



SOCIETY OF ACTUARIES

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BOOK ON BABBAGE

Ed. Note: We are indebted to Patricia L. Shapiro, F.S.A. for lending us her copy of a biography of Charles Babbage (1791-1871), much of whose life was devoted to inventing and constructing machines to free actuaries and other sufferers from the drudgery of repetitive arithmetic. Maboth Moseley's Inscrutable Genius: The Life of Charles Babbage (1964) was published in the U.S.A. in 1970 by Henry Regnery, Chicago.

It is written that, while a Cambridge undergraduate, Babbage, with a book of logarithms open before him, said to a friend, "I am thinking that all these tables might be calculated by machinery". He set this idea aside for many years, during which time he was asked to organize and manage a life insurance company, and did get as far as to construct a mortality table and to compose a small treatise on the nature of life insurance.

At about age 30 he visualized a machine that would "compute tables by differences", and shortly afterwards succeeded in building one that would produce any tables whose second differences were constant; its first exercise was calculating values of $(x^2 + x + 41)$ too rapidly for its results to be copied down.

It being evident that a general-purpose "difference engine" would be a formidable undertaking, Babbage turned to the British Government for financing. Arousing the personal enthusiasm of even the hero of Waterloo, the Duke of Wellington, Babbage got the backing he sought, which turned out to be the beginning of his troubles because the practical engineering difficulties of producing the instrument proved immensely greater than he or anybody else had foreseen.

Babbage was eventually to gain recognition and a measure of material benefit during his lifetime devoted, to the point of destroying his health, to the difference engine and other more advanced calculating monsters.

This is a fascinating book, encouraging to actuaries who themselves experience frustration in bringing exciting ideas to fruition. Though why the word "inscrutable" is in the title escapes this reader; the inventor surely displayed astonishing patience and consideration for others throughout his years of trial. Photographs of Babbage's machines are displayed—there is also a memorable re-

mark by his mother when her son was in understandable depths of despair:

"My dear son, you have advanced far in the accomplishment of a great object, which is worthy of your ambition. You are capable of completing it. My advice is, pursue it, even if it should oblige you to live on bread and cheese."

Babbage might have been, perhaps indeed can be claimed to have been, an actuary. And so might Augusta Ada, Countess of Lovelace, who thoroughly understood what he was doing, even down to the details, and rendered essential support and inspiration.

E.J.M.

THE E. & E. CORNER

Ques.: Examination results for the November 1981 Parts 7 and 9 arrived early in January, 1982. Can we expect them to arrive about the same time in 1983?

Ans.: The 1981 Fellowship exam results arrived early because Part 7 (EA-2) was an all multiple-choice exam, and Part 9 had only 62 candidates. In 1982, essays were added to Part 7, and the number of candidates sitting for Part 9 increased greatly. It is therefore likely that Fellowship exam results will be received a little later in 1983 than they were in 1982.

Ques.: How does the Society handle questions that were not printed correctly or are otherwise unsatisfactory?

Ans.: If there is more than one correct answer, credit is given for any correct response. If a question has no correct answer, the question is eliminated from grading.

In one recent Part 7 exam, the order of two questions was switched—candidates near the pass mark had their question books reviewed, and were graded on the work that was shown. In a recent essay exam, an annuity value needed to answer the question was left off—candidates who recognized the problem were given full credit, as were those who completed the question in terms of commutation functions.

We give as much credit as possible, particularly for candidates close to the pass mark. If a problem is significant enough to change a failing to a passing grade, the candidate is given the benefit of the doubt. □

HOW THE COMMITTEE ON DISCIPLINE DOES ITS WORK

by John M. Bragg

Since the Committee On Discipline was formed in 1976, eleven disciplinary actions have been taken by the Society. These arose out of 28 complaint cases logged by the Committee, three of which are still outstanding. This article's purpose is to throw light on these facts, and to clear up some of the mystery that surrounds the Committee's work.

An essential characteristic of any true profession is possession of a code of ethics, and of the means for enforcing it. The Society does possess such a code, i.e., the Guides to Professional Conduct and the Opinions as to Professional Conduct. It also possesses the means of enforcing its code of ethics; enforcement is the work of this Committee. Such instruments are essential for any profession; furthermore, its members and the public at large need to be aware that a code of ethics exists and is enforced.

The Committee on Discipline consists of a chairman (who must be a Society past-president) and at least 14 other members—at present there are 20—distributed by geography and specialty. Its past chairmen have been Edwin B. Lancaster, Charles L. Trowbridge, and John M. Bragg; E. Paul Barnhart has become chairman in the fall of 1982. The Committee operates under the detailed provisions to be found in Article VII of the Society's Constitution, supplemented by its own written guidelines.

The Committee considers complaint cases which are submitted in writing, but it may also generate cases on its own initiative; both forms of initiation have occurred. A two-thirds vote by the entire Committee is needed to impose any of the six constitutional sanctions: warning, admonishment, private reprimand, public reprimand, suspension, and expulsion. In the case of any of the last three of these, the Committee's action must be ratified by the Board of Governors which has power to downgrade a recommended sanction, but not to upgrade it. A member against whom a charge which might result in reprimand, suspension, or expulsion has been made, has the right to appear before the Committee and the Board—in person or by counsel. The Committee works closely

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