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A FUTURE EDUCATION METHODS WHITE PAPER

A Future Education Methods (FEM) White Paper was mailed to members and students in early March. This important document does for the second stage of the FES/FEM development what the Flexible Education System White Paper, reported upon in the May 1986 issue of this newsletter, did for the first.

The FEM White Paper is a set of proposals, carefully worked out by the Society's Education and Examination (E&E) Committees, which has been reviewed by the Board of Governors and approved for exposure to the membership. There are proposals with respect to five different Future Education Methods, and each proposal stands or falls on its own.

The first eight pages are largely background, expressing the rationale behind the FEM development, indicating the benefits anticipated, and summarizing the concerns expressed. The specific proposals are found in pages 9 through 21, and are organized under five headings:

- College Courses
- Intensive Seminars at the ASA level
- Examinations of Other Organizations
- Research Papers
- Fellowship Admission Course

Pages 22-24 are presented as Concerns Revisited, indicating how the concerns previously indicated have been addressed.

An important attachment is a six-page Survey of Your Opinions. The Board asks members and students to complete and return this survey to the

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DISCUSSIONS OF REPORTS ARTICLES

Sam Gutterman,
Experience Studies Committee
Chairman

In order to encourage the publication of additional actuarial research on the experience of insurance and related products, discussions of the articles published in the REPORTS will be allowed (and indeed are desired) by the various Experience Committees of the Society. Discussions will be published in the REPORTS. Such discussions may include, but will not be limited to, such items as the implications of results, additional data analysis, additional data available to the discussant, or other items of related interest.

Availability of preprints of the REPORTS articles will be announced via notices in *The Actuary*. The date any discussion is due will be indicated in the notice. A written discussion should be sent to Mark Doherty, Director of Research, at the Society's Itasca office. □

NOTICE TO CANDIDATES WRITING FELLOWSHIP EXAMS IN '87 OR '88

The Fellowship examinations to be given in May 1988 will follow the current Part (6-10) structure. Reorganization of the Fellowship examinations into a Flexible Education System (FES) structure will be in place no earlier than the November 1988 exam administration.

A decision as to the timing for the implementation of FES for the Fellowship examinations will be made in June 1987. Candidates will be notified of the scheduled implementation shortly thereafter. □

VALUATION PRINCIPLES: TODAY'S STATUS, TOMORROW'S HOPES

By Robert D. Shapiro

In October 1984, the Committee on Life Insurance Company Valuation Principles (COLICVP) was formed by the Society of Actuaries Board of Governors. The mission of COLICVP was twofold:

- to develop life insurance company valuation principles for the actuarial profession, and
- to define practical research and continuing education in the valuation area.

Several related events spurred the Society Board to form COLICVP. The 1985 Report of the Joint Committee on the Role of the Valuation Actuary in the United States included recommendations on the role of the valuation actuary and on valuation principles. Also, the American Academy of Actuaries' Committee on Life Insurance Financial Reporting prepared a draft of proposed standards for valuation actuaries. The future valuation environment envisioned in these committee activities accentuated the need for articulated valuation principles, as well as additional research and continuing education in the valuation area.

COLICVP's First Two Years

COLICVP's primary activity during its first two years was to develop and refine life insurance valuation principles. The Committee encountered a myriad of difficult issues that needed to be addressed before the principles could be refined. For example, the line between "principles" and "standards" was blurry and required constant Com-

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

Actuarial Giants

The profession has never felt the need for an actuarial "Hall of Fame". We doubt that it should or will. Formal recognition of the "giants" of our profession, however accomplished, serves no worthwhile purpose. If actuaries were recognition-oriented (and we claim they are less so than most), they should have become actors, politicians — or life insurance agents.

Even so, there are occasions when special recognition is appropriate. The deaths of two eminent actuaries, within a period of two days in early January, remind us that there are giants in any profession. Surely Reinhard A. Hohaus and James E. Hoskins are two of ours.

The careers of Hohaus and Hoskins have much in common. Both were born in the late 19th century, became Fellows in the early 20's, devoted their working years to service with a single major life company, retired around 1960, and lived into their 90's. More important, both were noted for their contributions to actuarial literature, and both won prizes for early-career papers. Hohaus became president of the American Institute of Actuaries (1939-40) and Hoskins of the Society of Actuaries (1959-60).

Reinie Hohaus was associated throughout his career with group insurance, social insurance, and pension plans, all relatively new in the much simpler 1930's. He was an active participant in the formation of U.S. Social Security, testifying before the Social Security Advisory Council of the late 30's, and serving on two such Councils in the 40's. His classic RAI paper, "Equity, Adequacy, and Related Factors in Old-Age Security" (1938), emphasized social adequacy as opposed to individual equity, and had substantial impact on the important 1939 Social Security amendments, the first to bring survivors and dependents into beneficiary status.

James Hoskins devoted most of his actuarial effort to individual life insurance. Two of his TASA papers — "New Method for Computing Non-par Premiums" (1929) and "Asset Shares and Their Relations to Non-Forfeiture Values" (1939) — were required reading for generations of actuarial students. He was also interested in aviation mortality, reporting to the Society on the studies conducted by his Aviation Committee. To younger Society members he may be best known as the senior member of the Society's only three-generation family, the father of one actuarial Hoskins and the grandfather of another.

It is interesting to note, though today not that important, that Hohaus was very active in the affairs of the more western and smaller company oriented American Institute of Actuaries, while Hoskins seems to have chosen to publish for the eastern based Actuarial Society of America, until the merger of these organizations in 1949.

There are, of course, other actuarial greats, some still living, others passed on. Those interested in such matters will have their own ideas as to who should be included. For all that, *The Actuary* here salutes Reinie Hohaus and Jim Hoskins as full-fledged *actuarial giants*. Their obituaries, to be written by those who knew them best and to appear in the *Transactions*, will surely bear us out.

C.L.T.

MATH ODDITIES

This month's ODDITY is the six digit integer 142857. This number (hereinafter referred to as N) is "odd", not only in the usual sense, but because the multiplication of N by any positive integer produces seemingly inexplicable results. Martin Snow, who submitted this ODDITY, does not tell us how he became aware of these interesting characteristics, but he points out the following:

$$N = 142857$$

$$2N = 285714$$

$$3N = 428571$$

$$4N = 571428$$

$$5N = 714285$$

$$6N = 857142$$

The first 6 multiples of N have the same 6 digits, and in exactly the same (circular) order! The only differences are in the starting points!

Higher multiples of N are equally interesting, though somewhat more complex. Examine this series:

$$N = 0142857$$

$$8N = 1142856$$

$$15N = 2142855$$

$$22N = 3142854$$

$$29N = 4142853$$

$$36N = 5142852$$

$$43N = 6142851$$

Evidently each addition of another 7N adds 1 in the first digit and subtracts 1 from the last. Exactly the same principle governs the series 2N, 9N, 16N,, or any other progressing in 7N steps.

That part of the ODDITY demonstrated immediately above is readily explainable. Perhaps readers have already noted that 7N (and its multiples) are not in the same pattern. $7N = 999999 = 1000000 - 1$. Each addition of 7N does indeed add 1000000 and subtract 1, no matter where one begins.

The original mystery remains.

Why do the first six multiples of N display the same six digits, and in the same circular order?

Is this surprising result somehow related to the fact that the decimal representing the fraction $1/7$ is .142857142857142857....?

Does any other number have similar characteristics? \square