BOOK REVIEWS AND NOTICES

La mortalité des vieillards. By Paul Vincent. Population (a quarterly review published by the Institute National d'Études Démographiques, Paris), Sixth Year, April–June 1951, Number 2, p. 181.

Because basic data toward the end of life are deficient, the actuary constructing a mortality table is inevitably faced with the problem of closing at the terminal ages. The solution is almost always empirical.[1] By one approach, the mortality rate is put equal to unity at an arbitrarily chosen limiting age, and some interpolation process is used to fill the gap following the last acceptable ages. A second approach is by extrapolation, with an eye to results that, in some undefined way, seem reasonable.

Fundamentally the problem raises two questions. First, is there a limiting age to human life? Second, is there any reliable mortality experience at the very old ages? Among the many who have searched for evidence of a limiting age to human life are Young and Bowerman.[2] Although Steffensen does say that the probability of indefinite survival is zero, he argues against the notion of any definite limiting age beyond which there can be no human survival.[3] Both Steffensen and Feller agree that infinite tails to the survivorship curve, indicating very small chances of survival to extreme and improbable ages, are acceptable if they are convenient for computation and for theoretical clarity.[4] Thus, a survival curve with an asymptotic approach to zero was used by Gumbel in building a mathematical model for his investigation into the distribution of the oldest observed ages at death.[5] Since it is necessary to have some age beyond which life table functions will not be shown, Steffensen came up with a practical proposal. The suggestion is to fix the oldest age at a point such that, in computing an integral or summation involving the survivorship function, the error in neglecting the integral or sum from that point to infinity is kept within a prescribed limit. His example is based on a Makeham graduation of $O^{M(5)}$, with the requirement that the expectation of life be correct to three decimals. In this case, the last age of the life table comes to 107 years.

The investigators just cited were not necessarily concerned with the reliabil-

[1] H. H. Wolfenden, *Population Statistics and Their Compilation,* The Actuarial Society of America, New York, 1925, p. 116.

[2] T. E. Young, *On Centenarians; and the Duration of the Human Race,* C. and E. Layton, London, 1905.
W. G. Bowerman, "Centenarians," *TASA* XL, 360.

[3] J. F. Steffensen, *Some Recent Researches in the Theory of Statistics and Actuarial Science,* Cambridge University Press, London, 1930, p. 6.

[4] W. Feller, *An Introduction to Probability Theory and Its Applications,* Vol. 1, John Wiley & Sons, Inc., New York, 1950, p. 8.

[5] E. J. Gumbel, *La durée extrême de la vie humaine,* Hermann et Cie, Paris, 1937.

ity of the mortality rates at the oldest ages. That question is considered by Vincent in his method of "extinct generations," that is, "generations" specified by a calendar year of birth and with no surviving members. For such "generations," a survivorship column can be constructed by cumulating deaths back from the highest age. The method is obviously applicable only in countries with reliable mortality data showing, for the deceased, both date of birth and age at death. For his study, the author found such records in publications of France and Sweden, both countries with vital statistics offices operating for more than a

TABLE 1

EXAMPLE OF AN APPLICATION OF THE METHOD OF EXTINCT
GENERATIONS—FEMALES IN FRANCE

YEAR AT DEATH								DEATHS BETWEEN BIRTH-DAY IN 1929 AND BIRTHDAY IN 1930		
1929				1930						
Year of Birth	Age at Death	Number of Deaths		Year of Birth	Age at Death	Number of Deaths		Year of Birth	Age at Death	Number of Deaths
		Before Birth-day	After Birth-day			Before Birth-day	After Birth-day			
1829	99	20	......	......	......	......	......	......	......	......
1829	100	......	17	1829	100	13	......	1829	100	30
1828	100	16	......	1829	101	......	2	......	......	......
1828	101	......	7	1828	101	3	......	1828	101	10
1827	101	8	......	1828	102	......	2	......	......	......
1827	102	......	5	1827	102	4	......	1827	102	9
1826	102	4	......	1827	103	......	1	......	......	......
1826	103	......	3	1826	103	1	......	1826	103	4
1825	103	1	......	1826	104	......	4	......	......	......
1825	104	......	0	......	......	......	......	1825	104	0

century. This was supplemented by unpublished data for The Netherlands and Switzerland.

The method is illustrated in Table 1, using female deaths in France during 1929–1930. In the left hand panel, the recorded deaths for each year of birth are distributed to show the number occurring before and after the birthday in the year of death. In the right hand panel, the deaths for the completed year of age within the two-year period of observation have been gathered for each year of birth. The deaths so obtained are shown again in the top diagonal of summary Table 2. Read vertically, the deaths are those for a single year of birth at various ages; read horizontally, the deaths are those for a single age in successive years of birth. To compute the mortality rate at age 101 for the years of birth from 1828 to 1831, for example, the numerator is taken as the sum of deaths at age 101

within the rectangle, and the denominator as the sum of all deaths within the completed rectangle. If, as in the illustration, data are not available to complete the rectangle, estimates are made for the gaps; however, no part of the numerator is to be estimated. The error in the rate resulting from estimates in the denominator will usually be relatively small.

The method was applied to construct tables for males and females separately with deaths for Sweden in three periods, 1901–1914, 1914–1930, and 1930–1945; France in 1920–1929 and 1929–1938; Switzerland in 1876–1914 and 1914–1948; and The Netherlands in 1910–1925 and 1925–1939. The mortality rates so computed ran from either age 80 or 85 to ages from 101 to 105. From his results, Vincent observed a parallelism in the mortality rates and concluded that "this proves the analogy of mortality laws at advanced ages in the various countries,

TABLE 2

GENERATION DEATHS AT AGES 100 TO 104 YEARS DURING
1929–1933—FEMALES IN FRANCE

AGE AT DEATH	YEAR OF BIRTH							
	1825	1826	1827	1828	1829	1830	1831	1832
100....	....	....	....	....	30	29	33	28
101....	....	....	....	10	8	17	10	....
102....	....	....	9	2	6	8	....	....
103....	....	4	4	6	2	....	....	....
104....	0	4	1	1	....	....	....	....

at the various epochs, and for both sexes."[*] A logarithmic plot of the mortality rates provided evidence of reductions in mortality rates in the course of time up to ages about 95 years. Vincent comments that "the benefit of progress up to now in the fight against mortality, therefore, extends to the whole of life; but it becomes less noticeable with advance in age until it becomes imperceptible at the highest ages."

In view of the very close agreement in the results for the four countries, and also to increase the volume of data, all observations for each sex were brought together in order to ascertain the progression of mortality at the most advanced ages. Then, because the differences in the rates for the two sexes were negligible above age 100 years, the two experiences were combined in their entirety. This gave a very smooth progression of rates up to age 100, with increasing but somewhat irregular rates thereafter. The irregular portion was smoothed by a straight line, on the logarithmic scale, which reached a mortality rate of unity at age 110 when extrapolated. With regard to this limiting age, Vincent makes the point that it was reached without any preconceived idea and also that any other hypothesis for extrapolation would lead to practically the same result. Table 3

[*] This and the later quotation are translations by the reviewer.

TABLE 3

GENERATION MORTALITY RATES AND COMPLETE EXPECTA-
TION OF LIFE FOR FRANCE, THE NETHERLANDS, SWEDEN,
AND SWITZERLAND COMBINED—BOTH SEXES JOINTLY

AGE x	UNSMOOTHED DATA		SMOOTHED DATA	
	Mortality Rate q_x	Complete Expectation of Life $\overset{\circ}{e}_x$	Mortality Rate q_x	Complete Expectation of Life* $\overset{\circ}{e}_x$
85	0.1957	3.64	. . . .	. . . .
86	.2115	3.41	. . . .	. . . .
87	.2286	3.20	. . . .	. . . .
88	.2435	3.01	. . . .	. . . .
89	.2613	2.82	. . . .	. . . .
90	.2803	2.65	. . . .	. . . .
91	.2949	2.50	. . . .	. . . .
92	.3160	2.35*	. . . .	. . . .
93	.3345	2.21	. . . .	. . . .
94	.3490	2.09*	. . . .	. . . .
95	.3715	1.96*	. . . .	. . . .
96	.3905	1.84*	. . . .	. . . .
97	.4076	1.73*	. . . .	. . . .
98	.4256	1.61	0.433	1.58
99	.4540	1.47	.465	1.45
100	.499	1.32	.500	1.32
101	.534	1.19	.537	1.20
102	.566	1.06	.577	1.08
103	.67	.88	.620	.97
104	.65	.85	.666	.86
105	.71	.68	.715	.76
106	1.	.38	.768	.65
107	. . . .	. . . .	.825	.55
108	. . . .	. . . .	.886	.44
109	. . . .	. . . .	.952	.32
110	. . . .	. . . .	1.	.2

* The expectations of life at ages under 98 computed using the smoothed mor-
tality rates for ages 98 and over are the same as those shown for the unsmoothed
rates except for those marked by an asterisk, which are diminished by one in the
second decimal.

TABLE 4

GENERATION MORTALITY RATES (UNSMOOTHED) FOR THE AGED, BY SEX, IN SWEDEN, FRANCE, SWITZERLAND, AND THE NETHERLANDS FOR SPECIFIED PERIODS OF DEATH

AGE	SWEDEN			FRANCE		SWITZERLAND		NETHERLANDS	
	1901–14	1914–30	1930–45	1920–29	1929–38	1876–1914	1914–48	1910–25	1925–39
Males									
80	0.118	0.115	....	0.156	0.146	0.170	....	0.132	0.124
81	.129	.127	....	.168	.159	.182	....	.142	.136
82	.143	.140	....	.184	.175	.193	....	.153	.146
83	.158	.151	....	.199	.188	.205	....	.167	.159
84	.172	.170	....	.215	.201	.220	....	.182	.177
85	.189	.184	0.184	.230	.219	.236	0.220	.196	.188
86	.208	.199	.202	.248	.236	.253	.235	.217	.209
87	.219	.218	.221	.269	.252	.272	.256	.234	.220
88	.241	.238	.233	.286	.267	.290	.270	.252	.237
89	.263	.256	.254	.304	.284	.316	.283	.271	.247
90	.284	.279	.279	.328	.303	.329	.311	.287	.275
91	.300	.295	.305	.340	.317	.343	.324	.298	.300
92	.321	.316	.313	.364	.335	.360	.340	.319	.309
93	.327	.330	.326	.393	.364	.366	.373	.323	.348
94	.356	.360	.363	.401	.356	.39	.378	.354	.352
95	.424	.370	.379	.420	.387	.43	.417	.394	.370
96	.43	.386	.394	.426	.387	.49	.43	.39	.409
97	.45	.444	.415	.427	.443	.47	.39	.39	.42
98	.36	.45	.45	.47	.43	.42	.45	.39	.41
99	.48	.39	.42	.53	.55	.4	.48	.46	.38
100	.7	.47	.52	.65	.67	.4	.5	.45	.47
101	.3	.53	.46	.65	.5	.5	.4	.5	.7
102	.6	.5	.6	.5	.6	....	.5	.7	.7
103	....	.2	.6	.9	....	....	.7	....	....
Females									
80	0.109	0.106	....	0.132	0.119	0.161	....	0.122	0.117
81	.119	.119	....	.141	.128	.172	....	.133	.129
82	.131	.130	....	.156	.143	.185	....	.145	.136
83	.145	.141	....	.169	.155	.198	....	.156	.151
84	.158	.155	....	.184	.169	.213	....	.170	.164
85	.171	.172	0.175	.198	.182	.227	0.194	.183	.178
86	.185	.185	.190	.214	.198	.244	.215	.196	.190
87	.206	.202	.207	.232	.216	.255	.232	.218	.207
88	.219	.215	.223	.247	.230	.271	.245	.231	.227
89	.239	.234	.241	.266	.251	.282	.264	.243	.238
90	.254	.254	.260	.284	.266	.317	.275	.268	.258
91	.271	.266	.284	.296	.280	.329	.304	.274	.275
92	.297	.288	.301	.322	.304	.334	.322	.300	.303
93	.317	.301	.325	.340	.322	.356	.332	.322	.312
94	.326	.326	.334	.352	.338	.395	.340	.339	.342
95	.353	.364	.352	.376	.348	.390	.377	.396	.344
96	.406	.383	.387	.398	.369	.40	.395	.363	.380
97	.391	.389	.377	.411	.402	.51	.39	.40	.396
98	.40	.410	.424	.413	.452	.34	.41	.38	.41
99	.40	.38	.456	.463	.465	.48	.48	.39	.50
100	.43	.45	.48	.46	.55	.5	.44	.55	.45
101	.55	.47	.50	.56	.57	.6	.63	.43	.50
102	.4	.55	.53	.63	.61	....	.5	.4	.65
103	.6	.65	.6	.75	.7	....	.6	.8	.7
104	....	.7	.5	1.	1.	....	....	....	....
105	....	....	.9	....	....	....	....	....	....

shows the unsmoothed mortality rates from age 85 and the smoothed rates from
age 98. The unsmoothed mortality rates for the individual experiences making
up the total are shown in Table 4.

Table 3 also contains figures for expectation of life corresponding to the mor-
tality rates. For this computation, special account has to be made for the frac-
tion of a year lived, on an average, in the year of age at death. The usual assump-
tion that this average is one-half year is not valid where mortality rates are very
high. The values used by Vincent, which are shown in Table 5, were computed by

$$k_x = \frac{1}{d_x} \int_0^1 t l_{x+t} \mu_{x+t} dt = \frac{1}{m_x} - \frac{1-q_x}{q_x}$$

where

$$m_x = \text{colog}_e p_x.$$

These results are, of course, applicable to the computation of annuity values.

Vincent's paper is an important contribution in several respects. His observa-
tions on reliable data for several countries lead him to doubt ages that exceed

TABLE 5

AVERAGE DURATION OF LIFE, k_x, SINCE LAST BIRTHDAY FOR DEATHS AT AGE x
AS A FUNCTION OF THE VALUE OF THE MORTALITY RATE, q_x, AT AGE x

q_x	k_x	q_x	k_x	q_x	k_x
0.10	.491	0.40	.458	0.70	.402
.15	.486	.45	.451	.75	.388
.20	.481	.50	.443	.80	.371
.25	.476	.55	.434	.85	.350
.30	.471	.60	.425	.90	.323
.35	.465	.65	.414	.95	.281

110 years. Then, he presents a set of reliable mortality rates at the most ad-
vanced ages. Lastly, he gives evidence that reductions in mortality are being
experienced even into the very high ages.

MORTIMER SPIEGELMAN

Statistics, An Intermediate Textbook, Volume II. By N. L. Johnson & H. Tetley.
Cambridge University Press, London, England, 1950. Pp. 330.

This is the second half of a two volume work on statistics; it is part of the
series of textbooks published under the authority of the Institute of Actuaries
and the Faculty of Actuaries. The first volume was reviewed by Mr. Morton D.
Miller in *TSA* II, 141. Volume II develops the basic ideas of Volume I to a
higher level and introduces some new concepts. The presentation is considerably
more mathematical than that of Volume I.

Volume II starts with a chapter on the calculus of distribution functions and
presents the techniques for deriving a distribution of various statistics. These

techniques are applied to study the t, χ^2 and F distributions. The volume continues with the mathematical treatment of the multinominal distribution and then proceeds to the general theory of statistical tests, a theory which considers the power of a test and the likelihood of a hypothesis. The theory on stratified sampling is then considered along with the analysis of variance and correlation analysis. The concluding chapter on curve fitting and graduation was obviously included with a direct eye to the actuarial student. It does not, however, concern itself with the technique of graduation, apart from the special method of curve fitting, but restricts itself more to the general principles. The curve fitting techniques include the method of moments, the method of least squares and the method of maximum likelihood. Apart from this the subject of graduation is restricted to a rather general description of the objects of graduation and the types of tests for smoothness and fit.

Each volume includes a comparatively small number of problems at the end of each chapter, and a bibliography by chapter. Each volume has a series of appendixes containing certain supplemental mathematical results and limited tables of the standard distribution functions.

As Mr. Miller has commented, the separation into two volumes is somewhat unfortunate since ideas which are introduced in the first volume are not developed until the second, while the second volume repeatedly calls for reference back to the first. A single combined volume would seem to be a more convenient arrangement. Moreover, as Mr. Miller comments in connection with Volume I, this work would not fit into our student program since our examinations are geared to an American undergraduate course on probability and statistics.

RALPH E. TRABER

The Facts of Life from Birth to Death. By Dr. Louis I. Dublin in collaboration with Mortimer Spiegelman. The Macmillan Company, New York, 1951. Pp. 461.

This book lists very entertainingly the principal questions raised with the Statistical Bureau of the Metropolitan Life over a period of forty years. Fairly complete answers are given from the latest available material. In addition, the volume covers the results of research over a wide area in which the Bureau has been engaged. The result is a compendium in the field of human biology—population, birth, marriage, divorce, sickness, old age, body build, death. The eight leading causes of death are given a chapter each. The compilation is encyclopedic in scope. After a quick reading, one wants to keep it at hand for frequent future reference. The present review can give only a taste of the book through a few excerpts:

Before the year 2000 the U.S.A. will probably have 200 million people. It seems quite possible that China will have 1,000 million then and India 750 million twenty-five years later.

Americans are a very mobile people, and recently there has been a great migration to the suburban fringes of cities.

One-sixth of U.S. women who marry never have any children born to them. This is twice as high a proportion as a generation earlier (1910). Childlessness among married women is much more frequent in cities than in rural areas. The cost of having a child born is $400, including a six-day hospital stay and semi-private care; this is for families with yearly incomes of about $4,500.

In 1948, one-fifth of U.S. wives living with their husbands were in the labor force, *i.e.* either working or looking for jobs. In the first year of marriage the proportion is nearly one-half, but the figure declines during later years of marriage. Among U.S. families with yearly incomes from $6,000 to $10,000, there are 55% where both men and women contribute to the income. Above $10,000 the ratio is 37%. These figures are higher in cities than in rural areas.

Divorce rates are high in occupations with irregular hours or frequent absence from home overnight, and those requiring association with the opposite sex with little or no community chaperonage. Example: actors, traveling salesmen, musicians, military personnel, seamen and physicians.

In 1940 the age-adjusted death rate of single men was 50% higher than that of married men. Widowers had a death rate twice that of married men; for divorced men it was higher yet.

Contrary to general impression, recent improvement in mortality is observed even at the older ages.

Lung cancer patients have, in a number of surveys, been found to include a larger proportion of heavy smokers than among patients with other cancers. It is not yet known what the cause-and-effect relationship may be, if indeed there is any at all.

Men graduating from college in the years 1870 to 1905 had an expectation of life at age 22 which was five years above that of white males of the same age in the general population. Honor men had a two-year advantage over other college graduates in expectation of life at age 22. This same general pattern probably holds true today.

There are 1,100 questions-answers in this book, of which a mere baker's dozen are illustrated above.

WALTER GREGORY BOWERMAN

OTHER RECENT PUBLICATIONS

ACTUARIAL AND INSURANCE PUBLICATIONS

Accident Insurance Statistics of the Sixth Quinquennium 1943–1947. Swiss National Accident Insurance Fund. Pp. 105.

This comprehensive report compares the extent of coverage of insured workers and the accident claims, both occupational and nonoccupational, of the quinquennial period with those of previous periods, showing the proportions of claims which result in disability pensions and survivors pensions as compared with lump sum indemnity. Claims are broken down into costs of treatment, lump sum indemnity, disability pension payments and survivors pension payments. Trends in accident rate by industry are shown, as well as average number of work days lost per work year and per accident, and average

duration of treatment. Accidents are analyzed by cause, and accident prevention efforts, both during and after the war, are discussed. Mortality of disabled pensioners and of survivors is compared with that of the general population.

Benz, Norman and Tappender, H. J. *Valuation of Reversions and Life Interests.* Cambridge University Press, New York, 1951. Pp. 102.

This volume is one of a series of texts published under the authority of the Institute of Actuaries and the Faculty of Actuaries for students preparing for the Actuarial examinations of these two organizations.

Blake, W. T. C. and Moore, J. M. *Friendly Societies.* Cambridge University Press, New York, 1951. Pp. 126.

The book describes the types of Friendly Societies in Great Britain, the benefits provided, the method of valuation of benefits and the legislation governing them. It is another of the series of texts published under the authority of the Institute of Actuaries and the Faculty of Actuaries for students preparing for the actuarial examinations of these two organizations.

Owen, Henry T. *Fundamentals of Life Insurance.* Prentice-Hall, Inc., New York, 1951. Pp. 432.

This book is one of the Prentice-Hall Insurance Series. The author, at present a professor of insurance and statistics, was formerly a life underwriter, general agent and lecturer on life insurance. The book is well arranged in four parts as follows: Part One, The Basic Structure of Life Insurance; Part Two, The Life Insurance Contract; Part Three, The Functions of Life Insurance; and Part Four, Administration.

It is designed to present a text that will be valuable to those who seek a basic knowledge of life insurance.

Rao, T. K. Raganatha. *Valuation Tables on the Oriental Mortality Experience. O(25–35).* Actuarial Society of India, 1948. Pp. 83.

This book, the first publication of the Actuarial Society of India, is a supplement to a previous volume with the same title published in 1944. Because of the decline in the interest rates there has been a need for Monetary Tables based on lower rates of interest than 3%, the minimum in the previous volume. This volume supplies that need and Monetary Tables at 2%, $2\frac{1}{4}\%$, $2\frac{1}{2}\%$ and $2\frac{3}{4}\%$ are shown. The Actuarial Society of India is to be congratulated on the publication of this timely volume as it helps to fill the needs of the actuarial profession in India.

Wightman, E. C. *Life Insurance Statements and Accounts.* Life Office Management Association, New York, 1952. Pp. 664.

Because of the thorough revision of the accounting pages of the Annual Statement (Convention Blank) used by life companies in 1951 for the first time, it is apropos that Mr. Wightman should publish this revision of his old book, *Life Insurance Accounts,* which has been so valuable to students of the subject. Since the new Annual Statement was designed in an attempt to obtain greater uniformity, the author has extended his text to highlight the consequent changes which have been made in the Blank. The book should be of value to life insurance accounting and actuarial students, to members of state insurance departments and to company officers responsible for preparing or interpreting the Annual Report of their company.

Willett, Allan H. *The Economic Theory of Risk and Insurance*. University of Pennsylvania Press, Philadelphia, 1951. Pp. 131.

This is a reprint of a thesis prepared in 1901 for a doctorate degree and published originally in limited quantity as one of the Columbia studies in History, Economics and Public Law. The original was considered the first and the best discussion of the economic principles of insurance.

Because of the value of the original book to students of insurance and its scarcity the S. S. Huebner Foundation for Insurance Education has republished Dr. Willett's thesis as a contribution to its "Studies" series.

The book devotes chapters to the Nature of Risk, Classes of Risk, The Cost of Risk, The Assumption of Risk, The Reward for Risk Taking, Ways of Meeting Risk, and Insurance. It is a very valuable book for all students of insurance.

Woodson, B. N. *More Power to You*. Insurance R and R Service, 12 West North Street, Indianapolis, Ind. Pp. 155.

This is a collection of 52 editorials and essays written by the author and reflecting his views on life and life insurance. While written primarily for the life insurance agent, it is well worth-while reading for anyone connected with the life insurance industry.

The author is well known in the life insurance business, having been connected in an executive capacity with prominent life insurance companies, with the Life Insurance Research Bureau (now the Life Insurance Agency Management Association), and at present he is the managing director of the National Association of Life Underwriters and of the Life Underwriter Training Council.

PENSION FUNDS AND SOCIAL INSURANCE

British Columbia Hospital Insurance Inquiry Board. *Report of the Hospital Insurance Inquiry Board*. Queen's Printer, Victoria, B.C., 1952. Pp. 107.

This is a preliminary report of the Hospital Insurance Inquiry Board appointed in British Columbia in April 1951 to enquire into, investigate and make recommendations with respect to the compulsory plan of hospitalization insurance which became operative in the province on January 1, 1949. The Board states that public opinion "was almost unanimously in support of the continuance of a hospital insurance service" and accordingly recommends that the present plan be continued subject only to modification as regards numerous details of administration. The report contains more than fifty suggestions for change, including recommendations that the coinsurance principle be abandoned and that persons in the low income groups be exempted from the personal payment of contributions. The Board has not yet completed its investigations and has been granted an extension of time for the filing of its final report.

Follows, John W. *Antecedents of the International Labor Organization*. The Clarendon Press, Oxford, 1951. Pp. 244.

Follows' *Antecedents* was presented as a thesis for a degree. It was, says the student, inspired and directed by Sir Alfred Zimmern and Sir Harold Butler. The book traces the evolution of the idea of international direction of labor legislation. Seemingly, the British socialists, irked by the charge of irreligion wisely enough charged against Marx, in this genealogical search welcomed some Bible-quoting paternalists among employers who wanted the world legislation.

Robert Owen, frequently credited with being the pioneer, is rather brushed off, partly

because his attacks upon all religions disqualified him. Of the German pioneering, Follows says: "By instituting a comprehensive system of social insurance, Bismarck's Government protected the worker against illness, accident and unemployment, disability and old age."

Antecedents shows by cumulative effect how many times men have attempted by legislation to change human environment and human possessions. and how difficult it is to sell the panacea to Government. It carries the stamp of the cloistered halls and reminds the reader of Wm. Steig's *Dreams of Glory*, somewhat enlarged.

Glueck, Sheldon, Ed. *The Welfare State and the National Welfare*. Addison Wesley Press, Inc., Cambridge 42, Mass.

No intelligent man can read these vigorous pleas for freedom, and then say: "He isn't talking about OASI, or Socialized Medicine, or Public Assistance." If these essays mean anything, they mean the need for critical assessment of all the appeals to greed and laziness. It is too late to gloss over the shortcomings of our American experiments, with their un-American ways. Here and in foreign relationships our representatives need to have their eyes open and their consciences touched. Motes and beams have to be recognized before they are removed!

Greenough, William C. *A New Approach to Retirement Income*. Teachers Insurance and Annuity Association of America, New York. Pp. 55.

This booklet is an economic report prepared as background for the College Retirement Equities Fund, which purports to be a new method of providing retirement income through periodic investments in common stocks and the payment of a divisible, or unit, annuity in combination with a traditional fixed-dollar annuity. Endowment funds of various institutions have for years tried to maintain their income by investing in common stocks but their purpose was not necessarily the purchase of retirement incomes. The idea seems to be catching, since recently the *Harvard Business Review* included such an article in their January-February number.

Journal of Gerontology. Volume 6—Supplement to No. 3. Program of the Second International Gerontological Congress and the Fourth Annual Scientific Meeting of Gerontological Society, Inc., Sept. 9–14, 1951. Pp. 204.

This Second International Congress took place only a year later than the first international at Brussels—perhaps because a year in the life of a man of 75 bulks as large against the presumptive after-lifetime as 5 years would to a man of 25. It was also an opportunity for a return engagement of the Conference on Aging of a year before. Abstracts of several hundred papers are included. There are four sections: I. Biology and Medicine; II. Sociology, Psychology, Education and Religion; III. Economics, Employment and Welfare; and IV. Medical Services, Hygiene and Housing.

Lasting Peace the ILO Way. International Labor Office. Geneva, 1951. Pp. 130.

Lasting Peace the ILO Way states in its foreword: "These conditions of poverty produce unrest within nations and among nations—'unrest so great,' in the words of the International Labor Organization, that the peace and harmony of the world are imperilled. The ILO was conceived as a means through which a struggle against hardship and privation could be waged by international action. And in doing so, its purpose is to provide the basis for universal and lasting peace." Here are history, imagination, idealism and pretension. In it there is no consideration of man as the captain of his

soul—only of men as subservient to the welfare state. It tells of the history of the organization, of the Conventions designed to have the force of treaty and to spread socialism. It has informed some, left others in low spirits, made others fighting mad. It should be recognized that here is a "putting the best foot forward," when the "best foot" is not good enough for Americans.

Margolius, Sidney. *It's Your Money—Come and Get It.* Gold Medal Books. Fawcett Publications, Inc., New York, 1951. Pp. 143.

It's Your Money—Come and Get It seems to be an appeal to basic selfishness. Nominal contributions do result in phenomenal incomes—and there is little expression of concern about capriciousness or anomalies, or concern about the other fellow who retired just too soon.

Minimum Standards of Social Security. Report V (a) (1) International Labor Office. Geneva, 1951. Pp. 96.

Back of the Minimum Standards of the ILO are many reports. Reports IV (1) and IV (2) were noted in reviews these last two years. There had been *Post-War Trends* and other illuminating reports earlier, along with the still more ancient *Approaches to Social Security.* The recent swing to national from labor legislation is evident. In IV (2) are tabulated the replies of 27 of the Governments which expected to be represented in Geneva last year. The only unanimity among them is in the belief in a planned economy rather than in the checks and balances of free enterprise in competition.

For countries listed in the current report, with a range in annual per capita income from $40 in Ecuador to $1,453 in the United States, there had been the assumption of three levels: (1) the high-level countries who should adopt higher standards than the minimum, (2) the normal level countries who are to meet the minimum and (3) the undeveloped countries who would require many years to meet the minimum. The assumption that procrustean beds in three lengths should be made—and would be enough —is disproved by the 27 replies. There *simply is no common ground.* The plans do not fit *us,* nor should they.

The report of the 1951 session carries but 36 pages of report on the Conference Committee, 8 pages of discussion by the Conference in the Plenary Session, 38 pages of the proposed text and less than 20 of the proposed Convention concerning minimum standards of Social Security for 9 branches. These are the minimum standards—much too high for many of the members, including the United States. It is the intention to crowd in also discussion of an advanced standard in next June's meeting at Geneva.

Netter, F. *Notions Essentielles de Sécurité Sociale.* Recueil Sirey, Paris, 1951. Pp. 233.

Mr. Netter's book, if read after the French replies in ILO Report IV (2), is rather persuasive, well-organized, in its 21 chapters and its two-page conclusion. Although for the major industrial coverage the French payroll deductions are 6% from the employee and 28% from the employer, and the railways seem to be spending about 50% on benefits, they hope that still more can be done ! Voluntary insurance is regarded as wasteful and inefficient—Government administration is "the better way." The Philadelphia resolutions, the United Nations statement on Human Rights are given full reporting. They crowd out anything about a man's personal responsibilities or his rights to handle them personally. There is also appreciation that one works the crisis as a hold-up technique. There is a minimum about the independent workers and their lack of enthusiasm for regimentation. As with us there is the expressed approval that one should make a contribution toward his own personal provision, and no feeling of shame whatever at

the extent of the subsidy he gets. There is a lot of attention to treaty arrangement for workers crossing the national boundaries. There is much discussion of correcting the benefit to meet inflation and none on blocking inflation. The perennial reserve problem, so minor in social budgeting, raises the question of choice of investment. After noting that Germany invested in destruction, he says that France invests in "socially desirable things"—hospitals and sanitaria. There is no emphasis on the wisdom of raising production.

This book should be especially valuable to the delegation to Geneva from the employers—to labor—even to the Government representatives. Few seem enough concerned about the losses to the individual which go with artificial systems. It should be prescribed reading. The trials and tribulations of France are before our eyes.

Norton, Thomas James. *Undermining the Constitution*. The Devin-Adair Co., New York, 1951. Pp. 365.

The Norton treatise was reviewed by Edna Lonigan in *Human Events* for July 25, 1951. It isn't just excoriation of the New Deal. It shows our progressive loss of understanding long before which made the undermining simpler. Since Norton's *The Constitution of the United States: Its Sources and Application* had outlined the strengths and the objectives of the Constitution, his more recent treatise is antithesis to his earlier thesis. The synthesis is now up to the American people.

Punekar, S. D. *Social Insurance for Industrial Workers in India*. Geoffrey Cumberlege, Oxford University Press, 1950. Pp. 228.

This represents a thesis for a Ph.D. degree from the University of Bombay. It presents a systematic study of social insurance and social insurance standards throughout the world, relying heavily on International Labor Office publications. In Part II, the present provisions for social insurance in India are set out in detail. The final chapter examines the extensions necessary to evolve a comprehensive unified system of social security. Actuarially speaking, he favors the budgetary system for India, rather than the capitalization system of financing.

Report on ILO. United States Employer Delegation Report 1951. International Labor Conference. Third Annual Report. Distributed by Chamber of Commerce of the United States and National Association of Manufacturers. Washington and New York. Pp. 31.

The NAM and the Chamber have raised some useful questions. Their slender report includes a foreword, a statement of significance, seven recommendations, the agenda of the Conference. The skeleton form enforces hard thinking and considerable filling in upon the reader. It should by now be clear that, in the same way that individual salvation is a very personal matter, so what counts most in human society is the *man*, rather than the *employee*. We have watched the appeals of the employers, the union heads, the local, state and Federal Governments competing for the fealty of our citizens. During the period when one contendant is very much in the ascendant, he develops arrogance. The bidding has got pretty high, but the blue chips are now down to the old value of the red. Many a citizen wants more command over his own income, a wider area where his choice holds.

Rose, William G. *The Best Is Yet To Be*. Austin-Phelps, Inc., New York, 1951. Pp. 212.

Giving plugs to the Federal Old-Age and Survivors Insurance system and Old Age Assistance seems to have furnished the inspiration for this readable, but uneven, book

bristling with experiences in the life of the author. It is replete with advice on gainful employment and hobbies, study and learning, appearance and dress, medical care, vitamins, self-expression and mental poise. He says: "The man or woman of 65 today, therefore, should count on many more years, with the chance being excellent for living at least 20 or 30 years more." By the 1939–41 U.S. Life Tables, it would appear that the chance of 20 more years might be 1 in 6, while the chance of 30 more years might be 1 in 60. Some good philosophy and warm friendliness shine through.

Social Contribution by the Aging. The Annals of the American Academy of Political and Social Science. January, 1952. Pp. 179.

Twenty-two articles appear under many separate subjects, with an introduction by the editor, Clark Tibbitts and Dr. Sheldon, Census. Some excellent articles are gathered together. The aged are rather too much accepted as the residue of a surprisingly long life, with little expectation of personal provision, while the one article that deals with the financial provision by Wilbur Cohen doesn't suggest that the programs will be expensive. Needs are shown to include more census subdivisions into age groups above 65, more consideration of effective past thrift in spite of the imposed inflation of the planners, and less expectation of community direction, with more choice to the man himself. The customary subjects are discussed in the rediscovery of age.

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 51, page 227.

TRANSACTIONS OF THE THIRTEENTH INTERNATIONAL
CONGRESS OF ACTUARIES
Vol. 1

Analysis of Financial Results:
　　Estimating Surplus—R. C. Barnsley (Canada).
　　Interim Financial Statements of Life Insurance Companies in the United States—
　　　　C. O. Shepherd (United States).
　　Twelve Additional Papers from Other Countries.
Financing of Social Insurance:

Methods of Financing Social Insurnace—Stefan Hansen (Canada).

Methods of Financing Voluntary Schemes of Old Age and Disability Pensions in the United States—D. C. Bronson (United States).

Reserve Problems under Federal Old-Age Insurance in the United States—M. A. Linton (United States).

Estimates of the Reserves under the Old-Age Insurance System in the United States —R. J. Myers (United States).

Seventeen Additional Papers from Other Countries.

Mathematical Statistics and Insurance:

Applications of Mathematical Statistics to Life Insurance in the United States— G. C. Campbell and D. D. Cody (United States).

Four Additional Papers from Other Countries.

BULLETIN OF THE PERMANENT COMMITTEE OF THE
INTERNATIONAL CONGRESS OF ACTUARIES
No. 49 (March, 1952)

Notices on Development of Actuarial Science in France, Great Britain, Italy, The Netherlands, and Switzerland.

Bibliographical Notices in France, Italy, and The Netherlands.

JOURNAL OF THE INSTITUTE OF ACTUARIES
Vol. 77, Part 3, No. 347 (1951)

Group Life and Pension Schemes Including Group Family-Income-Benefit Schemes— G. W. Pingstone.

Some Notes on Graduation—R. E. Beard.

Some Observations on Laplace's Rule of Succession and Perks's Rule of Indifference— J. E. Freund.

The Capital Letters in Actuarial Notation.

Continuous Mortality Investigation: Investigation into the Mortality of Impaired Lives.

Taxation Treatment of Retirement Benefits.

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

TRANSACTIONS OF THE FACULTY OF ACTUARIES
Vol. 20, Part 1, No. 174 (1951)

Inaugural Address by the President—J. M. Ross.

Summation and Some Other Methods of Graduation—The Foundatiors of Theory— M. D. W. Elphinstone.

The Use of "Powers" Cards for the Calculation of Repayment Schedules under Annuities-Certain—D. A. B. Scrimgeour.

Continuous Mortality Investigation—Assured Lives 1944–1948.

PROCEEDINGS FRATERNAL ACTUARIAL ASSOCIATION
No. 23 (1950–1951)

History of Fraternal Legislation in Canada—Samuel Eckler.

Significance of Half-Century Decline in Population Mortality—F. G. Dickinson.

An Agency Index for Evaluating New Business—W. W. Steffen.

Refund Payment Procedure—W. J. Hartwell.

State Supervision and the N.A.I.C. from the Viewpoint of the Fraternal Actuary— J. H. Powell.

Integration of Pension Plan Benefits under Social Security Act Amendments of 1950
—W. M. Hugins.

The New Fraternal Code for California—A. W. England.

Fackler Type Accumulation Formulae for True Monthly Reserves—F. C. Stauffer.

Observations on the Continuous Assumption—D. D. Macken.

JOURNAL OF THE INSTITUTE OF ACTUARIES
STUDENTS' SOCIETY
Vol. 10, Part 2 (March, 1951)

The Taxation of Annuity Funds—G. V. Bayley.

National Economic Statistics—H. C. Cottrell.

A New Method for the Group Calculation of Reserves—Heinrich Jecklin.

The Division of a Trust Fund between Life Tenant and Reversioner and the Incidence
of Estate Duty—L. T. Hayes.

SKANDINAVISK AKTUARIETIDSKRIFT
Nos. 3–4 (1951)

Post-War Mortality among Industrial Insured Lives in Norway—G. Harbitz.

Analytical Studies in Stop-Loss Reinsurance—S. Vajda.

The Sickness Experience of the Valkyrian Insurance Company, 1929–1948—Knut
Medin.

On the Test of the Hypothesis that the Probability of an Event is Contained within
Given Limits—Per Ottestad.

MITTEILUNGEN DER VEREINIGUNG SCHWEIZERISCHER
VERSICHERUNGSMATHEMATIKER
Vol. 51, Part 2 (1951)

Le cinquantenaire de l'Union des Actuaires danois (The Semi-Centenary of the Danish
Actuarial Society)—Émile Marchand.

Der XIII. internationale Kongress der Versicherungsmathematiker (The Thirteenth
International Congress of Actuaries)—H. Jecklin.

Weitere Ergänzungen zur F-Methode der Reserveberechnung (Further Complementary
Remarks on the F-Method of Reserve Calculation)—H. Jecklin and H. Zimmer-
mann.

Nomogramme zur « F-Methode » (Nomogram for the F-Method)—Hans Zimmer-
mann.

Ein weiteres Verfahren zur näherungsweisen Prämienbestimmung in der Invaliden-
versicherung bei Variation der Rechnungsgrundlagen (A Further Method for the
Approximate Calculation of Adjustments to Disability Income Premiums Resulting
from Changes in Annual Disability Rates)—Ernst Zwinggi.

Notiz zur Berechnung der Vermehrungsrate der stabilen Bevölkerung (A Note on the
Calculation of the Rate of Increase of a Stable Population)—Ernst Zwinggi.

Betrachtungen zum Beharrungszustand einer Pensionskasse (Considerations on the
Stationary State of a Pension Fund)—Padrot Nolfi.

Eine neue Funktion der Versicherungsmathematik und ihre Anwendung (A New Func-
tion in Actuarial Mathematics and Its Application)—Ivo Lah.

Eine Bemerkung zum Zinsfussproblem (A Remark on the Rate of Interest Involved in
a Generalized Life Annuity)—E. Rufener.

BULLETIN TRIMESTRIEL DE L'INSTITUT DES ACTUAIRES FRANÇAIS
Nos. 193–196 (1950–51)

A propos de l'application de la loi de Gauss (On Testing the Applicability of the Normal [Gaussian Law])—R. Risser.

Note sur l'ajustement d'une table de mortalité d'après la loi de Makeham (Note on the Graduation of a Mortality Table by Makeham's Law)—V. Lanoix.

Note sur les rentes réversibles et la méthode du dédoublement (Note on Survivorship Annuities Which Vary in Amount with the Number of Survivors)—J. Poudevigne.

Quelques remarques au sujet de la garantie du risque de guerre en Assurance-Vie (Some Comments on Governmental Guaranty of War Risk in Life Insurance)—B. Nolde.

Le taux réel de rendement des valeurs amortissables et la réserve de Capitalisation (The Mass Calculation of the Yields of Redeemable Securities and the Legal Reserves for Depreciation)—A. S. D'Izarn.

Note relative aux tirages contagieux (Note on "Contagious" Schemes of Urn Drawings) —R. Risser.

Détermination nomographique du taux de rendement des obligations (Nomographic Calculation of the Yield on Loans Repayable by Level Annuities)—René Lambert.

VERÖFFENTLICHUNGEN DES DEUTSCHEN AKTUARVEREINS
No. 1 (1951)

Betrachtungen über Sterbetafeln und Sterblichkeit (Remarks on Mortality and Mortality Tables)—Karl Freudenberg.

Der Schluss vom Teil aufs Ganze und der mathematisch-statistische Begriff der Wahrscheinlichkeit (Statistical Estimation and the Notion of Probability)—Paul Lorenz.

Über die Deckungsruckstellung der vertraglichen Krankenversicherung (On the Calculation of Reserves for Hospitalization and Medical Care Insurance)—Johannes Berger.

PROCEEDINGS OF THE FORTY-FIFTH ANNUAL MEETING OF THE
LIFE INSURANCE ASSOCIATION OF AMERICA
(December, 1951)

1951 Report of the Manager—B. E. Shepherd.
1951 Record of Life Insurance Investments—J. J. O'Leary.
Association's 1951 Legislative and Legal Activities—H. R. Glenn.
Aging and the U. S. Economy—M. A. Linton.

PROCEEDINGS OF THE FORTY-SIXTH ANNUAL MEETING
OF THE AMERICAN LIFE CONVENTION
1951

Report of the Actuary—A. N. Guertin.
Medical Research in 1951—Dr. L. G. Bell.
Our Grim Fiscal Future—Roswell Magill.
The Responsibility for Field Management—E. M. McConney.
Canadian Trends—J. G. Parker.
The Outlook for the Mortgage Market—H. H. Edmiston.
Economic Growth and Life Insurance—D. B. Mansur.
The Value of the Dollar and Whose Responsibility Is Inflation—C. M. Shanks.

MEDICAL SECTION
AMERICAN LIFE CONVENTION
1951

The Insurability of Cases of Mild Diabetes Mellitus not Requiring Insulin—J. T. Sheridan, M.D.

The Recognition of Liver Disease in the Absence of Jaundice—C. J. Watson, M.D.

Laboratory Procedures—J. R. Beard, M.D.

Heredity and Hypertension—A. E. Parks, M.D.

New and Old Questions about Hypertension in the Light of Recent Knowledge of This Disease—L. B. Ellis, M.D.

Chest Pain—Ghent Graves, M.D.

Lipoproteins in Atherosclerosis—J. W. Gofman, M.D.

The Antibiotics and Their Relationship to Underwriting—J. G. Irving, M.D.

Insurability of Lesions of the Spinal Cord—N. B. Cole, M.D.

Diagnosis of the Decompensated Personality—Its Application to Insurance Medicine— J. W. Johnson, Jr., M.D.

A New Clinical Method for the Determination of the Blood Pressure—E. F. Kerby, M.D.

PROCEEDINGS OF THE FORTY-FOURTH ANNUAL MEETING OF THE
LEGAL SECTION OF THE AMERICAN LIFE CONVENTION
1951

Validity of Oral Assignments and Change of Beneficiary where First Beneficiary Claims Vested Rights—Dudley Porter, Jr.

Legal Problems Arising from Modern War Risk—Millard Bartels.

Review of Legislation and Litigation in 1951—R. H. Kastner.

Some trends in Premium Taxation—I. V. Brunstrom.

Common Disaster and Related Problems—A. H. Jeffery.

Some Recent Legal Developments Resulting from Extension of Group Coverage to Union Members and Related Groups—G. C. Reeves.

PROCEEDINGS OF THE LIFE OFFICE MANAGEMENT ASSOCIATION
ANNUAL AND SPECIAL CONFERENCES
1951

Some Implications of the Current Economic Trends on Life Office Operations—D. B. Woodward.

A Ten-Year Development Program in Life Office Administration—J. H. Ditman.

Development and Use of an Organization Manual for a Small Company—R. W. Edick.

Home and Field Office Practices and Procedures in Paying Death Claims—C. A. Herschel.

Panel Discussion—Some Research Aspects of Personnel Administration.

Industrial Insurance Seminar.

Accident and Health Seminar.

PROCEEDINGS OF THE LIFE INSURANCE
INSTITUTE OF CANADA
1950–1951

Inaugural Address—W. J. Adams.

The 1950 Revision of the Federal Insurance Acts—J. A. Tuck.

Medical Research—Dr. G. E. Hall.

Office Management and the Expense Factor—J. B. Rollit.

PROCEEDINGS OF ASSOCIATION OF SUPERINTENDENTS OF
INSURANCE OF THE PROVINCES OF CANADA
(September, 1951)

Reports of Committees on Valuation of Securities, Annual Statement Blanks, Life Insurance Legislation, Licensing and Regulation of Agents, Insurance Law Revision, and Accident and Sickness Insurance Legislation.

REPORT OF THE THIRTEENTH ANNUAL MEETING
INSTITUTE OF LIFE INSURANCE
1951

Progress and Aims in Work on Diseases of the Heart and Arteries—Dr. F. J. Stare, Philip Handler, and Dr. George Murphy.

PROCEEDINGS OF ASSOCIATION OF LIFE INSURANCE COUNSEL
(December, 1951)

How Does the Trading with the Enemy Act Affect Life Insurance Policies?—E. V. Doogan.
Life Companies and the Taft-Hartley Act—Richmond Moore, Jr.
Charitable Contributions—G. D. Bleicken.
The Unclaimed Funds Problem—Eldon Wallingford.
Developments under the 1950 Social Security Act Amendments—E. J. Schmuck.

PROCEEDINGS OF THE INSURANCE ACCOUNTING AND
STATISTICAL ASSOCIATION
1951

Procedures in Accident and Health Premium Accounting—R. B. Savage.
Accident and Health Premium Accounting—E. E. McCandless.
Accident and Health Premium and Commission Accounting—W. A. Kufeldt.
Group Insurance 1951 Style—J. J. Lotz.
Allocation of Expenses—W. N. MacKenzie.
Control of Expenses—E. B. Rust.
Elimination of the Premium History Card—H. J. George.
Elimination of Notices and Receipts on Monthly Premium Policies—J. W. Hughes.
General Ledger Accounting Using IBM Punch Cards—G. B. Liddiard.
General Ledger Accounting—G. A. Ecklund.
Punch Card Premium Billing and Accounting—W. H. Bowen and Robert Livermore.
Combined Premium and Commission Accounting—C. W. Grady.
Valuation of Policy Reserves—E. C. Carlson.

THE JOURNAL OF THE AMERICAN SOCIETY OF
CHARTERED LIFE UNDERWRITERS
Vol. 6, No. 1 (December, 1951)

The Development of Individual Health and Accident Insurance—J. H. Miller.
Life Insurance and the Anti-Trust Laws—M. M. Gorman.
Published Annual Reports of Life Insurance Companies—Oswald Nielsen.
We Forgot, . . . or Overlooked—Some Case Histories—R. B. Mansfield.
What Constitutes the Life Insurance Contract—B. M. Anderson.
Developments in Actuarial Work—Manuel Gelles.
German Life Insurance After the Capitulation—Walter Rohrbeck.
Significance of Standardized Mass Contracts in Insurance—B. M. Eiber.

No. 2 (March, 1952)

The Suicide Clause in a Policy of Life Insurance—B. K. Elliott and T. H. Smith.

Underwriting without Medical Examination—Leigh Cruess.

Group Accident and Health Insurance—G. W. Fitzhugh.

State Legislation Affecting the Life Insurance Contract—Raymond Harris.

JOURNAL OF THE AMERICAN ASSOCIATION OF
UNIVERSITY TEACHERS OF INSURANCE
Vol. 18, No. 1 (March, 1951)

A Review of the Half-Century in Insurance:

The Half-Century in Personal Insurance—H. H. Jackson.

The Half-Century in Insurance Education—David McCahan.

Economics of Medical Care: II. Alternative Solutions:

The British Experiment—S. E. Harris.

Alternate Solutions: Voluntary and Compulsory Medical Care Insurance—C. A. Kulp.

Welfare Implications of Alternative Methods of Financing—Jerome Rothenberg

Review of the Year:

Life Insurance—J. S. Elston.

Social Insurance—W. R. Williamson.

PROCEEDINGS OF AMERICAN BAR ASSOCIATION
SECTION OF INSURANCE LAW
1951

Compulsory Non-Occupational Disability Benefits: Appraisal of the First Year's Experience under the New York Disability Law from the Standpoint of Covered Employees—B. A. Zorn, H. P. Yates, and H. G. Waltner, Jr.

Life Insurance Law: The Lawyer and Business Life Insurance—D. J. Reidy.

Regulation of Insurance Companies: The Case for State Regulation of Insurance—A. C. Leslie.

War Clauses—Past and Present—R. H. Kastner.

LAW AND CONTEMPORARY PROBLEMS
SCHOOL OF LAW
DUKE UNIVERSITY
Vol. 17, No. 1 (Winter, 1952)

Trends of Yields on the Investments of Financial Institutions—J. J. O'Leary.

Legal Framework, Trends, and Developments in Investment Practices of Life Insurance Companies—Haughton Bell and H. G. Fraine.

Current Trends and Developments in the Investment Practices of Endowments and Pension Funds—J. W. Wooster, Jr.

Federal Debt Management and the Institutional Investor—R. F. Murray.

Institutional Size—Life Insurance—G. T. Conklin, Jr.

INDIANA LAW JOURNAL
Vo. 26 (Summer, 1951)

Creditor Group Life Insurance—Protecting the Insured against Misrepresentations at the Time of Application.

INSURANCE LAW JOURNAL
No. 347 (December, 1951)

Actuarial Science: A Survey—A. N. Guertin.

THE RECORD OF THE ASSOCIATION OF THE BAR
OF THE CITY OF NEW YORK
Vol. 5, No. 9 (December, 1950)

A Reference Guide to Insurance Law—A. A. Lane.

THE AMERICAN ECONOMIC REVIEW
Vol. 41, No. 5 (December, 1951)

Issues of Business Cycle Theory—S. S. Alexander.
Depreciation Policies and Investment Decisions—S. P. Dobrovolsky.

JOURNAL OF ACCOUNTANCY
Vol. 93 (January, 1952)

Survey of 260 Pension Plans Reveals Wide Variety of Accounting for Costs, Plus Some
Hazards—W. B. Ogden.

THE QUARTERLY JOURNAL OF ECONOMICS
Vol. 66, No. 1 (February, 1952)

Compulsory Health Insurance: The Economic Issues—R. R. Campbell and W. G.
Campbell.

JOURNAL OF THE IOWA STATE MEDICAL SOCIETY
Vol. 41 (May, 1951)

Longevity Studies, Length of Life and the Aged Population in Iowa—Raphael Ginzberg
and W. C. Brinegar.

AMERICAN JOURNAL OF PUBLIC HEALTH
Vol. 42, No. 4 (April, 1952)

Factors in the Higher Mortality of Our Older Age Groups—L. I. Dublin and Mortimer
Spiegelman.

ARCHIVES DE MÉDECINE SOCIALE
(September–October, 1950)

Évolution en France de la durée moyenne de vie entre 1850 et 1950 (Development of the
Average Duration of Life in France, 1850–1950)—C. Canditotti and Marcel Moine.

POPULATION STUDIES
Vol. 5, No. 2 (November, 1951)

Differential Fertility in Puerto Rico—J. W. Combs, Jr., and Kingsley Davis.
Studies in the Recent Marriage and Fertility Data of England and Wales—P. R. Cox.

SOCIAL SECURITY BULLETIN
Vol. 14, No. 10 (October, 1951)

New International Convention on Social Security—R. J. Myers.

No. 11 (November, 1951)

Old-Age Assistance and Aid to Dependent Children, 1940–50—E. J. Perkins.

No. 12 (December, 1951)

State Public Assistance Legislation, 1951—J. H. Berman and G. J. Blaetus.

State Unemployment Insurance Legislation, 1951.

Voluntary Insurance against Sickness: 1950 Estimates.

Vol. 15, No. 1 (January, 1952)

After Fifteen Years: A Report on Old-Age and Survivors Insurance—O. C. Pogge.

No. 2 (February, 1952)

Railroad Retirement Act Amendments of 1951: Benefit Provisions and Legislative History—R. J. Myers and W. J. Cohen.

BIOMETRICS
Vol. 7, No. 4 (December, 1951)

Accident Statistics and the Concept of Accident-Proneness—A. G. Arbous and J. E. Kerrich.

JOURNAL OF THE AMERICAN STATISTICAL ASSOCIATION
Vol. 46, No. 256 (December, 1951)

Redistribution of Population, 1940 to 1950—H. S. Shryock, Jr.

Results of Alternative Statistical Treatments of Sample Survey Data—L. R. Klein and J. N. Morgan.

Vol. 47, No. 257 (March, 1952)

Fertility Trends and Differentials in the United States—C. V. Kiser.

SANKHYĀ
Vol. 11, Part 1 (March, 1951)

On the Realization of Stochastic Processes by Probability Distribution in Function Spaces—H. B. Mann.

A Theorem in Least Squares—C. R. Rao.

Some Notes on Ordered Samples from a Normal Population—K. C. S. Pillai.

MATHEMATICAL TABLES AND OTHER AIDS TO COMPUTATION
Vol. 5, No. 36 (October, 1951)

A Guide to Tables on Punched Cards—G. Blanch and E. C. Yowell.

JOURNAL OF THE ROYAL STATISTICAL SOCIETY
Vol. 114, Part 3 (1951)

A Comparison of the Trends of Male and Female Mortality—W. J. Martin.

Bibliography of Applications of Mathematical Statistics to Economics, 1943–1949—A. D. Scott.

Part 4 (1951)

Recent Advances in Mathematical Statistics. Bibliography, 1943–47.

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Vol. 38, Parts 3 and 4 (December, 1951)

A Chart for the Incomplete Beta Function and the Cumulative Binomial Distribution —H. O. Hartley and E. R. Fitch.

The Effect of Standardization on a χ^2 Approximation in Factor Analysis—M. S. Bartlett.

The Comparison of Several Groups of Observations when the Ratios of the Population Variances Are Unknown—G. S. James.

On the Comparison of Several Mean Values: An Alternative Approach—B. L. Welch.

The Fitting of Polynomials to Equidistant Data with Missing Values—H. O. Hartley.

Interrelations between Certain Linear Systematic Statistics of Samples from Any Continuous Population—G. P. Sillitto.

THE ANNALS OF MATHEMATICAL STATISTICS
Vol. 22, No. 4 (December, 1951)

Extremal Properties of Extreme Value Distributions—Sigeiti Moriguti.

The Fitting of Polynomials by the Method of Weighted Grouping—P. G. Guest.

A Combinatorial Central Limit Theorem—Wassily Hoeffding.

Normal Regression Theory in the Presence of Intra-Class Correlation—Max Halperin.

Minimum Variance Estimation without Regularity Assumptions—D. G. Chapman and Herbert Robbins.

One-Sided Confidence Contours for Probability Distribution Functions—Z. W. Birnbaum and F. H. Tingey.

On the Estimation of Central Intervals which Contain Assigned Proportions of a Normal Univariate Population—G. E. Albert and R. B. Johnson.

On Dependent Tests of Significance in the Analysis of Variance—A. W. Kimball.

On a Connection between Confidence and Tolerance Intervals—G. E. Noether.

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Vol. 23, No. 1 (March, 1952)

Formulas for the Group Sequential Sampling of Attributes—H. L. Jones.

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Vol. 1 (1950)

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New Developments in Interpolation Formulae—Erich Michalup.

The Accuracy of Linear Interpolation—H. E. Stelson.

On the Logarithmico-Pearson Distributions—E. Cansado.

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

A Frequency System that Generalizes the Pearson's System—F. I. Toranzos.