# TRANSACTIONS OF SOCIETY OF ACTUARIES 1951 VOL. 3 NO. 7

# BOOK REVIEWS AND NOTICES

Man and His Years. Health Publications Institute, Inc. Raleigh, North Carolina, 1951. Pp. 316.

Man and His Years is an account of the first National Conference on Aging sponsored by the Federal Security Agency in August 1950, to which over 800 persons were invited. The purpose was announced as an exploration into the process of aging, the consideration of the need for research, problem identification, and action—under Federal direction. It is stressed that the 800 came as individuals and not as representatives of pressure groups—but they could not divest themselves of their conditioning nor was the "job" commonly ignored in the discussion.

The book, in preparation for a year, explicitly states that the reports of the eleven subsections, Chapters 3-14, "do not necessarily reflect final conclusions or official policy of the Federal Security Agency"—a back-handed implication that the introductory letter by President Truman, the Conference reports of Administrator Ewing and Assistant Director Thurston and the Conclusion by Conference Director Clark Tibbetts ("Next Steps") do.

The Secretariat furnished from Governmental Departments and Agencies (largely the Federal Security Agency) which handled the Section reports had the difficult task of lacking, generally, stenographic reports, of finding that at times no one had kept notes at some session, and having the long training of trying to force significance into meanderings, and to resolve disputes without taking sides. The over-all editing seems to have generalized the use of the words discovery and mushrooming, the general attitude that we have just discovered a new thing, old age. There is little hint in some of the chapters of the centuries of awareness of life and its values, or of the steady evolution over the centuries of American history of the normal avenues of thrift, investment and insurance. all partially aimed at satisfying the contingent, presumptive needs of old age. "Rootlessness" and the implication that before 1933 the aged were systematically taken to the edge of the town, faced symbolically West, and then given up for lost-these seem to go with an unawareness of the American capitalistic tradition. There is little evidence in these reports-as they have been set down, after leaving the hands of the Secretariats-that from the first schooling, the first job, the first acceptance of family responsibilities, there has been, and can continue to be, an understanding of the episodes of life, trivial, serious or catastrophic. There have been and still are numerous agencies evolved for the use of the citizens.

Throughout the report is stressed the "wide areas of agreement." The overall demand for more Federal control was pronounced in the conference and in the report. In the conference there were marked voices in opposition to that

domination. There was a questioning of estimates and indices, carelessly labeled "facts," both as to accuracy and as to their complete pertinence to the conference theme. The breathless tone of some of the chapters-particularly where the resolutions prepared in advance were accepted (in most of the sections they were not adopted)—seems to lead hastily to a note of enthusiasm as to the Federal Security leadership, and an acceptance of another unit to be added to the tremendous galaxy already in existence. Reading this exuberance a year later is a quaint experience. To one who was there and who has talked to many others who also attended, the published report seems, like a sundial, to mark only the sunny hours, and not to reflect the very real disapproval many expressed as to any more Federal regimentation. To this extent, the printed report shows bias and inadequate reporting. I was given an opportunity to review the first draft of one of the sections. The final draft is much less misleading than the first. It doesn't—and probably couldn't—reflect the give-and-take of fundamental and deep-seated differences of opinion, as rather fully voiced in that section.

The chapter on Religion had a definite story to tell, and seems to have told it well. The chapter on Research uses the word in its real sense and not in the derived sense of ingenious presentation of the gaps in knowledge as though they represented knowledge itself. The most instructive chapters are the ones on Professional Personnel and Community Organization—the first setting up an ideal of superficial training in generalities for these professional welfare folk, the other rather reminiscent of the girls with a major in psychology who in the early days of the war tackled increasing the home happiness of the aging women in the task-force. The section on income maintenance lists much preliminary analysis to be done before further barging in on the property rights of all our citizens.

In the concluding chapter it is indicated that studies on the impact of pensions are being undertaken by the Twentieth Century Fund and the National Planning Association, that there have been several further explorations along gerontological lines and that in September of 1951 there was scheduled the second annual conference on Gerontology—international. Against these evidences of more regimentation, the recent Governors Conference, addressed by the Federal Security Administrator, voted unanimously that they preferred to handle their own problems and reduce, rather than expand, centralized Federal direction.

Eight hundred people can't meet to discuss life and death, income, taxes, personal attitudes, without a large number of sentient comments, many of which have been preserved in *Man and His Years*. The report—as was the Conference—is a catch-all of wisdom, of platitudes, of evidences of thinking and just rippling words. Many of the more discreet refrained from imposing the results of long completed analysis upon the assemblage. The hothouse pressures, the snappy problem identification, the demands for immediate action programs —these are not important. It is important that the "design for living" of the report involves a loss and not a gain of personal responsibility, a greater tampering with people and property. There is insistent reiteration throughout the section reports that the aged differ, that chronologic age does not mark cleancut limits to personal activities, that retirements arbitrarily enforced may be most misguided. On the other hand the idea that the termination of one job ends the man is equally arbitrary.

The jewels of thought in the report warrant a careful reading by trained professional persons. We sufficiently grasp neither the complicated processes of aging nor the simple values of freedom to go beyond the original thought of exploration here. But, with its mingled tares and wheat, this book should not be ignored.

#### W. RULON WILLIAMSON

# OTHER RECENT PUBLICATIONS

### ACTUARIAL AND INSURANCE PUBLICATIONS

Anderson, B. M. Handbook on the Law of Insurance. West Publishing Co., St. Paul, Minn., 1951.

The third edition of this book popularly known as "Vance on Insurance" has just been published. The author, B. M. Anderson, Vice-President and Counsel of the Connecticut General Life Insurance Co., assisted Professor Vance in the preparation of the second edition in 1930 and hence was in a logical position to prepare the third.

Shortly after Professor Vance's death in 1940 the author undertook the task of preparing the third edition. The book has been thoroughly revised and brought up-todate and contains about two hundred more pages than the second edition. In addition to new sections, old sections have been extensively rewritten and in many cases background material has been added to give the reader reasons for the applicable rules of law.

Hooker, Richard. A Century of Service. The Massachusetts Mutual Story. Massachusetts Mutual Life Insurance Co., Springfield, Mass., 1951. Pp. 191.

This is an interesting historical account of the founding of the Massachusetts Mutual Life Insurance Company and of the progress during its first one hundred years. The book contains many historical anecdotes and traces the contemporary history of the development of the country along with the progress of the Company.

Institute of Life Insurance (Prepared and Published by). 1951 Life Insurance Fact Book. New York, 1951. Pp. 108.

The sixth edition of this valuable book covers, for the most part, statistical data through 1950. As in previous editions, any tentative figures used in previous years have been changed if more accurate figures have since been obtained. New tables on insured pension plans, mortgages by states and more information on new investments are being shown for the first time in this edition.

Maclean, Joseph B. Life Insurance. McGraw-Hill Book Co., New York, 1951. Pp. 692.

This is the seventh edition of Mr. Maclean's popular book, the sixth edition of which was published in 1945. The current edition includes revisions brought about by major changes in the business since the end of World War II. All of the editions have been written in a style easy to follow and understand. Almost everything of importance insofar as it affects life insurance has been covered. Hence the book serves as a valuable reference source.

636

# Phoenix Mutual. A Century of Pioneering. Barta Press, 1951. Pp. 36.

One hundred years of progress, and pioneering into new sales philosophy, are recorded in this little book published to commemorate the one hundredth anniversary of the Phoenix Mutual.

#### ECONOMICS, BANKING AND FINANCE, INVESTMENTS, AND LAW

Von Neumann, John and Morgenstern, Oskar. The Theory of Games and Economic Behavior. Princeton University Press, 1947. Pp. 659.

Ever since this remarkable book first appeared in 1944 it has enjoyed a continually expanding circle of readers. Some of the concepts even landed in a *Fortune* article. Starting with the reasonable premise that a mathematical theory of economics could hardly be formulated without considerable preliminary exploration of the simpler components, the authors have constructed a mathematical theory of games, which occupies most of the book. This is not a glorified treatise on how to compute odds, but a successful attempt to reduce such elusive notions as strategy, the appearance of coalitions among players, etc., to rigorous mathematical form. Not the least interesting feature is the way the authors lead the reader along the paths that led to their results, rather than being content just to present the results in formal language. It is not an easy book to master but this is because of the ideas in it—its mathematical basis is elementary—and reading it is a most rewarding experience.

#### PENSION FUNDS AND SOCIAL INSURANCE

Analytical Notes. Federal Security Agency, Social Security Administration, Bureau of Old-Age and Survivors Insurance, Division of Program Analysis, Baltimore, Maryland.

These numbered analytical notes, dealing with the operation of the OASI program, are issued from time to time in processed form and are available upon request in limited quantities to research workers and interested organizations. The subjects covered are quite varied, some being of an actuarial nature and others being more along economic or sociological lines. Periodically, the notes of current applicability are listed on the rear cover of the *Social Security Bulletin* (cf. the January 1951 issue). Illustrative of the topics covered are the following: "Death Rates Among Primary Beneficiaries" (No. 34); "Labor Mobility in the Automobile and Steel Industries During 1947" (No. 55); "Estimated Number of Workers with Insured Status on January 1, 1951" (No. 61), which describes the effect of the 1950 Amendments in liberalizing the insured status requirements by having a "new start"; and "Effects of Increased Benefits on Beneficiaries' Level of Living" (No. 63).

British Columbia Hospital Insurance Service. Second Annual Report. B.C. Hospital Insurance Service, Victoria, B.C., 1951. Pp. 19.

This second Annual Report of the B.C. Hospital Insurance Service reviews the operations during 1950 of the compulsory plan of hospitalization insurance which became operative in the province on January 1, 1949. It gives a brief account of the organization and administrative procedures adopted, sets out the rates of contribution, lists the benefits payable, and furnishes some statistical data concerning the financial and claims experience of the plan during the year under review. It is of interest to note that the plan experienced an excess of cash disbursements over cash receipts for the fiscal year ended March 31, 1950 of more than  $\$4\frac{1}{2}$  million.

Committee on Labor and Public Welfare, United States Senate. Health Insurance Plans in the United States (82d Congress, 1st Session, Report No. 359, Parts 1, 2 and 3). United States Government Printing Office, Washington, 1951. Pp. 356.

Senator Lehman writes the Foreword to a report which tabulates the findings and recommendations of the Dean Clark Sub-Committee as to the present status of Voluntary Medical Care Insurance. There are charts and batteries of numbered paragraphs, including those on problems, differences of opinion, recommendations. This is followed by seven chapters, acknowledgments and voluminous appendices. The appendices carry the reports of the cooperating organizations—Blue Cross, Blue Shield, Cooperative Health Federation of America, Insurance Companies, Social Security Administration, American Medical Association—and Characteristics of Ten Comprehensive Medical Care Plans in the United States. The third part deals with the activities of local, State and Federal Governments in the field of health. The Committee frankly considers its report inadequate, needing further analysis and research. Yet, till that occurs, the material of this report will be much quoted, and much of the quotation is apt to ignore the stated inadequacies and limitations. When the Brookings report appears, the two differently approached studies should be carefully compared.

Executive Office of the President. Bureau of the Budget. The Federal Budget in Brief. Fiscal Year 1952. United States Government Printing Office, Washington, 1951. Pp. 44.

This pamphlet provides excellent practice to the student of Social Security in locating and explaining the various portions of each program. With military expenditures and social security the two major users of Government funds around the world, American tax-consciousness needs to be sharpened as to both, so long as we are globally aiding many nations who seem to use a much larger proportion of the total budget than do we on Social Security.

Federal Old Age and Survivors Insurance Trust Fund. Eleventh Annual Report of the Board of Trustees of the Federal Old-Age and Survivors Insurance Trust Fund. 82d Congress, 1st Session. Senate. Document No. 44. United States Government Printing Office, Washington, 1951. Pp. 60.

Although the Appropriations Hearings list 10,000,000 new coverage, this report lists 8,000,000 as brought in by the new Amendments of 1950, and less than half that many absolutely new account numbers seem to have been assigned. The complexities of the "self-supporting" basis of potential tax-rate advances, the great doubt as to future cost trends, and the utilization of the special bargain opportunities, the tendency to let illustrations be used as estimates, the implication that inflation lowers costs—such unsolved problems shine through this report as through all its predecessors. Read in juxtaposition with the Appropriations Hearings, an added dimension of complexity appears. The unresolved reserve complexities, the exclusion of "Assistance" (the major money-user to date) and the absence of clear objectives both functional and financial make this report hard reading.

Harper, F. A. Morals and the Welfare State. The Foundation for Economic Education, Inc. Irvington-on-Hudson, New York, 1951. Pp. 34.

The most recent publication of the Foundation, this excellent case against socialism first poses five fundamental ethical concepts, then considers the moral right to private property and then tests the Welfare State (Social Security, parity or fair prices, reasonable profits, the living wage, TVA, Federal aid to States, etc.) against this battery of ethical principles. The immorality of most of the operations is indicated. An excellent test of alertness.

International Labor Office. Objectives and Minimum Standards of Social Security: Report IV(2). International Labor Office, Geneva, 1951. Pp. 364.

This report supplementing Report IV(1), which was reviewed in TSA II, 524, is a statement and analytical summary of the replies of the various member States to the questionnaire transmitted in regard to a new international instrument on social security. In this Report the Office also included a series of proposed conclusions in the form of two Conventions, one for Minimum Standards and the other for Advanced Standards.

This report, and in particular the proposed conclusions, was the basic document considered at the 1951 session of the International Labor Conference held in Geneva in June. An informal description of the results of this meeting, as well as of previous action, is contained in "New International Convention on Social Security," by Robert J. Myers, in the *Social Security Bulletin* for October 1950.

Joint Committee on the Economic Report, A Communication to the: From the Conference Group of Nine National Voluntary Organizations Convened by the National Social Welfare Assembly. Making Ends Meet on Less than \$2000 a Year (Case Studies of Low-Income Families). 82d Congress, 1st Session. United States Government Printing Office, Washington, 1951. Pp. 152.

This report is another in the long series dealing with underprivileged families. It appeared not long before the President's speech at the laying of the cornerstone of the General Accounting Office, where he said that "Americans had never had it so good." These families illustrate—among other things—the impact of inflation, the inconvenience of inadequate education, the awkwardness of coming to rely upon a Governmental paternalism and the fact that there is a wide range of earnings and of the "will to learn" among the citizens. It could be called "the Oliver Twists of 1951."

Killingworth, Charles C., and Schroeder, Gertrude. Long-Range Cost Estimates for Old-Age Insurance. Reprinted from May, 1951 Quarterly Journal of Economics. Pp. 15.

Considerations as to the impossibility of dependable estimates of costs over 50 years—with the suggestion that economists, rather than actuaries should make them. The negations rather impressive, the affirmations thoroughly unconvincing.

Social Security Administration. Estimated Amount of Life Insurance in Force as Survivor Benefits under Social Security Act Amendments of 1950. (Actuarial Study No. 31.) Division of the Actuary, Social Security Administration, Federal Security Agency, Washington, 1951. Pp. 17.

Estimates the amount of life insurance in force January 1, 1951 as survivor benefits (lump sum and monthly benefits) of insured workers under interest rate assumptions of 2% and 3% by age, sex, marital and parental status and type of benefit. The total on the more realistic "net" estimate (after work clause and after adjustment for duplication of benefits) was about \$186 billion on the 2% basis, \$170 billion on the 3% basis. The radical increases under the new start of two new years beginning with 1951 will radically boost benefits by the end of 1952. Mr. Altmeyer in the House Appropriations Hearings quotes \$250 billion as of that date. Sub-Committee of the Committee on Appropriations. Hearings, House of Representatives, Eighty-second Congress, First Session. Appropriations for 1952: Department of Labor-Federal Security Agency. Part 2, Federal Security Agency, Exclusive of Public Health Service, 1951. Pp. 457. Part 2, Federal Security Agency, Public Health Service, 1951. Pp. 458-886.

Some time ago, Dr. Lewis Meriam of Brookings Institution indicated that statistical data were very hard to secure from the Social Security Administration. These Hearings carry significant statistical exhibits, and the accumulating series over the years help to outline the complexities, the burden of paper work, the dead weight of mechanical requirements. This report shows the increasing complexity, the addition of more diverse categories in the new legislation, the smaller number of employees per employer, perhaps the necessary difficulties to emphasize the need of a new building, and the large funds so easily available in the reserves. They need space, more clerks, more record-keeping. In Mr. Altmeyer's testimony the quotation of \$250 billion as the prospective insurance at the end of 1952 is supplemented by more adequate spelling out of the differences between relief, assistance and insurance—three branches of welfare activity.

Sub-Committee of the Committee on Labor and Public Welfare. United States Senate. Veterans Administration Policies and Practices with Respect to Medical Care. 82d Congress, 1st Session. United States Government Printing Office, Washington, 1951. Pp. 47.

A thoroughly illuminating report on the quality of medical care under Governmental administration, it contrasts the considerations motivating General Bradley and General Hawley with those of a later period, and canvasses the problems of politically dominated medical service. It has a carry-over into other professional services than that of medicine and other agencies than the Veterans Administration.

United States Department of Labor: Bureau of Labor Statistics. Brief History of the American Labor Movement. U.S. Government Printing Office, Washington, 1951. Pp. 66.

With an Appendix showing Highlights in the American Labor Movement from 1778 to 1950, numerous pictures and a short bibliography, this very brief story tends to a *Reader's Digest* brevity. With collective bargaining presuming the knowledge presented in this pamphlet, it would be well to read it, and then consult some of the more complete books listed in the bibliography.

United States Department of Labor. Unemployment Insurance Financial Experience During the Postwar Years 1946-1950. United States Department of Labor, Bureau of Employment Security, Washington, 1951. Pp. 32.

This brief pamphlet presents some very interesting statistical cost data as to the operations of the various State unemployment insurance programs during the postwar years. There is a minimum of analysis; rather the statistics as to size of reserve, benefit rates, taxable wages, and contribution rates are set forth in detail both in tabular form and in charts. In fact, it may be noted that not only is there considerable repetition between the tabular and graphic material, but also the same series of data is presented in several places, perhaps for the convenience of the reader.

Various ratios are developed between the different statistical data, such as the number of years that reserves at the end of 1950 (a change in phraseology, since the customary terminology has been "State accounts in the Unemployment Trust Fund") could finance benefits at the average rate in 1946-1950—for Iowa, there is the happy situation that such period is almost 24 years while, at the other end of the list, Rhode Island and Massachusetts barely have enough for one year (the United States average is 4.7 years). Ratios of benefits in 1946–1950 to taxable wages for the same period are also shown as indicative of unemployment insurance costs; quite a number of States had such costs as low as .5% of payroll, while Rhode Island was highest with 3.2%, followed by California with 2.8% (the United States average was 1.5%). The average contribution rates during the period differed from these cost figures; no State has as low a rate as .5%, although there were a number below 1.0%, while the highest rates were for Rhode Island at 2.1% and Washington with 2.4% (the United States average being 1.4%). Quite obviously, the differences one way or the other between average costs and average contribution rates reflect changes in the so-called "reserves" of the individual States (specifically, Rhode Island had a significant decline in such "reserves" during the period). The report makes no attempt at future cost projections, particularly as to what might occur if there were a serious business depression.

University of Michigan. Living Through the Older Years. University of Michigan Press, Ann Arbor, Michigan, 1949. Pp. 193.

This is the first volume of a trilogy on gerontology and its connotations. Credit for the idea is given to the late Dr. Charles A. Fisher of the University of Michigan Extension Service, who helped to formulate the initial plans for a conference later named the Charles A. Fisher Memorial Institute on Aging. The introduction is by Clark Tibbitts and there are 11 contributors, with a chapter (originally an address) by each. The subjects covered are such problems as health, employability, and economic security of the aged. Some statistics and many opinions are marshaled on behalf of the aged. Of most interest to actuaries is the chapter on economic security, dealing with private and public provision for the aged. Individual annuities and insurance are barely mentioned; more emphasis is placed on group annuities, old-age and survivors insurance, and old-age assistance.

University of Michigan. *Planning the Older Years*. University of Michigan Press, Ann Arbor, Michigan, 1950. Pp. 248.

This, the second volume of the trilogy, has 14 contributors. Emphasis is placed on the need for public understanding and response with respect to the problems of old age in order that those who are in a position to help solve the problems can take more positive action. Among the problems discussed in this symposium are living arrangements, rehabilitation, recreational and cultural activities, employment opportunities and retirement. One chapter deals with a very interesting experiment undertaken as a joint activity of the University of Michigan Extension Service and the Institute for Human Adjustment. An outline of 16 lectures used in the experiment is included at the close of the book.

Wilcox, Walter E. Analysis of the Benefits under Title II of the Social Security Act Amendments of 1950 (Actuarial Study No. 30). Federal Security Agency, Social Security Administration, Division of the Actuary, Washington. Pp. 46.

This study is the third of a series of analyses dealing in mathematical fashion with the various benefit, and benefit-tax, relationships. They include No. 8 on the original 1935 Act, No. 14 on the 1939 Amendments, and now No. 30 on the 1950 Amendments. A number of illuminating tables of illustrations are included on the new amendments, both for the intermediate situations developing from the conversion tables and for the situation after direct computation of benefits again becomes possible in late 1952 and early 1953. In view of the special emphasis on the "new start" both in 1939 and 1950, it is regrettable that those persons who now hold the center of the stage—say at age 60, 62, 63, 65 and perhaps 70—have not been illustrated. Had Table 12, on page 46, been so extended, "level premium costs" of 100% might have been indicated. It is regrettable that the vagaries of this Study could not have been skillfully presented at the Hearings on the Amendments. It should be useful now. Another table that would have been most interesting would have been the dollars of subsidy above the nominal contributions, when the more prosperous persons at many stages would have been shown to receive greater subsidies than those with lower wages—a relationship hidden by the sole use of percentages. The small availability of these studies accounts for the general ignorance of some most important relationships.

### ACTUARIAL AND OTHER ARTICLES OF INTEREST IN RECENT PERIODICALS

In compiling this list, the Committee on Review has included only those papers which from their titles would appear to be of possible interest to members of the Society of Actuaries; and, in so doing, the Committee offers no opinion on the views which the various articles express.

References to only a limited number of papers on mathematical statistics and allied subjects are included. For a more complete listing of such papers reference should be made to *Mathematical Reviews*, published by the American Mathematical Society. Numerous articles on social insurance are listed each month in the *Social Security Bulletin* of the Social Security Board; and various articles are listed each month on social security, unemployment insurance, workmen's compensation, pensions, and health insurance in the *Monthly Labor Review*. *Population Index*, published quarterly by the Office of Population Research, Woodrow Wilson School of Public and International Affairs, Princeton University, and the Population Association of America, lists numerous articles published throughout the world on mortality, fertility, marriage, divorce, and migration and on statistical methods of interest in such questions. A very complete listing of actuarial, other insurance and mathematical statistics papers published in 1949 in other countries, especially in continental countries, appeared in *Mitteilungen der Vereinigung Schweizerischer Versicherungsmathematiker*, Volume 50, page 361.

# TRANSACTIONS OF THE THIRTEENTH INTERNATIONAL CONGRESS OF ACTUARIES

Vol. 3

- Memoirs on: Taxes and Life Insurance (Questionnaire) from Australia, Belgium, Denmark, Finland, Great Britain, Italy, Luxembourg, Netherlands, Norway, Spain, Sweden, Switzerland, Yugoslavia, and United States; the latter by B. E. Shepherd.
- Regulation and Supervision of Private Pension Funds in Various Countries—A. G. Ploeg.
- Communication Relative aux Surfaces de Probabilité-R. Risser.

La Mathématique Actuarielle dans le Domaine du Continu-R. Masciotti.

Some Observations on the Theory of Limit-S. Shirasugi.

On a Simplified Method of Investigation into Disability Insurance-S. J. Bjoraa.

Health Insurance in the United States-R. A. Hohaus.

Eine praktische Interpolationsformel des Zinsfussproblems-Ivo Lah.

#### BOOK REVIEWS AND NOTICES

# BULLETIN OF THE PERMANENT COMMITTEE OF THE INTERNATIONAL CONGRESS OF ACTUARIES No. 48 (June, 1951)

Minutes of the Meeting of the Council of the Permanent Committee for International Actuarial Congresses September 30, 1950.

Minutes of the Meeting of the Sub-Committee on International Actuarial Notation September 30, 1950.

Notices on Development of Actuarial Science in Denmark, Norway, and Venezuela.

JOURNAL OF THE INSTITUTE OF ACTUARIES Vol. 77, Part 1, No. 345 (1951)

The Actuary in the National Economy-F. A. A. Menzler.

Graduation Tests and Experiments-H. A. R. Barnett.

The Papers of the Royal Commission on Population-F. M. Redington and R. D. Clarke.

Mortality Tables Giving the Same Policy Values-G. V. Bayley.

A Slide-Rule Connecting Age, Height and Weight-H. M. Cochran.

Continuous Mortality Investigation: Assured Lives 1944-48.

The Recent Trend of Mortality in England and Wales-W. S. Hocking.

### Part 2, No. 346 (1951)

Approximate Integration-William Phillips.

Personnel Statistics and Sickness-Absence Statistics—F. H. Spratling and F. J. Lloyd.

Notes on the Valuation of Tax-Free Annuities-L. T. Hayes.

Duplicate Policies in Mortality Data-R. H. Daw.

Some Notes on Evans's and Other Approximations to Life Annuities-Wilfred Perks. War Deaths Investigation.

Legal Notes-E. J. MacGillivray and David Houseman.

**PROCEEDINGS OF THE CASUALTY ACTUARIAL SOCIETY** Vol. 37, Part 1, No. 67 (1950)

A Mid-Century Look at Casualty Insurance-H. T. Barber.

The Enigma of the Permissible Loss Ratio-H. T. Barber.

Credibility Procedures-Laplace's Generalization of Bayes' Rule and the Combination of Collateral Knowledge with Observed Data-A. L. Bailey.

Automobile Accident Statistics by "Age of Driver"-L. W. Scammon.

New York Statutory Disability Benefits Law, Coverage, Rates and Rating Plans-M. J. Schwartz

The Combined Fire and Casualty Annual Statement Blank-T. F. Tarbell.

# SKANDINAVISK AKTUARIETIDSKRIFT Nos. 1-2 (1951)

On Asymptotic Expansions of Probability Functions-Harald Bergström.

Concerning Some Inequalities in the Theory of Statistical Estimation-E. W. Barankin. Truncated Inverse Binomial Sampling-Martin Sandelius.

A Function for Smoothing Tables of the Duration of Sickness-Knut Medin.

The Regression Problem Involving Nonrandom Variates in the Case of Stratified

Pension Schemes and Life Assurance in an Economy with a Fluctuating Currency-K.-G. Hagstroem.

# BULLETIN TRIMESTRIEL

#### No. 192 (September, 1950)

Du Champs d'Application de la Formule d'Approximation de Lidstone (The Field of the Application of Lidstone's Approximation Formula)---Dr. Jecklin.

# MITTEILUNGEN DER VEREINIGUNG SCHWEIZERISCHER

# VERSICHERUNGSMATHEMATIKER

# Vol. 51, Part 1 (1951)

- Ein neues Testverfahren für geordnete Beobachtungsreihen und seine mathematischen Grundlagen (A New Method of Testing Ordered Series of Observations and Its Mathematical Basis)—Hans Ammeter.
- Ergänzende Bemerkungen zur Reserveberechnung auf Basis hyperbolischer Interpolation (F-Methode) (Complementary Remarks on the Calculation of Reserves by Means of Hyperbolic Interpolation)—H. Jecklin and H. Zimmermann.
- Betrachtungen über konsekutive Verteilungen (Notes on the Distributions of Consecutive Events)—Padrot Nolfi.
- Etude statistique du risque mathématique dans l'assurance collective sur la vie (Statistical Study of Risk Theory in Its Application to Life Insurance Companies)— K.-G. Hagstroem.

Eine praktische Interpolationsformel des Zinsfussproblems von hoher Präzision (A Practical and Accurate Formula of Interpolation for Interest Functions)—Ivo Lah.

# Blätter der Deutschen Gesellschaft für Versicherungsmathematik

Vol. 1, No. 1 (April 1950)

Der Beruf des Versicherungsmathematikers (The Profession of the Actuary)-S. Vajda.

- Anwendung neuerer statistischer Verfahren in der Versicherungsmathematik (The Application of New Statistical Techniques in Insurance Mathematics)—Ernst Zwinggi.
- Bemerkungen über die Nachkriegssterblichkeit (Comments on Post-War Mortality in Germany)-Wolfgang Sachs.
- Statistische Testmethoden in der Versicherung (The Application of Statistical Tests to Insurance Data)—Hans Münzer.
- Die Bedeutung von Pierre Simon Laplace und Felix Klein für die Versicherungsmathematik (The Importance of Laplace and Felix Klein to Insurance Mathematics)-Wilhelm Lorey.
- Methoden zur summarischen Berechnung der Prämienreserve ohne Gruppierung des Versicherungsbestandes (Methods of Calculating the Net Premium Reserves in Total without Grouping Policies)—Werner Pöttker.

#### The Actuarial Society of Australasia 1950

Presidential Address-L. Shotlander.

Life Office Records for Superannuation Business-R. L. Bienvenu, L. J. Cohn and R. F. McDonald.

Australian Publications-1948-1949.

Notes on Life Insurance-Frank Ross.

Some Aspects of Assessments of Liability under the Broken Hill Mines (Pneumoconiosis-Tuberculosis) Scheme—M. H. Gastineau-Hills and P. C. Jackson. Group Life and Pension Schemes in Australia—R. M. Craig.

#### GIORNALE DI MATEMATICA FINANZIARIA 1950

The Evaluation of Varying Annuities at Varying Rates of Interest-H. E. Stelson.

# PROCEEDINGS OF THE LIFE INSURANCE ASSOCIATION OF AMERICA

1951

Address by A. A. Berle, Jr.

# TRANSACTIONS OF ASSOCIATION OF LIFE INSURANCE MEDICAL DIRECTORS OF AMERICA Vol. 34 (1950)

Prophylaxis and Therapy of Arteriosclerosis-William Dock.

- The Diagnosis of Arteriosclerosis: Including Observations on Lipid Metabolism and the Ballistocardiogram—Richard Gubner.
- Prognosis in Coronary Artery Disease-R. W. Scott.
- Myocardial Infarction: A Mortality Study-F. A. Waldron and W. P. Constable.
- Prognostic Import of a Large Q<sub>3</sub> Deflection: A Mortality Study—William Bolt and M. F. Bell.
- Is Obesity an Endocrine Problem?-E. H. Rynearson.

Sarcoidosis and Histoplasmosis-H. B. Campbell.

Underwriting the Highly Impaired Risk-H. C. McAlister.

The Electrocardiogram in Insurance Selection—K. F. Brandon, M. H. Neill, and G. C. Streeter.

# THE JOURNAL OF THE AMERICAN SOCIETY OF CHARTERED LIFE UNDERWRITERS

# Vol. 5, No. 3 (June, 1951)

Gratuitous Indemnity for Servicemen-Its Background and Significance-D. M. McGill.

An Experiment in State Insurance—The Wisconsin State Life Fund—C. C. Center. Louisiana Civil Law as Applied to Life Insurance—L. S. Cahn.

Post-War Trend of Life Insurance in Japan-Makoto Suetaka.

#### No. 4 (September, 1951)

Developments in the Field of Personal Insurance-J. H. Wood.

Powers of Appointment and Revised Insurance Planning-Harold Wurzel.

Gifts of Life Insurance-B. M. Becker.

Points of Law for an Insurer to Consider in Acting under an Insurance Trust-P. F. Fallon.

## PROCEEDINGS OF THE LIFE OFFICE MANAGEMENT ASSOCIATION 1951 Special Conference

Organization, Management and Control Activities of a Life Office Planning Division— G. C. Boddiger. Control Reports and Their Use in Life Office Operations-E. J. Moorhead.

Disbursement Accounting via Punch Cards-Carl Arnold.

A Simplified Plan for Clerical Production Control-W. B. Irons.

Planning Projects That Are Paying Dividends-A Panel Presentation.

# Association of Life Insurance Counsel

(December, 1950)

Divorce and Policy Ownership-L. G. Dorety.

Strengthening of Policy Reserves—Comments on Some Legal Questions—L. M. Gammill.

Delivery of the Policy to the Insurer as a Condition Precedent to: (1) Right to Receive Cash Surrender Value, (2) Effecting Surrender, (3) Change of Beneficiary—Barry Oakes.

# (May, 1951)

Current War Problems-The Serviceman in 1951-Joseph Wadsworth.

PROCEEDINGS OF THE HOME OFFICE LIFE UNDERWRITERS ASSOCIATION Vol. 32 (April, 1951)

Substandard Insurance-E. A. Lew.

Applications and Binding Receipts-H. S. Campbell.

Discussion of War Underwriting, Underwriting Routine, Liberalization of Underwriting, Term Insurance, and Business Insurance.

State and Highway Police-Morris Pitler.

Canadian Aluminum Industry-Pot Room Workers-J. B. Mabon.

The Chemical Industry-A Ten-Year Review-S. M. MacCutcheon.

PROCEEDINGS OF THE FRATERNAL ACTUARIAL ASSOCIATION No. 21 (1948–1949)

Moral Hazards & Habits-K. I. Hittle.

Developments in the Field of Pensions-G. A. Huggins.

The Recent Juvenile Mortality Experience of Thirteen Fraterna Societies-M. M. Cusic.

Multiple Decrements in the Determination of Monetary Values-D. D. Macken, Jr.

The Conference Modification of the Class III Disability Table, and its Application to Fraternal Societies—Elmer Knodel.

Supplement to Valuation Report from Insurance Departments' Supervisory Viewpoint -C. C. Dubuar.

Practices and Conclusions of Pennsylvania Insurance Department on Reserve Strengthening-S. L. Tucker, Jr.

Expense Limitation for Fraternal Benefit Societies per Section 461a, New York Statute -T. F. Hanrahan.

Some Commutation Columns for Monthly and Continuous Payments and Their Application to Valuation Procedures-Jean Conrad.

Periodical Operating Reports-R. E. Henne.

Accumulation of Surplus under the Commissioners 1941 Standard Ordinary Mortality Table—John Gall.

#### No. 22 (1949-1950)

Hospitalization Insurance and Fraternal Benefit Societies—C. A. Tiffany. Results of a Recent Reserve Strengthening Program—C. R. Keene. Some Observations on Reducing Term Insurance-John Phelps.

- Some Problems in Integrating Social Security and a Local Retirement Plan-R. G. Roeder.
- Adapting a Traditional Method of Gross Premium Calculation for Fraternal Societies-R. H. Taylor.

Recent Amendments to the Social Security Act-R. A. Hohaus.

Informal Discussion of Payor Benefits, Certificate Changes, Production of New Business, and Fraternal Statements.

New England Journal of Medicine Vol. 243 (December 7, 1950)

Life Expectancy and Probable Disability in Multiple Sclerosis-J. Ipsen, Jr.

THE JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION Vol. 143, No. 17 (August 26, 1950)

The Normal Blood Pressure Range and Its Clinical Implications—A. M. Master, L. I. Dublin, and H. H. Marks.

Vol. 144, No. 16 (December 16, 1950)

Maternal Mortality in the United States in 1949-F. G. Dickinson and E. L. Welker.

CONNECTICUT STATE MEDICAL JOURNAL Vol. 15, No. 8 (August, 1951)

Normal Blood Pressure Range-H. L. Dwyer, Jr.

American Journal of Public Health Vol. 41, No. 5 (May, 1951)

Medical Care Insurance: Lessons from Voluntary and Compulsory Plans—Adequacy of Financing—I. S. Falk.

Methods and Rates of Payment-F. G. Dickinson.

No. 6 (June, 1951)

Longevity of the Industrial Worker-L. I. Dublin and R. J. Vane.

No. 7 (July, 1951)

The Quality of Medical Care: Methodology of Survey of the Medical Groups Associated with the Health Insurance Plan of New York—H. B. Makover.

No. 8 (August, 1951)

A Mortality Index for Use in Place of the Age-Adjusted Death Rate-J. Yerushalmy.

L'EGYPTE CONTEMPORAINE

Vol. 41 (January-February, 1950) Mortality Tables in Egypt and in England—A. G. Abdel-Rahman.

> BULLETIN DE L'INSTITUT NATIONAL D'HYGIÈNE Vol. 5 (April-June, 1950)

Evolution en France de la durée moyenne de vie entre 1850 et 1950 (French Trends in Average Length of Life between 1850 and 1950)—C. Candiotti, et al. THE JOURNAL OF BUSINESS OF THE UNIVERSITY OF CHICAGO Vol. 24, No. 2 (April, 1951)

Pensions Are Not Enough: The Individual Company and Its Older Workers-E. S. Hewitt and Associates.

THE QUARTERLY JOURNAL OF ECONOMICS Vol. 65, No. 2 (May, 1951)

Long-Range Cost Estimates for Old-Age Insurance—C. C. Killingsworth and G. Schroeder.

Annals of American Academy of Political and Social Science (January, 1951)

Medical Care for Americans (Whole Number).

SOCIAL SECURITY BULLETIN Vol. 14, No. 3 (March, 1951)

Social Security at the Midcentury: Report for the Fiscal Year 1950.

No. 5 (May, 1951)

Independent Plans Providing Medical Care and Hospital Insurance: 1950 Survey-A. W. Brewster.

No. 6 (June, 1951)

Financial Policy in Old-Age and Survivors Insurance, 1935-50-J. S. Parker.

POPULATION STUDIES Vol. 4, No. 3 (December, 1950)

The Reproductivity of Jews in Canada, 1940-1942-Mortimer Spiegelman. Refined Rates for Infant and Childhood Mortality-V. G. Valaoras.

> Bulletin de l'Institut International de Statistique Vol. 32 (1950)

The "Expectation of Life of the Dead": A Contribution to Classify some Fundamental Notions-Wilhelm Winkler.

ANNALES DE SCIENCES ECONOMIQUES APPLIQUÉES (BELGIUM) (March, 1950)

Recherche des taux divers relatifs au décès et à l'invalidité (Study of Various Rates for Mortality and Disability)—R. Dussart.

Estadística

Vol. 9, No. 30 (March, 1951)

The Construction of the First Venezuelan Life Tables, 1941-1942-Eric Michalup.

No. 31 (June, 1951)

The Problem of Quality in Census Data-L. E. Truesdell.

MATHEMATICAL TABLES AND OTHER AIDS TO COMPUTATION Vol. 5, No. 34 (April, 1951)

The California Digital Computer-P. L. Morton.

#### BIOMETRICS

#### Vol. 7, No. 1 (March, 1951)

The Present Status of Variance Component Analysis-S. L. Crump.

Components in Regression-J. W. Tukey.

Consistency of Estimates of Variance Components-R. E. Comstock and H. F. Robinson.

# No. 2 (June, 1951)

Notes on the Estimation of Gross and Net Reproduction Rates by Methods of Statistical Sampling-J. C. Koop.

# Sankhyä

# Vol. 10, Part 4 (1950)

Completeness, Similar Regions and Unbiased Estimation—E. L. Lehmann and Henry Scheffé.

A Statistical Study on Multiple Cases of Disease in Households-K. K. Mathen and P. N. Chakraborty.

# JOURNAL OF THE ROYAL STATISTICAL SOCIETY Vol. 114, Part 1 (1951)

The Doctor's Day and Pay. Some Sampling Inquiries into the Pre-War Status—A. B. Hill.

A Discussion on the Reports of the Royal Commission on Population—Alexander Carr-Saunders, Sir Hubert Henderson, Sir George Maddex, and D. V. Glass.

## Part 2 (1951)

Historical Survey of the Development of Sampling Theories and Practice-Y. P. Seng.

# BIOMETRIKA

# Vol. 37 (1950)

- The Exact Partition of  $\chi^2$  and Its Application to the Problem of the Pooling of Small Expectations—H. O. Lancaster.
- On the Generalized Second Limit-Theorem in the Calculus of Probabilities—K. S. Rao and D. G. Kendall.

Tables of the  $\chi^2$  Integral and of the Cumulative Poisson Distribution—H. O. Hartley and E. S. Pearson.

# Vol. 58 (1951)

The Frequency Distribution of the Product-Moment Correlation Coefficient in Random Samples of Any Size Drawn from Non-Normal Universes—A. K. Gayen.

Note on the Exact Treatment of Contingency Goodness of Fit and Other Problems of Significance-G. H. Freeman and J. H. Halton.

Efficiency of the Method of Moments and the Gram-Charlier Type A Distribution-L. R. Shenton.

> JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION Vol. 46, No. 253 (March, 1951)

Undergraduate Statistical Education-S. S. Wilks.

A Short-Cut Measure of Correlation-W. A. Spurr.

Sampling with Probabilities Proportional to Size-Nathan Keyfitz.

#### No. 254 (June, 1951)

Estimating Parameters of Logarithmic-Normal Distributions by Maximum Likelihood -A. C. Cohen, Jr.

Recent Mortality Trends and Differentials-I. M. Moriyama.

On the Variance of Estimates of the Standard Deviation and Variance-W. D. Evans.

# No. 255 (September, 1951)

Actuarial Science-C. A. Spoerl.

# The Annals of Mathematical Statistics Vol. 22, No. 1 (March, 1951)

On Minimum Variance in Nonregular Estimation-R. C. Davis.

Ratios Involving Extreme Values-W. J. Dixon.

On Information and Sufficiency-S. Kullback and R. A. Leibler.

Estimators of the Probability of the Zero Class in Poisson and Certain Related Popula-

tions-N.L. Johnson.

# No. 2 (June, 1951)

Estimation of Parameters in Truncated Pearson Frequency Distributions-A. C. Cohen, Jr.

Conditional Expectation and the Efficiency of Estimates-P. G. Hoel.

#### No. 3 (September, 1951)

Estimating Linear Restrictions on Regression Coefficients for Multivariate Normal Distributions-T. W. Anderson.

The Asymptotic Distribution of the Range of Sums of Independent Random Variables ---William Feller.

The Moment Problem for Unimodal Distributions-N. L. Johnson and C. A. Rogers.

THE AMERICAN MATHEMATICAL MONTHLY Vol. 58, No. 6 (June-July, 1951)

A New Interpolation Formula-P. M. Hummel and C. L. Seebeck, Jr.

HET VERZEKERINGS-ARCHIEF Vol. XXVIII, Nos. 1 and 2, 1949

L'Age limite  $\omega$  (The limiting age  $\omega$ )-M. van Haaften.

Over het verband tussen verlaging van de gemiddelde rekenrentevoet der premiereserve, verhoging van de premiereserve en verhoging van de intrestwinst (On the relation between a fall in the interest basis on the net premium reserves, the consequent increase in the reserves and the increased interest surplus)--W. Meyer.

- Stochastische problemen in de verzekeringswiskunde (Probability problems in insurance mathematics)-G. W. de Wit.
- Enige resultaten van groepsgewijze reserveberekeningen voor verzekeringen van weduwepensioen (Some results of grouping in the reserve calculations for insurances of widows annuities)---B. Grootenboer.
- Differentierekening, interpolatie- en benaderingsmethoden (Differential calculus interpolation and approximate methods)—J. de Gans.

#### Vol. XXVIII, No. 3, 1950

Insurance of under-average lives in Denmark—I. Moltke.

Eerste congres van de toezichthoudende overheidsinstanties voor private verzekering

(The first congress of government supervisors of private insurance in Europe)---C. Campagne.

- Benadering koopsommen voor dalende tijdelijke verzekeringen bij overlijden (The approximate single premium for decreasing term insurances)—Th. C. L. Kok.
- Een sterfte-formule, die vrijwel dezelfde voordelen biedt als die van Makeham (A mortality law which possesses the same advantages as that of Makeham)—W. J. C. De Heer.
- De wetenschappelijke balansen van het Algemeen Burgerlijk Pensioenfonds (The valuation balance sheet of the general citizens' pension fund)—E. Steller.
- De sterftedaling in Nederland sinds 1870 (The decreasing mortality rates in Holland since 1870)—G. W. de Wit.

### Vol. XXVIII, No. 4

- Le financement de l'assurance sociale (Financing Social Security)—J. A. T. M. Brans and C. Campagne.
- Disability-insurance in Denmark-C. A. Busch-Petersen.
- Benelux-dag der Vereniging voor Verzekeringswetenschap (Coordination of insurance problems in the Benelux countries)—C. Scheltema.
- Vergelijking der verschillende toekomststerftetafels voor Nederland (Comparisons of different mortality forecasts for Holland)—G. W. de Wit.
- Enige nieuwe gezichtspunten ten aanzien van de reserveberekening voor de gemengde verzekering volgens Lidstone (Some new viewpoints on the calculation of reserves for endowment insurances by Lidstone's Z-method)—B. Grootenboer.
- Sterfte naar doodsoorzaken (Mortality tables according to cause of death)-G. W. de Wit.

#### INSTITUTO DOS ACTUARIOS PORTUGUESES, BOLETIM No. 4, 1949

- Introdução na Demografia de alguns conceitos de Geometria das Massas (The demographic interpretation of some concepts used in Statios)—L. dos Santos Fernandes.
- Avaliação, para efeito do balanço técnico, do activo das instituições de previdência (The valuation of the assets of pension funds for balance sheet purposes)—A. Alexandre.
- Sobre a aplicação de um grupo de iórmulas do Cálculo de Probabilidades na teoria dos Seguros de Vida (On the application of a group of formulas in probability calculus to the theory of insurance)—B. de Jesus Caraça.
- Leis de probabilidade—Metodos gerais para a sua dedução (General methods for the derivation of probability laws)—R. Campeão.
- Algumas considerações sobre anuidades de invalidez (Some considerations on disability annuity values)—A. C. Nova.
- Nouvelle méthode pour le calcul par groupes des réserves mathématiques en assurancevie (A new method of calculating reserves by grouping)—H. Jecklin.
- Eine Interpolationsformel des Zinsfussproblemes für steigende Renten (Increasing annuities at non-tabular rates of interest)—K. Lah.
- Regime financeiro do seguro social (Financing of Social Security)-A. Leao.