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AN ETYMOLOGICAL EYE-OPENER

MAUREEN FANT'S "actuarius" essay, quoted in our June issue, has spawned a letter from scholar Robert G. Espie that reflective readers will readily recognize as of major significance.

The psychological impact of Mr. Espie's discovery upon the self-perception of actuaries seems sure to be profound. It appears that, to live up to our heritage, we must abandon our allegiance to the advice by Aesop that is perhaps the item of guidance that actuaries cherish most deeply. Mr. Espie's letter reads:

> The many actuaries who have read all LXXI Chapters of Edward Gibbon's *The History of the Decline and Fall of the Roman Empire* appear to have little noted, nor long remembered, the reference in Footnote 48 of Chapter XI. One Victorinus is described: "He ravished the wife of Attitianus, an actuary, or army agent." (The word "actuary" is in italics).

> Gibbon does not state, nor even imply, that the existence of actuaries in the Roman army was the prime cause of the Decline and Fall.

> The word clearly comes from the root "ago, agere" implying swiftness; hence the word's use to describe the Roman equivalent of today's court reporter.

> My Latin dictionary gives for "actuarius" the meanings: swift, easily moved. Admittedly this latter characteristic of modern actuaries is better known to ourselves than to our underwriting and agency colleagues.

> An interesting speculation is that the Romans may have used the term "canis actuarius" to refer to a hound dog.

> *Robert G. Espie*

As if Mr. Espie's Latin dictionary did not give us trouble enough, the Editor's American Heritage Dictionary of the English Language gives among the derivatives of *agere* the words: agent, agile, agitate, ambiguous, fustigate, intransigent, prodigal and retroactive. The derivatives agony, demagogue and strategem also are said to come from the Greek cousin of agere, *agein.*

Senior actuaries will be wise if we continue to be our normal selves just as if this discovery had not burst upon us. Appropriate change in the Society syllabus and in the hallowed procedure for determining which examination candidates are to be judged to have passed, can be counted upon to produce, slowly but surely, future generations of actuaries who will emulate the hare rather than the much overpraised tortoise.

E.J.M.

SLIGHTLY PERFECT
by Andrew C. Webster

"Writing from Hartford was George Malcolm-Smith, a former newspaperman who covered jazz and wrote a column called 'It Happens In Hartford.' Malcolm-Smith started one of his articles with a lead that must have sent many readers scurrying for a pencil.

"Take the number 80," it said. "Subtract your present age. Multiply the remainder by 7. Divide the result by 10. The figure thus obtained is the approximate number of years you have left to live, according to the American Expectation (sic!) Table of Mortality." (see below)

"Malcolm-Smith went on to point out that 'those ingenious fellows called actuaries were responsible for working out that neat little puzzle,' and he proceeded to provide a few observations about the actuarial type. 'He is nearly always a college graduate (B.S. degree) and a member of the University Club. A Phi Beta Kappa key rests on his slight paunch. . . . He walks to and from the office and knows precisely how many steps it takes. Tennis, rarely golf, is his game and he plays it with a grim, mathematical precision. He is a Republican and eyes the Social Security program with professional dubiety. He is sometimes seen in public places where he sticks to the proper Scotch and soda and does a sort of sedate schottische'."

Mr. William R. Williamson, Jr. sent us the above excerpt from the April 1979 issue of the monthly magazine *Connecticut.* George Malcolm-Smith, a colleague and friend of James E. Hoskins, was a public relations man with the Travelers (now retired). He wrote a play about an actuary, the story of which Jim Hoskins kindly gave us, to wit:

"Some years ago there was an article in a business magazine—*Fortune,* I think—in which actuaries were prominently mentioned. Shortly thereafter Malcolm-Smith was in a small gathering in which one of those present was Heywood Broun. Broun remarked that he was fascinated by the unusual creatures depicted in the article, and that someone

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Slightly Perfect

ought to write a book about them. Malcolm-Smith took up the challenge and went to work on such a book. He and I had several conferences in his quest for background, although I don't recall that I contributed anything to the story plot that eventually evolved. He gave the book the name *Slightly Perfect*. When, in the 1940's, it was made into a musical comedy and a movie, the name was changed to *Are You With It?* This I understand to be an expression used by traveling carnival people to distinguish a fellow member from an outsider. (The theme of the plot was that a young actuary, at the Associate level, in chagrin at having made an arithmetical error, quit his job and joined a carnival).

"Quite naturally the book was dedicated to Heywood Broun, but in acknowledgement of such help as he thought I had given, George named his hero Haskins."

James E. Hoskins

Jim conceded that at least one item in the description fitted him—he used to walk to and from work, 4 miles each way (but not counting the steps). The rest was presumably a composite picture of actuaries as Mr. Malcolm-Smith observed them. We are indebted to Mr. Malcolm-Smith for permission to reproduce his wry definition. □

Ed. Note: A modern version of the life-expectancy rule is: Subtract the present age from 77 (men) or 84 (women), and reduce the answer by 10%. This rule gives accurate values for $\overset{\circ}{e}_x$ for United States 1976 population mortality from age 0 up to middle 60's.

BOOK REVIEW

Problem Solving in Life Contingencies, Brian Bambrough, F.S.A., 190 pages (approx.), 1979. The book may be ordered directly from the author at 206 Cedar Hollow, Rocky Hill, CT 06067. The price is $12.50 U.S. or $14.50 Canadian.

by Mitchell R. Katcher

Efficient use of time is optimal strategy for exam takers. For the students taking the new Parts 4B and 5A, this can best be achieved by plenty of problem solving, reducing the excessive reliance on memorizing.

For the student who finds that Jordan's text and the *Northeastern University Problem Manual in Life Contingencies* do not provide enough problems, or that a new approach or supplemental material will enhance understanding, Brian Bambrough has written *Problem Solving in Life Contingencies*. As the author, an experienced teacher, writes in the preface, "This book does not seek to teach the subject matter . . . Rather, its purpose is to help a student who already knows the material to solve multiple choice problems."

Principles underlying broad classes of problems are identified, and specific step-by-step methods for solution are presented. For example, all annuity and insurance problems are broken down into three elements: the benefit, the probability that it will be paid, and the compound interest factor. When this analysis is applied to $\bar{a}_x$, it can be seen that the benefit is dt, the probability it will be paid is $_tp_x$, and the compound interest factor is v^t. Hence, the value of that part of the benefit paid between t and $t+dt$ is $v^t \, _tp_x dt$. Integrating this expression gives the desired value.

The reader is given an alternate approach for *solving stationary population problems* as follows: at any instant in a stationary population there are $l_y dy$ people of exact age (y), who can be treated as a survivorship group. After a suitable diagram is drawn, the integrals can be set up, limits derived, and the solution quickly obtained. Though lacking the Veit method's elegance, this process can be applied easily and to a wider range of problems.

The highlight of this book is its section of tests. Challenging multiple choice

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R.E.H

problems are given, along with a basis upon which to judge one's performance. Taken under exam conditions, these tests can sharpen one's competitive edge. The book contains also a description of a useful generalized technique applicable to Jordan's Chapter 16 (A Generalized Model), and helpful treatments of multiple and secondary decrement tables.

Since the author asserts that 90% of the student's time should be spent doing problems, it is disappointing that he has not given more problems to be solved.

An attempt is made to reduce to a mechanical process problems of the type, "Find the probability that (x) will die before (y) and not survive (z) by t years or more." This process, requiring that a diagram be drawn and that integrals be judiciously manipulated into easily recognizable forms, invites confusion rather than clarity.

The author stresses the "elimination" method, which purports to obtain an answer to a multiple choice problem without solving the problem itself. Although a student *may* be able to increase his score slightly by this approach, it has its drawbacks . . . it may be time-consuming and yet be less accurate than direct problem solving.

It must be realized that Bambrough's book is meant to supplement Jordan, not to replace it. Used in this way, *Problem Solving in Life Contingencies* can be a valuable tool for the students taking the new parts 4B and 5A. □