BOOK REVIEWS AND NOTICES

Society of Actuaries' Textbook on Life Contingencies. By Chester Wallace Jordan,
Jr. The Society of Actuaries, Chicago, 1952. Pp. 342.

A wag with tongue in cheek has defined an expert as a genius who ignores all
the details as he sweeps forward to the grand fallacy. In more serious vein, an in-
expert teacher of mathematics may be defined as one who strews so many de-
tails along the road that his students stumble with rigor instead of striding with
vigor.

Conversely, the expert teacher of mathematics is one who has so thorough a
grasp of all the details that he can submerge some with discretion, and expound
the others with clarity, emphasizing the basic principles in such a way that his
students achieve a practical combination of both rigor and vigor. This book has
been written by an expert teacher.

It is a difficult task, even for an expert teacher, to write a textbook which
continues the high level of accomplishment achieved by King and Spurgeon. It
is an even more difficult task to transcend this level and, at the same time, to
produce a book which students can read more easily. Professor Jordan has ac-
complished these tasks and has justified the plaudit of the Society's preface that
his is a "fortunate combination of technical ability and expository talent."

In the exposition of single-life functions, two basic approaches seem to be
feasible. Spurgeon's textbook, which will always warrant a nostalgic affection
from those of us who have reveled in its encyclopedic content, covers the subject
by using annual functions in the first few chapters, and it then modifies the re-
sults to cover benefits involving payments on a fractional or continuous basis.
There is merit to this approach and, if one were to make a major criticism of
Spurgeon's textbook, it would not be because of this approach. Instead, one
would need to criticize the roadblocks set up in the first chapter by the defini-
tions of the life table functions in terms appropriate for the theory of a station-
ary population, and by the concentration on the m_x and μ_x functions many chap-
ters before any practical use for these functions is indicated.

Jordan has adopted the alternative procedure of covering all the important
types of annuity benefits in one chapter, then devoting a chapter to all types of
insurance benefits, and so on. This justifies his thorough analysis of the μ_x func-
tion in the very first chapter, because no delay is encountered by the student
before he makes practical use of the function. In this chapter is a masterly ex-
planation of the life table as a mathematical embodiment of the underlying sur-
vival function. Because the life table is defined in exactly the way it will be used
in the immediately succeeding chapters (contrary to Spurgeon's treatment)
there is no artificial blockade for the student who wants to be mathematically
precise.

In line with the stated objective of producing a modern textbook capable of be-

ing applied directly to the benefits commonly offered by the life insurance com-
panies of the United States and Canada, Jordan has refrained from covering sub-
jects of interest primarily outside these countries. It is interesting to note that
a review in *JIA*, when Spurgeon's textbook first appeared, criticized that book
on the ground that it was so reflective of British practice that it could not be-
come an international textbook to the extent that King's book did. Today many
of us would wield the sword, or the traditionally mightier quill or ball-point, in
defense of Spurgeon against this sort of criticism. Assuming there were any simi-
lar criticism of Jordan, it would only prove he has accomplished his designated
task. There is much in Jordan's book which is destined for republication abroad.
Even if this were not so, surely there is praise enough in the affection the book
will inspire in the two countries for which it is especially intended.

Much of this affection will result because of the straightforward treatment of
the three modified preliminary term plans which are of most practical impor-
tance in America today. Another factor will be the tightly-knit presentation of
Lidstone's Theorem, which is the essential part of that misnamed dragon, the
"Equation of Equilibrium." The dragon is now dead and, fortunately, it is the
evil which has been interred with its bones while the *good* lives on.

Part II of the book, dealing with multiple-life functions, uses a remarkably
ingenious bit of pedagogy. Jordan first defines the joint-life status as the special
case of group survival in which a group is considered as a single collective entity
continuing until the first death of a component life occurs.

He then treats the last-survivor status as the opposite extreme; that is, as the
special case of group survival in which a group is considered to fail when its last
survivor dies. By this procedure he is able to simplify the treatment of other
cases, between the two extremes, in the chapter on the generalized multiple-life
status. Throughout, the very general nature of the term "status" is appropriate-
ly emphasized. The approach leads into a clear discussion of contingent and
compound contingent functions.

Part III of the book begins with a chapter on population problems. In this
chapter especially, Jordan combines the ingredients of clarity and rigor to pro-
duce a usable understanding of the subject.

The chapter on multiple-decrement theory embodies the results of recent re-
search and presents the general theory in such a way that the basic concepts are
available to the student for possible use in specific situations. On the other hand,
the treatment of specific situations is sparse. There are, of course, a number of
possible reasons for this sparsity. Those of us who work with pension funds, how-
ever, may be disappointed that the treatment of such funds has the dimensions,
not even of a summer romance, but of a hesitant flirtation carried on by mail.

The text concludes with a chapter on combined tables. This chapter is dis-
tinguished by its use of a generalized case in which there are two primary causes
of decrement, death and an unspecified cause. After a careful analysis of the gen-
eralized case, students should be able to cope readily with the two special cases
discussed in the chapter, namely, the combined mortality and disability table
and the combined marriage and mortality table.

Of all the gems the book contains, perhaps the most attractive are the sixteen sets of exercises. Not only does each chapter have a set of exercises ranging in difficulty from reproductions of the text to previous Society examination problems, but the exercises are also grouped by reference to the pertinent sections of the chapter. How far we have come from the days when an actuarial textbook would not stoop below the level of "principles"! Jordan stoops—and he stoops to conquer. As if this progress were not sufficient, there are, *mirabile dictu*, answers to every problem.

Through the judicious use of three appendixes, the book is able not only to clear a number of obstacles from the text but also to compile various formulas and derivatives in readily accessible form. As a corollary, Jordan achieves his purpose of emphasizing a small number of primary principles and stressing the unity inherent in the different branches of his subject.

There are only a few points on which this reviewer ventures to make even partially adverse criticism. At the end of Section 4 of Chapter 1 is a simple proof of the fact that values of μ_x exceeding 1 will occur in the year of age $\omega - 1$ to ω. Without any real increase in complexity, the calculus theorem of mean value could have been used in such a way as to prove the point while suggesting to students that $\mu_x > 1$ may occur at ages below $\omega - 1$.

Exercise 11 of Chapter 1 invites the student to prove that $\mu_x > q_x$ when $d_{x-1} > d_x$ by "using formula (1.20)." The formula referred to is the approximate equation:

$$\mu_x \doteq \frac{d_{x-1} + d_x}{2l_x}.$$

(1.20)

Since it is hardly feasible to prove an inequality from an approximate equation, the quoted language should probably have read "if l_x is a second degree polynomial from $x - 1$ to $x + 2$." As a matter of interest to students, it is relatively easy to prove that, if l_x is a third degree polynomial, and if $d_{x-1} > d_x$, then the inequality $\mu_x > q_x$ may be reversed or may become an equality; the critical test is a comparison of $\Delta^3 l_x$ and $1.5\Delta^2 l_x$.

An interesting interpretation of formula (1.20) is obtained from the following transformation:

$$\mu_x \doteq \frac{\frac{1}{2}d_{x-1} + \frac{1}{2}d_x}{l_x}.$$

Since the numerator closely approximates the sum of the deaths from $x - \frac{1}{2}$ to x and the deaths from x to $x + \frac{1}{2}$, it may be taken as the number of deaths at age x nearest birthday. Thus,

$$\mu_x \doteq \frac{\text{Deaths at nearest age } x}{l_x},$$

a result whose importance in the study of exposure formulas would seem to warrant its inclusion in the textbook.

Formula (1.25) of the text is as follows:

$$_t p_x \, \mu_{x+t} \doteq q_x \quad \text{for} \quad 0 < t < 1.$$

The reason for the exclusion of the end points 0 and 1 in the t range is not pointed out in the text, and the student is left to surmise that the assumption of uniform distribution of deaths over each integral year of age implies discontinuities in the l_x curve (or polygon) at integral ages.

The last part of Section 3, Chapter 3, gives definitions of "life estate" and "remainder" in connection with an explanation of "the usual basis of estate and inheritance tax laws." These definitions may cause confusion to students who, in practical work, find that Federal laws of this type use somewhat different definitions in connection with estates of decedents dying before January 1, 1952. Unfortunately, other changes in the basis of the Federal laws with respect to other decedents were made too late for reference in the textbook.

Students familiar with policies of the type often referred to as "Modified 5" or "Modified 3" will find that a strict adherence to the text definition of net level premium reserves appears to leave such policies outside the realm of such reserves. A simple comment in the text could cover this point.

In the discussion of valuation methods in Chapter 5, the group method of valuation appears to have been slighted. Perhaps it was assumed that this method would be apparent to students from the earlier discussion of reserve formulas, but it would seem that only a few students could quickly bridge the gap between formulas and the working method.

Section 6 of Chapter 14 includes the familiar proof that $a_{\overline{x}|}$ is "always" greater than a_x. Students should note a possible exception at the end of a mortality table in which the numbers of the deaths at the last few years of age happen to be equal. If DeMoivre's law applies, the two annuity values are always equal.

Exercise 19 in Chapter 15 deals with a mutual benefit society offering withdrawal, death and retirement benefits. It is readily apparent that, in many cases, the stated withdrawal benefit would substantially exceed the death benefit, and this is a dangerous state of affairs. A more realistic scale of benefits should have been used in the exercise.

Not one of the critical comments in the nine preceding paragraphs involves a major point; in fact, most of the paragraphs are merely suggestions to students or (the traditional privilege of a reviewer) statements of personal preference on minor points. The outstanding facts are that Jordan has wrought his book with care and precision, and that his techniques must win the praise and admiration of everyone who is interested in the education of our students. Necessarily basing his work to some extent on the texts of King and Spurgeon, Jordan has surpassed them in grace of style and grasp of pedagogy; confronted with a mass of recent literature on current topics, he has separated the wheat from the chaff with skill and understanding; steering his course to avoid the Scylla of excessive detail and the Charybdis of vague generality, he has produced a superb combination of theory and practice. This is more than a textbook; it is a rewarding experience to the reader. And if, in these closing words, I seem to rhapsodize over the book—why not? Students will.

HARRY GERSHENSON

OTHER RECENT PUBLICATIONS

MATHEMATICAL, STATISTICAL, AND ACTUARIAL TABLES, TEXTBOOKS, ETC.

Mouzon, E. D., Jr. and Rees, P. K. *Mathematics of Finance*. Ginn and Company, Boston, Mass., 1952. Pp. 155.

This text is designed for the student with a modest background in mathematics and is liberally supplied with illustrative examples and exercises. The book is not sufficiently advanced for inclusion in the Society's syllabus.

Price, H. V. and Knowler, L. A. *Basic Skills in Mathematics*. Ginn and Company, Boston, Mass., 1952. Pp. 257.

This textbook is intended for students who need a review of fundamentals preparatory to the usual college course in mathematics. A chapter on mathematics of finance includes a development of elementary life insurance formulae.

OTHER ACTUARIAL AND INSURANCE PUBLICATIONS

Batchler, J. L. *Punched Card Accounting in a Life Insurance Company*. Life Office Management Association, New York, 1952. Pp. 167.

This is a new and revised edition of a booklet prepared in 1944. So much progress has been made on the subject and so many new and improved machines have been introduced that a new edition was felt advisable. The application of these new techniques and the new machines is described in considerable detail. The book is quite comprehensive, chapters being devoted to the application of punched card routines to general accounting, premium income, investment income, income and disbursement accounting, premium billing and many similar activities.

Institute of Actuaries. *Actuarial Tables for Examination Purposes*. University Press, London, 1952. Pp. 112.

This is a series of tables for the use of candidates for the actuarial examinations. It provides in one compact volume the tables for working out actuarial problems met in the course of their studies for the compound interest, annuity-certain and life contingency portions of the examinations.

Institute of Life Insurance (prepared and published by). *1952 Life Insurance Fact Book*. New York, 1952. Pp. 107.

This is the seventh issue of the yearly fact book prepared by the Institute and covers the activities of the year 1951. The statistics given represent, except as noted, the business of legal reserve life insurance companies and cover life insurance in the United States or of United States companies. As in the past, where further information has been obtained, totals for past years have been revised and thus may differ from those appearing in previous Fact Books.

Mutual Life Assurance Company of Canada (prepared and published by). *An Epic of Progress*. Waterloo, Ontario, 1952. Pp. 40.

This little booklet is a history of the first mutual life insurance company in Canada, its early problems and its rise to a position of prominence in the life insurance industry. It has been prepared as a tribute to the half-century of service given unselfishly by Mr. Walter H. Somerville, Executive Vice President of the Company.

Society of Actuaries (prepared and published by). *Annuity Tables*. Chicago, 1952. Pp. 156.

This is a volume of tables of derived functions at four interest rates, 2%, $2\frac{1}{4}\%$, $2\frac{1}{2}\%$ and 3%, in combination with mortality rates according to each of four annuity tables. These four annuity mortality tables had been developed in papers and discussions of the Society dealing with past, present and future mortality of annuitants. The derived functions were prepared as a result of the need for an authoritative and reasonably complete set of such tables. The four annuity mortality tables chosen represent (1) a reasonably conservative level of mortality on nonrefund annuities as of 1949, known as the "a-1949 Table"; (2) and (3) the mortality rates of this table projected ten years and thirty years respectively; and (4) the mortality rates based on projected decreases in the mortality rates of the a-1949 Table, producing what is described as a "generation" table.

PENSION FUNDS AND SOCIAL INSURANCE

George W. Bachman and Associates. *Health Resources of the United States*. The Brookings Institution, Washington, D.C., 1952. Pp. 360.

The stated objectives of the present study are (1) to ascertain the extent of the health resources available in the United States, (2) to describe the major private and public health programs, and (3) to furnish a basis for further study. The decisions as to the format and extent of the book followed a basic pattern against varying health levels, matching the facilities and their utilization. More study is expected. Mortality and morbidity statistics precede those on personnel, on medical group practice, the catalogue of impairments, industrial health facilities and time losses.

British Columbia Hospital Insurance Service. *Third Annual Report*. Queen's Printer, Victoria, B.C., 1952. Pp. 20.

The third Annual Report of the B.C. Hospital Insurance Service covers the year 1951 and follows the same general pattern as the reports of prior years (*TSA* II, 520 and *TSA* III, 637). In particular, it is indicated that the plan experienced an excess of cash disbursements over receipts amounting to more than \$5 million during the fiscal year ended March 31, 1951.

Federal Security Agency. *Fact Book on Aging*. Committee on Aging and Geriatrics, Federal Security Agency, Washington, D.C., 1952. Pp. 62.

This booklet contains 21 charts and 35 tables giving basic information about the aging population of the United States. The term "aging" is a new development, in contrast with the previous use of the word "aged." It is stated that many of the data are given beginning at age 45 "in recognition of the fact that many of the problems of aging have their onset in middle life." The information given covers many facets of the problem—not only mortality (with the usual oversimplification involved in utilizing life expectancies) but also household relationships, budget costs, income and assets status, employment status, and disability. Brief comments accompany the charts. In a few cases, the brevity tends to be somewhat misleading as, for instance, a sentence discussing the cost of living for an aged couple in a *large city* being immediately followed by a sentence dealing with cash income of families with an aged head *in all sections of the country*.

KIMMEL, LEWIS H. *Share Ownership in the United States*. The Brookings Institution, Washington, D.C., 1952. Pp. 151.

A study proposed by G. Keith Funston, President of the New York Stock Exchange, this report has been briefly reported in financial and research journals. Probably 6½ million individuals own shares in "publicly owned" stocks, and 3 million in "privately held" stocks. The report covers the methods of research, links the investment pattern of 9 thrift facilities—insurance ownership leading—and shows results by sex, geographical area, size of community, occupation and other breakdowns. Elderly retired persons holding the publicly owned stocks are estimated at 560,000. Former estimates are also reviewed.

International Labor Office. *Minimum Standards of Social Security*. Report V(a)(2); and *Objectives and Advanced Standards of Social Security*. Report V(b). International Labor Office, Geneva, 1952. Pp. 313 and 164 respectively.

In the development of the new Convention concerning minimum standards of social security adopted last June by the International Labor Conference, a number of reports have been prepared. These have been noted in reviews during the past two years. Report V(a)(2) contains the replies of 30 Governments on the changes which the Office had made in the tentative conclusions developed at the Conference in June 1951. Thereafter the Report presents a new revised text along with analysis thereof as to how it would apply to certain selected national systems. This revised text was used as a basis for consideration at the June 1952 Conference. A summary of the action taken at this Conference, including a description of the contents of the Convention adopted, is available in an article by Robert J. Myers in the *Social Security Bulletin* for October.

Report V(b) was prepared for the use of the 1952 Conference in its initial consideration of advanced standards. However, there was not sufficient time to take up this subject. The Conference recommended that its consideration should be postponed indefinitely.

Saskatchewan Hospital Services Plan. *Annual Reports of the Saskatchewan Hospital Services Plan, 1950 and 1951*. Queen's Printer, Regina, Saskatchewan, 1951 and 1952. Pp. 84 and 88.

These reports constitute the fourth and fifth in a series and describe the operations of the Saskatchewan Hospital Services Plan during 1950 and 1951. They follow the same general pattern as earlier reports (*TSA* II, 527) and provide extensive descriptive and statistical data about this compulsory governmental plan of hospitalization insurance.

Social Security Administration. *Analysis of 346 Group Annuities Underwritten in 1946–50. Actuarial Study No. 32*. Weltha Van Eenam and Martha E. Penman, Division of the Actuary, Social Security Administration, Federal Security Agency, Washington, D.C., 1952. Pp. 64.

In connection with the old-age and survivors insurance system, the Social Security Administration has always taken an interest in supplementary ways of providing old-age security. The Division of the Actuary had previously made an analysis of new group annuity plans underwritten in 1942–46, considering such elements as eligibility provisions, retirement ages, benefit formulas, requirements for vesting, and coordination with OASI. The current study considers plans underwritten in 1946-50—not only analyzing them in the same manner but also comparing them with the plans of the previous study.

Social Security Administration. *Analysis of the Benefits under the Old-Age and Survivors Insurance Program as Amended in 1952, Actuarial Study No. 34.* Eugene A. Rasor, Division of the Actuary, Social Security Administration, Federal Security Agency, Washington, D.C., 1952. Pp. 50.

The actuarial staff of the Social Security Administration has at each major change of the benefit formula under OASI made a quantitative, mathematical analysis of the various benefit relationships developing. This study relating to the 1952 Amendments is the latest in this series and is a revision of *Actuarial Study No. 30,* which related to the far more extensive 1950 Amendments. Illustrative benefits for the new formula are given, as well as nomographs. Analyses are made as to the cases in which minimum and maximum benefits are applicable and as to how the rounding provisions apply. Finally, there are tables of level-premium costs of the benefits for various individuals differing by age at entry into the system, sex, and marital status.

Social Security Administration. *Illustrative United States Population Projections 1952, Actuarial Study No. 33.* Robert J. Myers and Eugene A. Rasor, Division of the Actuary, Social Security Administration, Federal Security Agency, Washington, D.C., 1952. Pp. 43.

This study presents illustrative population projections for the entire United States (including territories) for the next 100 years. Actually, four separate projections are given, for combinations of future low and high fertility and future low and high mortality. Two of these projections are to be used as the basis for new long-range cost estimates for the OASI system. Detailed data are presented for both the demographic factors and the population for various future years, with subdivisions by sex and 5-year age groups. In addition, the study contains valuable reference data in regard to past censuses and vital statistics.

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 other countries, especially in continental countries, appeared in *Mitteilungen der Vereinigung Schweizerischer Versicherungsmathematiker,* Volume 52, page 174.

PROCEEDINGS OF THE CASUALTY ACTUARIAL SOCIETY

Vol. 38, Part 1, No. 69 (November, 1951)

Address of the President: The Casualty Actuarial Profession—H. T. Barber.
Rate Regulation and the Casualty Actuary—T. O. Carlson.
The Combined Fire and Casualty Annual Statement Blank, Part II—T. F. Tarbell.

JOURNAL OF THE INSTITUTE OF ACTUARIES

Vol. 78, Part 1, No. 348 (1952)

Mortality of Life-Office Annuitants.
The Whittaker-Henderson Method of Graduation—A. W. Joseph.
The Maximum Likelihood Fitting of the Discrete Pareto Law—H. L. Seal.

Part 2, No. 349 (1952)

Time-Changes in the Mortality Rate: An Experimental Formula—L. G. K. Starke.
The Treatment of Sub-Standard Lives in Practice—Wilfred Perks.
Some Compound Interest Approximations—A. W. Evans.

TRANSACTIONS OF THE FACULTY OF ACTUARIES

Vol. 20, Part 2, No. 175 (1951)

The Individual and the State—Sir Alexander Gray.
Widows' Funds: Some Notes on Theory and Practice—D. A. B. Scrimgeour.
An Actuary in Commerce—N. C. Turner.
Nomograms—W. J. Cooksey.

JOURNAL OF THE INSTITUTE OF ACTUARIES
STUDENTS' SOCIETY

Vol. 11, Part 1 (March, 1952)

Notes on Points Arising during the Currency of Transactions in Reversions and Life
    Interests—N. Benz.
Discount Houses and the Short-Term Money Market—L. G. Mills.
The Measurement of the Intensity of Marriage with Allowance for the Relative Num-
    bers and Age Distributions of the Sexes—A. H. Pollard.
Note on Annuity Certain Contracts—J. Hamilton-Jones.
The Trend of Future Cost in Group Life and Pension Schemes—W. Eschrich.

Part 2 (July, 1952)

Population Projections: Notes on the Choice of Bases—P. R. Cox.
Some Theoretical Aspects of Permanent Sickness Insurance—Knut Medin.
Concerning Large Sample Tests and Confidence Intervals for Mortality Rates—J. E.
    Walsh.

MITTEILUNGEN DER VEREINIGUNG SCHWEIZERISCHER
VERSICHERUNGSMATHEMATIKER
Vol. 52, Part 1 (1952)

(Probability Criteria for Judging the Goodness of Fit of a Graduation of a Mortality
    Table)—Hans Ammeter.

SKANDINAVISK AKTUARIETIDSKRIFT
Nos. 1-2 (1952)

Large Sample Validity of the Binomial Distribution for Lives with Unequal Mortality Rates—J. E. Walsh.

Inequalities in Makeham-Graduated Tables—J. F. Steffensen.

On the Net Retention and Solvency of Insurance Companies—T. Pentikäinen.

TRANSACTIONS OF THE ASSOCIATION OF LIFE INSURANCE MEDICAL
DIRECTORS OF AMERICA
Vol. 35 (1951)

Cortisone, Hydrocortisone and Corticotropin: Some Facts and Speculations with Special Reference to Rheumatoid Arthritis—P. S. Hench.

The Outlook for the Control of Rheumatic Fever and Rheumatic Heart Disease— H. M. McCue, Jr.

Blood Dyscrasias: Current Concepts: The Effect of Treatment on Prognosis—J. G. Falconer.

Current Progress in Cardiovascular Research—F. R. Dieuaide.

The Differential Diagnosis of Chest Pain—H. M. Marvin.

The Evaluation of Certain Fundamental Electrocardiographic Patterns in the Selection of Insurance Risks—H. B. Kirkland, C. E. Kiessling, and A. M. Lyle.

Calcification of the Thoracic Aorta: A Mortality Study—William Bolt and M. F. Bell.

The Life Insurance Examiner and the Cardiovascular System—J. R. Gudger.

Relationships Between the Medical Profession and the Health Insurance Council— James Andrews, Jr.

The Public Health Situation Today: Public Health and Civil Defense—H. E. Hilleboe.

Some Contributions of Public Health to Life Insurance—G. M. Wheatley.

The Impact of Life Insurance on Public Health—R. F. Buchan.

The Prognosis of Benign Gastrointestinal Conditions—F. J. Ingelfinger.

Vagotomy and Subtotal Gastrectomy: Effect on Insurability of Individuals with Gastric and Duodenal Ulcers—L. L. McLelland and D. S. Pepper.

Mortality Among Insured Overweights in Recent Years—L. I. Dublin and H. H. Marks.

Insurance Hazards of Overweight: Dietary Factors in the Development of Atherosclerosis—T. M. Durant.

Overweight as a Contributing Factor in the Development of Diabetes and Its Complications—E. S. Dillon and J. M. Trapnell, Jr.

Overweight as a Contributing Factor in the Development of Hypertension—J. T. Sheridan and J. McC. Peck.

PROCEEDINGS OF THE HOME OFFICE LIFE UNDERWRITERS ASSOCIATION
Vol. 33 (April, 1952)

Presidential Address—A. C. Webster.

Non-Medical Insurance—J. T. Phillips.

The Underwriting of Accident and Sickness Insurance—W. S. Bagby.

Discussions of War Problems, Pension Trusts, Occupational Extras, The 1951 Impairment Study, Military Aviation, and Underwriting Routines.

Government Law Enforcement Agencies and Royal Canadian Mounted Police—Morris Pitler.

Granite Industry—E. A. Carlson.
The Steel Industry—Paul Shea.
1952 Report on John Plastics—Life Insurance Prospect—R. K. Mueller.

THE JOURNAL OF THE AMERICAN SOCIETY
OF CHARTERED LIFE UNDERWRITERS
Vol. 6, No. 3 (June, 1952)

The Distribution of Surplus—Valentine Howell.
Current Problems on Pension Plans—M. M. Goldstein.
Arbitration—A Facet of Pension Planning and Administration—L. J. Ackerman.
Social Insurance and Private—Contrast and Similarities—C. A. Kulp.

PROCEEDINGS OF ASSOCIATION OF LIFE INSURANCE COUNSEL
(May, 1952)

Consideration of Legal Problems Presented when a Legal Reserve Life Insurance Com-
    pany Enters the Accident and Health Field—C. J. Cover.
A New Look at the Incontestable Clause—W. L. Shield.
Enforcement of Loan Agreements Against Corporate Borrowers—E. J. Conroy.

THE QUARTERLY JOURNAL OF ECONOMICS
Vol. 66, No. 2 (May, 1952)

Long-Range Cost Estimates for Old-Age Insurance—R. J. Myers, C. C. Killings-
    worth, and Gertrude Schroeder.

AMERICAN JOURNAL OF PUBLIC HEALTH
Vol. 42, No. 5 (May, 1952)

An Epidemiologic Approach to the Study of High Blood Pressure—E. G. Clark and
    J. A. Morsell.
No. 8 (August, 1952)

Progress of American Industrial Medicine in the First Half of the Twentieth Century—
    R. T. Legge.
No. 10 (October, 1952)

The British National Health Service—Sir Allen Daley.

HARVARD BUSINESS REVIEW
Vol. 30, No. 4 (July–August, 1952)

Retirement Programs for Industrial Workers—L. J. Ackerman and W. C. McKain, Jr.

THE AMERICAN ECONOMIC REVIEW
Vol. 42, No. 3 (June, 1952)

Our Changed Population Outlook—J. S. Davis.

BRITISH JOURNAL OF SOCIAL MEDICINE
(July, 1951)

Changing Mortality from 1841 to 1947 Measured by the Life Table—Wallis Taylor.

POPULATION STUDIES
Vol. 6, No. 1 (July, 1952)

Estimating by Sample the Size and Age-Sex Structure of a Population—H. Silcock.

SOCIAL SECURITY BULLETIN
Vol. 15, No. 3 (March, 1952)

Social Security Progress and Problems: Report for the Fiscal Year 1951.

Railroad Retirement Act Amendments of 1951: Financial and Actuarial Aspects—
R. J. Myers.

No. 4 (April, 1952)

Social Welfare Today—A. J. Altmeyer.

No. 5 (May, 1952)

Economic Security of Farm Operators—A. M. Skolnik.

No. 6 (June, 1952)

Medical Services in the Old-Age Assistance Program—Ruth White.

No. 7 (July, 1952)

Old-Age Assistance Recipients: Reasons for Nonentitlement to Old-Age and Sur-
vivors Insurance Benefits—C. E. Hawkins.

Old-Age and Survivors Insurance Records: Derivation of By-Product Data—W. H.
Cummins.

BIOMETRICS
Vol. 8, No. 1 (March, 1952)

On the Construction of Tables for Moving-Average Interpolation—W. R. Thompson
and C. S. Weil.

No. 2 (June, 1952)

The Computation of Sums of Squares and Products on a Desk Calculator—J. M.
Hammersley.

JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION
Vol. 47, No. 258 (June, 1952)

Some Principles of Processing Census and Survey Data—R. B. Voight and Martin
Kriesberg.

Factors in the Accumulation of Social Statistics—Solomon Fabricant.

Prepaid Medical Care as a Source of Morbidity Data—N. R. Deardorff.

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