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BOOK REVIEWS AND NOTICES*

Society of Actuaries' Textbook, *Accident and Sickness Insurance Provided Through Individual Policies*, John H. Miller, principal contributor, pp. x, 155, Society of Actuaries, Chicago, Ill., 1956.

As indicated in the preface, this book was written to meet the needs of students preparing for the final fellowship examination. Only because the subject is in the final examination, preceded by the study of most of the material in *Actuarial Studies No. 5, Disability Benefits in Life Insurance Policies* and the *Study Notes* for the Group insurance portion of the syllabus, was it feasible to condense the subject matter to the extent resulting in this very compact text for the student. Without the prerequisite material, the book would not be of as great value to "others concerned with Accident and Sickness insurance," as anticipated in the preface.

It would be an easy matter to suggest instances where further elaboration would be helpful both to the fellowship student and to the practicing actuary, but this would be at the cost of requiring the reading of a more extensive text by students already faced with the formidable array of references for the Part 8 syllabus. Under the circumstances, the eight chapters provide a very excellent summary of the basic considerations essential for a proper actuarial perspective of individual Accident and Sickness insurance.

The presentation of the first two chapters covering Introduction, Background and Description of Benefits might have been improved if the chronological order of development had been abandoned in favor of discussion of topics in order of their present-day importance. Few would expect to find the subject of annuities given first consideration in each chapter of a book on life insurance merely because of its historical precedence, but here Hospital, Surgical and Medical Care coverages have been accorded rather secondary treatment despite their present importance.

The need for preparation of a modern text on Personal Accident and Sickness insurance became apparent prior to the reinclusion of the subject of Personal Accident and Sickness in the syllabus for the 1955 examinations. It might have been better to have continued the use of the *Study Notes*, on which this text is largely based, for another two years until several very important projects currently in course of development are completed. These include the likelihood of a replacement in the near future of the Conference Modification of the Intercompany Class III Disability table, the imminent adoption of the Task Force IV recommendations for reserves on Hospital and Surgical policies, and the expected revision of the present Federal Income Tax regulations based on the 1954 Internal Revenue Code. These forthcoming changes should prove funda-

* Books and other publications noted with an asterisk (*) may be borrowed from the library of the Society of Actuaries under the rules stated in the *Year Book*.

mental and will make a revision of this text very desirable in about two years. In the course of such a revision, it would be of great advantage to combine those chapters of *Actuarial Studies No. 5* which are not outmoded, especially the mathematical expositions, with this new text, producing one comprehensive source on disability and invalidity for the student.

To some, it may be surprising that the authors chose to discuss underwriting, benefit payments and selling methods at a greater length than the calculation of premiums, omitting specific actuarial formulas in favor of a broad over-all discussion of the latter topic. However, this approach is most commendable and re-emphasizes the statement Sir Alfred Watson made more than 40 years ago, that "Actuaries now realize more than ever before that the business of Health Insurance is more of a managerial proposition than an Actuarial calculation."

Despite the need for conciseness, it would have been helpful to the student if mention and explanation had been made of several important items. For example, one of the most important of current exclusion clauses involves the exclusion or reduction of benefits for surgery for any one of several common "elective" or chronic causes within the first six months after the issue of a Hospital and Surgical Expense policy; this is covered rather obscurely on page 66. Also, some discussion of the underwriting problems involved in the rapidly growing coverage of "Blue-Collar" and outdoor occupations would have been of value. The element of sex, of major importance in underwriting the currently most widely sold coverages, merits more attention than factors relating to policies with Accident coverage only. Dividends have been given only cursory comment; the growing volume of participating policies would justify more attention. The text would have been enhanced in value, especially for non-students, by the addition of an index and a selective bibliography.

This book has laid a foundation on which to build and, in condensing the subject matter, there wisely have been eliminated some previously published concepts that rapidly are decreasing in importance or becoming outmoded by current developments. The contributors well deserve our appreciation for this excellent first edition.

EDUARD H. MINOR

* A. R. Davidson, *The History of the Faculty of Actuaries in Scotland, 1856-1956*, pp. xviii, 291, The Faculty of Actuaries, Edinburgh, 1956.

This volume, issued in connection with the Centenary of the Faculty, should (and will) be of great interest to all American and Canadian actuaries. Some thirty or forty years ago it was popularly supposed that the majority of the leading American actuaries were Scotsmen. That was very far from being the case. The founders of the Actuarial Society of America in 1889 and most of the leading actuaries of that and succeeding generations in the Western Hemisphere were Americans or Canadians. Nevertheless, the number of Scottish actuaries who came to the United States and Canada about the turn of the century, and for some time thereafter, was substantial and some of them played a not inconsiderable part in the development of the profession on this continent. In speaking

of this, Mr. Davidson remarks that "during the first twenty-five years of the Society's history there was only one fellow of the Institute resident in the United States" (*i.e.*, of English origin). The debt which the profession in America owes to Great Britain is, therefore, predominantly to Scotland and to the Faculty.

This is an excellent book. The author, himself a distinguished Fellow and Past-President of the Faculty, was eminently qualified for the task of writing it. In addition to the "capacity for taking infinite pains" (which such a work requires) and the ability to select what is important or interesting from the record of a hundred years, he has literary ability of a high quality and, incidentally, a typically Scottish sense of humor, which make the book easy and, in fact, fascinating reading.

To most American actuaries the names of the "giants" of the Faculty's early days are virtually unknown—such men as W. T. Thomson (the "Founder of the Faculty"), James Borthwick (the first "Chairman of Council"—the office of President was not created until 1887) and Edward Sang (the first Tutor and Lecturer). This unfamiliarity may be due to the fact that, in its early days, formal papers and discussions were not presented at the meetings of the Faculty and no "Proceedings" or "Transactions" were published. The *Transactions of the Faculty* began in 1901 and it is interesting to note that the first paper in the first volume was, very appropriately, one on the subject of "First Year's Risk." This paper was written by our own Henry Moir, one of the Faculty's greatest sons and one of the most honored of American actuaries.

It is rather curious that this apparently obvious function (publication of papers and discussions) was undertaken by a separate organization. This was the Actuarial Society of Edinburgh which was founded in 1859, three years after the foundation of the Faculty, and which continued in existence until 1900. The Society was, apparently, a sort of "junior Branch" of the Faculty intended, largely, to provide a forum for the younger members. That it was not entirely so is evident from the authorship and quality of many of the papers in its *Transactions*. Thus, G. F. Hardy and George King were among the authors of papers, the latter contributing one on "The Theory of Finance" which, in book form, was until a comparatively recent date the standard text on compound interest and annuities-certain for actuarial students.

Mr. Davidson is, perhaps, "going out on a limb" when he undertakes to nominate the four "all time greats" of the Faculty. His nominees are W. T. Thomson, James Meikle, T. B. Sprague and G. J. Lidstone. Thomson provided most of the initiative and driving force which led to the successful establishment of the Faculty. Meikle was, as Davidson says, the Faculty's "guiding spirit" and was the most active and prolific of the early members. Sprague and Lidstone (both, unfortunately, English rather than Scottish actuaries) would, of course, find their place in any actuarial "Hall of Fame." This reviewer regrets that Mr. Davidson did not name *five* rather than *four*, adding W. A. Robertson. That was "a name to conjure with" for a generation, not only as

that of the greatest tutor actuarial students ever had but because of his many other contributions and services to the Faculty and his unique personality.

In view of experience on this side of the Atlantic, American actuaries will be interested to learn that proposals have been made from time to time for an amalgamation of the Institute and the Faculty. Such proposals are, very clearly, *anathema* to Mr. Davidson who is evidently a strong Nationalist. In speaking of the original secession of the Scottish members from the Institute (which certainly caused some hard feelings), he says: "This was not an 'unhappy event'; it was inevitable and the soundest of common sense." The reasons which led to the union of the two American Societies were, in a word, duplication—of membership, of meetings, of nearly all normal activities. The situation in Britain is, in many respects, entirely different. No doubt, the majority of Scottish actuaries agree with Mr. Davidson's hope that the *status quo* will be maintained indefinitely.

Those who had the privilege of attending the Faculty's Centenary celebrations were impressed by the perfection of all the arrangements. This book is of the same embarrassingly high standard.

JOSEPH B. MACLEAN

B. Abel-Smith and R. M. Titmuss, *The Cost of the National Health Service in England and Wales*, pp. xx, 176, Cambridge University Press, 1956.

On April 1, 1953, the British Government appointed a committee under the chairmanship of Mr. C. W. Guillebaud to review the National Health Service with particular reference to its present and prospective cost. Soon after this committee was set up, Mr. Guillebaud asked the National Institute of Economic and Social Research to prepare a memorandum presenting an economic analysis of the costs of the National Health Service. The Institute entrusted the preparation of this memorandum to Mr. Brian Abel-Smith with Professor Richard Titmuss of the London School of Economics as consultant. This memorandum was presented to the Guillebaud committee in February 1955 and formed the basis of part of the committee's report to the government.¹ This book is substantially that memorandum with some revision and amplification.

In their book, the authors emphasize that their study is limited to showing the cost of the National Health Service in England and Wales each year between July 5, 1948 and March 31, 1954. In doing so, they consider the effect on cost of changing prices and the operation of charges paid by the public for services and they separate capital from current cost and incurred from cash cost. The authors have succeeded well in accomplishing these objectives.

The National Health Service began July 5, 1948. These two social scientists, working with the volumes of data accumulated over six years under the National Health Service, brought out the careful analysis of cost shown in this book. Nevertheless, they state that even with all this experience and data, it is difficult

¹ *Report of the Committee of Enquiry into the Cost of the National Health Service*, H.M. Stationery Office, London, November 16, 1955 (Cmd. 9663).

to make reasonably accurate projections of future cost. How brave were those persons who made cost estimates in 1946, when the National Health Service Bill was presented to Parliament! Experience has shown how absurd those estimates were. In 1946, it was estimated that the cost of the National Health Service would be £110 million for England and Wales. This was comparable to the rough figure used in the Beveridge report in 1942. Another estimate of £179 million for the first year of operation was made at the end of 1947. The net cost for the first year, 1948-49, turned out to be £242 million.

The following are the main conclusions drawn by the authors:

(1) The current annual cost of the National Health Service for England and Wales was £371 million in 1949-50. In subsequent years, it rose by roughly £15 million each year, reaching £430 million in 1953-54. This rise of £59 million in the current net cost of the service over the four years was the combined result of a larger rise of £77 million in gross cost, offset by a saving of £18 million arising from new or increased charges to beneficiaries. These charges are primarily for ophthalmic and dental services.

(2) If allowance is made for the rise in prices between 1949-50 and 1953-54, the current net cost of the Service was only £11 million greater in 1953-54 than in 1949-50. Further, if allowance is made for the nearly 2% rise in population during this period, the cost per head at constant prices was almost exactly the same in 1953-54 as in 1949-50.

(3) The National Health Service cost is divided into three areas: hospital services; executive council services—medical, surgical, dental and pharmaceutical; local authority services—child health and maternity, ambulance service, health services, home nursing, etc. In the four year period the cost of the hospital services rose by £71 million and that of the local authority services by £11 million, while the cost of the executive council services fell by £24 million. Even at 1948-49 prices, the cost of the hospital services increased by £29½ million in that period. Most of the increased hospital cost was due to an increase in the number of personnel employed by the hospital services, chiefly doctors, nurses and domestic staff.

(4) The amount of capital expenditure by the National Health Service has been relatively small throughout the five years 1948-54. The ratio of capital to current expenditure for the hospital service was only 4.1% in 1952-53 as compared with 19.6% in 1938-39. This may be compared to the corresponding percentage in the United States of 23.4% that the value of hospital construction bore to the total operating expenses of all hospitals in 1951. At the present rate of hospital construction in Great Britain, it would take over 200 years to replace the present stock of hospitals; and approximately 45% of all present hospitals were originally erected before 1891. The present rate of capital expenditure would have to be multiplied several times to replace many of the antiquated hospitals.

(5) A special tabulation of the hospital population was made from the 1951 Census. Analysis of these data indicated that the demand for hospital care is influenced more by the social situation of a person than by the age of a person.

The writers conclude that "changes in the proportions of men and women who are single, widowed, divorced or childless may represent in the future more important factors in influencing demand for medical care than any foreseeable changes in the age structure of the population as a whole."

The authors have demonstrated that, contrary to some opinions, the cost of the National Health Service in real terms has not risen significantly between 1949 and 1954. They have also quelled some of the fears, stimulated to some extent by Dr. Ffrangcon Roberts' book *The Cost of Health*, that an aging population might eventually lead to a situation in which the cost of the Service might threaten to get completely out of control. They have raised some other questions: the very small capital expenditures being made on hospitals; and the difficulties of comparing costs of medical care under the National Health Service with such costs before the Service was introduced and with a period prior to World War II.

This study is just the beginning in learning, first, the proportion of the national income applied to health services; secondly, the effect of the introduction of the National Health Service on this proportion; and finally, whether an increase in this proportion is actually improving the health of the people.

SAMUEL ECKLER

* I. Pfeffer, *Insurance and Economic Theory*, pp. xvii, 213, Richard D. Irwin, Inc., Homewood, Ill., 1956.

This book, which is a publication of the "Studies Series" of the S. S. Huebner Foundation for Insurance Education, examines the role of insurance in economic theory. It is thus a text of a considerably different nature than most of the other volumes in this series, which are descriptive and analytical studies of various fields of insurance activity. The author, who is presently Assistant Professor of Insurance at the University of California at Los Angeles, was trained as an economist and has maintained an interest in philosophy and economic theory. This work is a technical study in the field of economic theory.

In his introduction the author points out that insurance has been a comparatively neglected subject of study by economists. He analyzes several reasons for this, an important one being that insurance is a dynamic phenomenon and the development of economic theory has been concerned mainly with the idealized conditions of the static state. Only as part of dynamic economics, which is currently being given greater attention, is the economic analysis of insurance really practical. Another consideration which has hindered the economic analysis of insurance is what the author calls the "fallacy of actuarial perfection." This is the general tendency, affecting economists as well as the public, to believe that actuarial science is nearly an exact science and that the actuary under most circumstances can evaluate any insurance risk with a high degree of accuracy.

Part I of the book is concerned with the scope and limits of insurance and especially with an effort to arrive at a definition of insurance. Different ap-

proaches to a definition are analyzed, and the final conclusion is that "insurance is a device for the reduction of the uncertainty of one party, called the insured, through the transfer of particular risks to another party, called the insurer, who offers a restoration, at least in part, of economic losses suffered by the insured." The concept of insurable hazard is then analyzed, with particular attention given to the function of the actuary.

Part II, the basic portion of the work, covers the role of insurance in micro-economic theory. First the point is made that the element of time is essential for insurance to play a part in economics; and, as stated earlier, only in dynamic economics can the role of insurance be really analyzed. Attention is given to several different views of the temporal framework of the insurance function. Next are taken up the nature of expectations as viewed by different economists and the effect upon expectations of insurance as a device for reducing uncertainty and hence making for a more satisfactory economic condition. This leads to an analysis of the role of insurance in the theory of production, where it is shown that the productivity of insurance arises from its usefulness in reducing some of the uncertainties of economic activity.

The ideas of different economists as to the role of insurance in the theory of distribution are examined. Most contemporary economists recognize four factors in distribution: land, labor, capital and enterprise. The possibility of treating insurance as a fifth factor is rejected, and it is concluded that insurance, per se, cannot be assigned a role in the marginal productivity theory of distribution. Rather the insurer must be regarded as filling the functions of capitalist, laborer and entrepreneur combined.

A chapter is devoted to the role of insurance in the theory of consumer's preference, with attention given to mathematical models developed by various economists. Some of these attempts to reduce theories of consumer utility to mathematical formulas seem unsatisfactory. For instance, the Petersburg Paradox is examined without attention being given to what happens to the expectation of the coin tosser when some limitation on the total funds of the one who is to pay him is assumed. Efforts to analyze marginal utility by graphs intended to explain both insurance and gambling also produce rather absurd results. The author recognizes these difficulties and concludes that "the motives that lead people to purchase insurance are too diversified to be amenable to analysis by any simple mathematical formula."

The author does not try to develop any new economic theory of insurance, but rather he analyzes various general theories of economics which have been developed in the past, and attempts to show how insurance fits into these theories and how its role has been viewed by different economists. As a technical study in economic theory, the book is intended for the person with an interest in and some knowledge of theoretical economics. It is not easy reading, but it warrants study by actuaries with such an interest. With insurance playing an increasingly important role in the economic life of the country, this book seems likely to be the forerunner of other similar studies.

GEORGE H. DAVIS

- C. W. Churchman, R. L. Ackoff, and E. L. Arnoff, *Introduction to Operations Research*, pp. x, 645, John Wiley & Sons, Inc., New York, 1957.
- J. F. McCloskey and F. N. Trefethen, *Operations Research for Management*, pp. xxiv, 409, The Johns Hopkins Press, Baltimore, 1954.
- J. F. McCloskey and J. M. Copping, *Operations Research for Management*, Vol. 2, pp. xxxvi, 563, The Johns Hopkins Press, Baltimore, 1956.
- P. M. Morse and G. E. Kimball, *Methods of Operations Research*, pp. xiv, 158, The Technology Press of the Massachusetts Institute of Technology and John Wiley & Sons, Inc., New York, 1951.

The interest shown in operations research in the informal discussion at the Eastern Spring Meeting, reported elsewhere in this volume, brings into focus some recent publications in this area.² The most recent book, that by Churchman, Ackoff and Arnoff, is the only one published in this country for students of operations research. The book covers operations research chiefly from the prospective operations research worker's point of view, but partly from the viewpoint of the prospective customer. There are chapters on the general nature of operations research and its relation to the organization in which it is applied, others on setting up a specific problem, on constructing a mathematical model, special mathematical techniques, and finally a chapter on selection, training, and organization of an operations research group.

The chapters on special techniques include inventory models, linear programming, queueing (waiting line), replacement models, and the theory of

² The following monographs and articles are additional references to those reviewed here:

L. Lockley, "Operations Research: What It Is; How It Is Conducted; What It Offers Business," *Studies in Business Policy Number 82*, National Industrial Conference Board, New York, 1957.

"Operations Research Applied—New Uses and Extensions," *Special Report Number 17*, American Management Association, 1957.

"Operations Research—A Basic Approach," *Special Report Number 13*, American Management Association, 1956.

A. Henderson and R. Schlaifer, "Mathematical Programming: Better Information for Better Decision Making," *Harvard Business Review*, May-June, 1954.

C. Herrmann and J. Magee, "'Operations Research' for Management," *Harvard Business Review*, July-August, 1953.

M. Goland, "Management Planning Through Operations Research," *Proceedings of the 1954 Annual Conference of the Life Office Management Association*.

J. Plymen, "Operational Research," *Proceedings of the Centenary Assembly of the Institute of Actuaries*, 1950, vol. 3.

G. Shellard, "Actuaries in the Operations Research Group, U.S. Navy," *ibid.*

The following are specialized journals in the field:

Management Science, Journal of the Institute of Management Sciences.

Operations Research, Journal of the Operations Research Society of America.

Operational Research Quarterly, Journal of the Operations Research Society (Great Britain).

games. While the material covered does not include all the special techniques that have come to have some association with operations research, nor is any one technique exhaustively treated, the result is a well balanced presentation which should enable the student to learn practical application of most of the useful special techniques associated with operations research at this time. Only knowledge of elementary mathematics through calculus is assumed.

The volume by McCloskey and Trefethen is divided into three parts: general, methodology, and case histories. The general section contains a chapter on the place of operations research in a large organization. Several special techniques not in wide use prior to the end of World War II have become rather closely associated with operations research since that time because of their usefulness in connection with certain classes of problems. These include queuing theory, information theory, linear programming, game theory, and others. A chapter is presented on each of these, with a rather simple description or exposition of the technique involved. Although the information given is sufficient to convey the essential idea of each technique, it is generally not sufficient to permit the reader to apply the technique himself. A separate chapter is devoted to each of eight different case histories. While two of these relate to military problems, neither essentially wartime, the remainder relate to industry, commerce, and agriculture.

McCloskey and Copping follow the pattern set by the predecessor volume. There is a chapter on each of thirteen different case histories, only three of which relate to military problems. There are also nine chapters on methodology, each on a special technique. These include the design of experiments, the Monte Carlo method, operational gaming, and the application of actuarial technique to the failure of complex equipment. The final five chapters present material on "information handling in organized groups."

The book by Morse and Kimball, the first published on operations research in this country, consists of an introductory chapter, describing some features of operations research, two chapters devoted chiefly to fundamental tools and concepts, four chapters of expository and illustrative examples, and a final chapter on organization and procedure. Of the two chapters devoted to basic tools, one is entitled "Probability" the other "The Use of Measures of Effectiveness." The examples included are mostly from naval operations.

GORDON D. SHELLARD

SELECT CURRENT BIBLIOGRAPHY

In compiling this list, the Committee on Review has digested only those papers which appear to be of direct interest to members of the Society of Actuaries; in doing so, the Committee offers no opinion on the views which the various articles express. The digested articles will be listed under the following subject matter classifications: 1—Actuarial and other mathematics, statistics, graduation; 2—Life insurance and annuities; 3—Accident and sickness insurance; 4—Social security; 5—Other topics.

References to allied subjects will be found in the following publications: *Mathematical Reviews*, published by the American Mathematical Society—Subjects: Theory of probability, mathematical statistics, mathematical economics, various other mathe-

mathematical topics; *Monthly Labor Review*, published by Bureau of Labor Statistics—Subjects: Cost and standards of living, employment and employment services, fringe benefits, handicapped, industrial hygiene, industrial relations, labor organization and activities, manpower, older workers and the aged, personnel management, social security (general); *Population Index*, published by Office of Population Research, Princeton University, and Population Association of America—Subjects: Mortality, fertility, marriage, divorce, the family, various other demographic topics; *Social Security Bulletin*, published by Social Security Administration—Subjects: Retirement and old age, employment, maternal and child welfare, health and medical care, various other topics in social security; *Journal of the Institute of Actuaries*—The review section contains digests in English of articles appearing in foreign actuarial journals.

ACTUARIAL AND OTHER MATHEMATICS, STATISTICS, GRADUATION

M. Spiegelman, "The Versatility of the Life Table," *American Journal of Public Health*, vol. 47, p. 297, March 1957.

This is an expository paper in which the author describes the basic concepts of generation life tables, current and projected life tables, multiple decrement tables and select tables. Briefly described are the applications to health problems; these include comparisons of communities, analyses by causes of death, clinical medicine, hospital studies and morbidity analyses. The applications to population problems include topics on marriage, population growth, the labor force and the money value of a man to his dependents. The article closes with a brief note on some uses of the life table in population and health problems involving life contingencies.

LIFE INSURANCE AND ANNUITIES

National Association of Insurance Commissioners, *New Mortality Table*, December 1956 Midwinter Meeting.

The Report of the Subcommittee on Deficiency Reserves of the National Association of Insurance Commissioners was received by the Life Insurance Committee. To this was attached the Report of the Special Committee on New Mortality Tables of the Society of Actuaries and proposed changes in the Standard Valuation Law. Action on the Subcommittee Report was postponed until the Annual Meeting of the National Association of Insurance Commissioners, June 1957. An explanatory Statement for the American Life Convention—Life Insurance Association of America Subcommittee on Deficiency Reserves by Mr. B. M. Anderson was attached to the Report of the Life Insurance Committee. Pending publication, these items may be obtained from the office of the Secretary of the National Association of Insurance Commissioners at 160 North La Salle Street, Chicago 1, or from the A.L.C.-L.I.A.A. Joint General Bulletin No. 750, December 18, 1956.

Survey of Corporate Pension Funds, 1951-1954, pp. iii, 50, Securities and Exchange Commission, Washington, D.C., October 1, 1956.

This is the second annual report presenting financial data on noninsured pension funds of United States corporations. It was prepared from a special survey of companies filing reports with the Securities and Exchange Commission. The report deals with the distribution of assets in these funds which are administered by the corporations themselves, or through trustees, in the period 1951-1954. The tables included in the report, many of which are subdivided to show distributions by type of industry and size of fund, trace the rapid growth in funds held under these plans. An analysis is made of the types of investments into which new money has been placed during this period.

ACCIDENT AND SICKNESS INSURANCE

M. Spiegelman, "New Frontiers in Medical Statistics," *Milbank Memorial Fund Quarterly*, vol. 35, p. 48, January 1957.

The author classifies the determinants of morbidity and mortality as follows: (1) scope, quality and quantity of health services; (2) personnel in the health services; (3) financing the costs of medical care; (4) consumers of health services; (5) economic progress. Topics discussed include needed mortality and morbidity data, problems in medical care data, the role of social research related to health, and some issues in medical economics.

SOCIAL SECURITY

Division of Employment, New York State Department of Labor, *Potential Liability of the New York Unemployment Insurance Trust Fund Under Various Economic and Legislative Assumptions, 1956-1962*, pp. ii, 33, New York, N.Y., July 1956, and Supplement, unpagged, December 1956.

This Report, including the Supplement, gives detailed results of short-range cost estimates for the New York State Unemployment Insurance system. These estimates apply not only to the existing law, with several alternative estimates for different assumptions as to economic conditions, but also for certain selected possible amendments, such as extension of coverage to more employment categories, a higher maximum weekly benefit, dependents allowances, an increased duration of benefits, and shorter qualification periods.

The estimates indicate that for the present system the existing trust fund of about \$1.2 billion would, by the end of 1962, amount to \$1.9 billion under the most optimistic projection and would decrease to about \$600 million under the most pessimistic projection. Under the intermediate projection, the fund is shown to remain more or less level at all times during the period. There is a considerable range in the estimated total benefit disbursements in 1956-62, namely, from \$1.1 billion to \$3.1 billion.

Cost estimates as to total benefit payments in 1956-62 for the various possible legislative changes are shown for the several economic projections, but the progress of the trust fund is shown only for the intermediate estimate. Cost estimates are also shown for various single legislative changes and also for several "packages," the most costly of which involves a reduction in the qualification period from 20 weeks to 15 weeks, an increase in the maximum weekly benefit from \$36 to \$40, addition of dependents allowances of \$4 for each of 3 dependents, and extension of the maximum duration of benefits from 26 weeks to 36 weeks. Under this "package," the cost is increased by about 30% in comparison with present law, regardless of the economic assumptions. No figures are given for the progress of the trust fund under this "package," but for the next most costly the intermediate estimate shows that the fund at the end of 1962 would be only about \$200 million lower than under existing law and, in fact, would only be slightly lower than the present existing fund.

This Report is Part I of a series of studies of the financial aspects of the New York Unemployment Insurance Law. Two subsequent studies have been issued, *A Group Contribution Rate for Small Employers in Unemployment Insurance* and *The General Account and Subsidiary Contributions Under the Unemployment Insurance Law*.

OTHER TOPICS

F. G. Dickinson and L. W. Martin, "Physician Mortality, 1949-1951," *Journal of the American Medical Association*, vol. 162, p. 1462, December 15, 1956.

This article compares the mortality of all physicians with that of white males for the period 1949-1951. Because of difficulties in separating the available data for physicians according to race and sex, female and nonwhite physicians were included in this study. It was assumed that the relatively unfavorable nonwhite mortality experience would be offset somewhat by the more favorable mortality for females. For all physicians at ages 20 and over, the ratio of actual deaths to the expected on the basis of the mortality of white males was 93.3 percent. The mortality ratio was lowest for ages 25 to 29, namely 64.3 percent, and rose to highs of 102.7 and 101.2 percent at ages 60 to 64 and 65 to 69, respectively. For three causes—diseases of the heart, diabetes mellitus and suicide—the actual deaths exceeded the expected on the basis of white male experience in this period; for tuberculosis, influenza and pneumonia, and nephritis and nephrosis the actual deaths were considerably lower than the expected.

More detailed information on data and methods, and supplementary tables, are published in Bulletin 103 of the Bureau of Medical Economic Research of the American Medical Association.

H. J. Montoye *et al.*, "Study of the Longevity and Morbidity of College Athletes," *Journal of the American Medical Association*, vol. 162, p. 1132, November 17, 1956.

This was undertaken as a pilot study for a larger national research project. Questionnaires were sent out to former students of Michigan State University, both athletes and nonathletes. Little difference was found in average age at death between the two groups. The authors state that differences in distribution of causes of death were statistically insignificant, but they do not show data. Results of various studies made in the past are also cited.

Studies of the Aged and Aging, Compiled by the Staff of the Committee on Labor and Public Welfare of the United States Senate, Selected Documents, Volumes I-XI, Washington, dated variously in 1956 and 1957.

These studies issued by the Senate Committee on Labor and Public Welfare consist of 11 volumes (varying in length from 77 pages to 309 pages) of selected documents, and in addition a summary of Federal legislation relating to older persons. The documents reviewed in the series include such reports as those on the 1952 Conference of State Commissions on Aging and Federal Agencies; the 1955 Study by the Council of State Governments, *The States and Their Older Citizens*; the Bureau of Labor Statistics Study of the older worker program; and the 1955 New York State Conference on Retirement Policy.

The compilations cover pertinent research reports of numerous private organizations, for example, the National Industrial Conference Board, Health Information Foundation, National Science Foundation, and the National Association of Manufacturers; and also those of Federal and state agencies.

Of special interest is Volume VII, which is in essence a bibliography with short reviews of over 400 articles dealing with employment, health, income, retirement, and public and private services for the aged.

B. Kutner *et al.*, *Five Hundred Over Sixty: A Community Survey on Aging*, pp. 345, Russell Sage Foundation, New York, 1956.

A total of five hundred persons at ages 60 and over, residents of the Kips Bay-Yorkville Health District of New York City, participated in this survey; this sample constitutes a little over one percent of the population of the area who were over the age of sixty. A section of the book is devoted to the study of health in old age.

Answers were sought to such questions as the extent and nature of illness in old age, the extent to which illness results in incapacitation, the uses made of private and community health services, and attitudes toward health and social centers. Results indicate that concern about health and the attitudes of the aged toward seeking services, either medical or social, vary with age and social status.

B. Benjamin, P. R. Cox, and F. A. A. Menzler, "Modern Population Trends and Problems," *Journal of the Institute of Actuaries*, vol. 82, part III, no. 362, p. 279, 1956.

The paper is an outgrowth of the World Population Conference which was held in Rome, early in September 1954, under the auspices of the United Nations and in which a number of actuaries from several countries participated. The authors state that their purpose is to direct attention of actuaries to the problems of population with which the world is faced. They begin by pointing out the interest of the actuary in demography generally and in particular with regard to analyses and forecasts of mortality, studies of fertility by means of issue rates, sickness data, and the accuracy and analysis of census data. This is followed first by a detailed account of demographic developments in Great Britain during the period 1949-1955 and then by a discussion of world population and resources. An appendix contains notes on the populations of France, Russia, the United States, India, and Japan.

J. Brožek, editor, *Body Measurements and Human Nutrition*, pp. vii, 167, Wayne University Press, Detroit, 1956.

The papers in this book are the outcome of a meeting held on June 17th and 18th 1955 by the Committee on Nutritional Anthropometry of the Food and Nutrition Board of the National Research Council at Harvard University. Among them are papers on obesity and disease, the Canadian weight-height survey, and body weight from life insurance records.