, James C. Hickman, Robert H. Hoskins, Barbara J. Lautzenheiser, and E.J. Moorhead.

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