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BOOK REVIEW

Allan Chase, *Biological Imperatives*, Holt, Rinehard and Winston, New York, 1971, pp. 399, \$8.95.

by Jerome M. Stein

Biologist Allan Chase grinds a few axes in this analysis of the present and future conditions of our health and health care. Writing in a style that should be understandable to laymen, he argues that the nation's health and longevity have been jeopardized by the motorized economy, insensitive industry, and the demands of the war in Vietnam. The insurance industry is also charged with placing profits above people.

He begins with the assertion that "our physical survival now demands the existence of a national system or integrated group of systems of comprehensive health care—starting with environmental health controls—that meets the demands of our present and projected biological imperatives." Then, after describing the four stages of health care as prevention, early detection and prompt treatment, acute care, and postacute (convalescent rehabilitative, and terminal) care, he discusses the problems of each.

Of particular insurance interest is his concern over possible development of automated health screening as a broad prevention technique. He claims that the margin of error of each test in multiple screens is such that, on a 16-test screen, the odds are better than even for at least one "false positive." He also fears that an industry based on such screening could use up more dollars and people than would be justified and would inundate us with data beyond our capabilities of distinguishing the medically relevant.

His discussion of biological and pharmacological research includes a history of the National Institutes of Health which, he claims, have supported three-

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CAREER CONSULTATION

by Wendell Milliman

Editor's Note: Mr. Milliman is chairman of the Society's Special Committee on Career Consultation.

This Committee was established in 1971 as a Special Committee with the charge to examine the feasibility and desirability of the Society's establishing a career consultation service, or placement service, to aid actuaries in obtaining the type of work which may be best suited to their potential capabilities. The establishment of this Committee was influenced by the fact that some services of this general character are provided by some other actuarial organizations, notably the Institute of Actuaries. Further several members had urged that the Society consider comparable action.

The Committee has sought both factual information and opinions of members in a variety of ways. Members of the Committee have talked with a number of employment agencies and executive search agencies in order to get a better understanding of how these organizations operate. A questionnaire was sent to those members where a change in listing in the 1973 Yearbook indicated the possibility of a change in employers. Special sessions were held at each of the recent Spring meetings at which the background and activities of this Committee were summarized and members were given an opportunity to ask questions and to air their viewpoints. (At this time any member, whether or not he spoke up at one of these sessions, who would like to offer information or state an opinion relative to the charge to this Committee is invited to do so by writing to the chairman.)

Some of the information developed from the survey of 1972 job changers may be of general interest. 190 of the

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PENSIONS FOR PUBLIC EMPLOYEES

Thomas P. Bleakney, F.S.A., *Retirement Systems for Public Employees*, published for the Pension Research Council, Wharton School of the University of Pennsylvania by Richard D. Irwin, Inc., Homewood, Ill., and Irwin-Dorsey, Ltd., Georgetown, Ont., Nov. 1972, pp xvii, 205, \$6.75.

by J. Darrison Sillesky

This book assumes considerable importance in the literature dealing with Pension subjects because it speaks authoritatively about a major segment of the Pension field concerning which very little has been written. The book gives the reader a satisfied feeling that the author's conclusions are based upon analysis of a large number of public employee retirement systems.

Public employee retirement systems are an important part of the total economic security structure of the nation. As noted in the Foreword, "Mr. Bleakney examined with a critical eye the environment in which public employee retirement systems operate and called attention to the prevailing concepts, practices, and influences that will have a bearing on how these plans will fulfill their assigned mission and at what cost to the taxpayers." The reader is made aware of some major deficiencies in the design and operation of such systems, as an integral part of the author's discussion of generally accepted characteristics of good design and operation. Further says the Foreword, "the book is written at a level and with a focus designed to further the understanding of public employee retirement systems by legislators and others responsible for their proper functioning."

The book does not require that the reader have a prior knowledge of Pension matters, and so the author has to develop all the basic concepts of plan design, actuarial costs, funding, and the importance of investment quality and

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Through their reports they consequently promote a greater understanding of the value, and inherent limitations, of projections based on these assumptions and thereby help to bring about a greater understanding of more complex social and economic structures. In this way the public's interest, and the interests of the institutions served by actuarial science, are strengthened by improved understanding of how best to determine future actions that can be affected by changing future conditions.

Examples of such assumptions for a pension projection study would be: changes (1) in the rates of retirement, particularly those at the early retirement ages which can vary widely from year to year for many reasons; (2) in anticipated long-range investment earnings and asset values; (3) in salary, the scale assumption and its component parts; (4) in demographic and economic conditions; and (5) in the benefit schedules and their relationships, particularly to the new social security automatic provisions. The choice of the proper funding method, while not an assumption, also affects the determination of the optimum course of action. Similar assumptions for a system dynamics social study include changes in social values and life styles as ecological effects increasingly dictate the manner of living.

Applying Professor Whitehead's generalized views to the subject matter of this article, we conclude that the design of an actuarial model for a pension fund projection involves the weighing together of the fact, the theory, the alternative, the goal (ideal), and a comparison of the possibilities with the actualities. The results are insight and foresight for guidance in achieving the purpose for which the model is constructed. For the pension actuary that purpose is to maintain an actuarially sound pension fund under changing future conditions in a rational and just manner.

Since actuarial science is grounded in traditional ways of thought emphasized by Plato and validated by experience, it can make increasingly valuable contributions to society by helping to elucidate the manner in which the interweaving of mathematical relationships in a harmonious composition of things can contribute to the attainment of desired goals. □

Deaths

James A. Campbell
Jesse Feld
Bernard Jouvin
Louis R. Menagh
Jacques M. Winters

Book Review

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fourths of all biomedical research in the United States. War-related cutbacks in funds are blamed by him for seriously depleting the training of health research MDs and PhDs.

Among the subjects that he covers are the effect on mental development of malnutrition during the first six years of life, the history of American medical education, the harmful side-effects of improperly tested drugs, and the Rat Extermination Bill of 1967.

He gives a very interesting history of drug addiction in the United States, starting with the opium used by Chinese coolies in the 1840's. He sees the problem reaching major dimensions with the addiction after the Civil War of soldiers who were medically administered opium and morphine. This was followed by the opium-based "tonics" that were sold as pain killers to ex-soldiers later in the nineteenth century.

His discussion of overpopulation includes mention of the periods of Justinian (6th century), the Black Death (14th century), and the Thirty Years War (17th century) when the western world experienced "minus zero population growth." Today, he asserts, "overpopulation is, essentially, a poverty disease."

Chase's industrial fears are expressed thus: "Biologically, the ever expanding American technology represents a far greater threat to humanity and to the population of this country itself than does the continually declining American birth rate." His quarrel with the insurance industry is somewhat puzzling, particularly in light of the dominance of large mutual companies: "Private insurance companies exist to make profits for their stockholders. They have never had in the past, nor should they ever be expected to develop in the future, the professional skills that would enable them to contribute a thing toward the . . . lowering of health care costs, the introduction of innovations in the delivery of health care, and the maintaining of the quality of health care." Their business is not health care but insurance;

INVESTMENT PERFORMANCE

Donald Harrington made available a written presentation on "Measuring Investment Performance" at the teaching session on that subject at the St. Paul meeting. An expanded version is available by writing: Mr. Donald P. Harrington, F.S.A., Assistant Actuary, American Telephone & Telegraph Company, 195 Broadway, New York, N. Y. 10007. □

Pensions

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performance as well as comment on those matters which are peculiarly of interest and importance to persons particularly interested in public systems. This places a heavy burden on so small a book and this reviewer wonders whether the average reader will fully appreciate the significance of some of the carefully phrased sentences which imply more than is stated directly.

While the book gives a good picture of what the actuary does, it fails to make a straightforward statement of the importance of a professional actuarial analysis of costs and funding to protect the interests of those who pay for the system and those who benefit from it.

In summary, the book consistently takes a calm, dispassionate, academic view of this category of pension plans that exist in a pragmatic, political, and sometimes volatile environment.

Considering the expected readership, the author does a particularly fine job of discussing the actuarial aspects and the investment aspects.

Note: A more detailed review will appear in the Transactions. □

their expertise is not biology and medicine but finance and investments."

He concludes by suggesting the following tentative goals for an ideal health care delivery system: (1) Maximum protection, via medical and social techniques, of prevention of avoidable diseases and accidents; (2) early detection; (3) sufficient acute medical and surgical care; and (4) sufficient postacute, convalescent, rehabilitative, and terminal care.

A curious blend of polemic and history, recriminations and statistics, this book confuses as it teaches. Allan Chase's anger and frustration may cause the reader to question the credibility of some of the comments and recommendations that are obviously most important to the author. □