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BOOK REVIEWS AND NOTICES*

E. M. Burns, *Social Security and Public Policy*, pp. xvi, 291, McGraw-Hill Book Company, Inc., New York, 1956.

The scope of this book is indicated by the following extracts from the author's preface and introduction respectively:

I have attempted, first, to identify the major questions about the nature of social security programs which must be answered by every community desiring to assure, through the instrumentalities of government, a measure of economic security to some or all of its members. Second, I have tried to indicate some of the more important considerations which have to be taken into account and evaluated in answering these questions.

Again,

This book will not deal with contemporary issues program by program or risk by risk. Rather, an effort will be made to consider the general and specific problems posed by governmental action in this field and to discuss in this context some of the outstanding social security issues of the day.

In view of the rapidly growing importance of social security, it is no easy task for a would-be reviewer to do justice to so comprehensive and philosophically oriented a project. The easy way out would be to summarize its contents with a few comments and criticisms thrown in to indicate that he has really read the book. On the other hand, the very scope of the work should put the reader on his guard against omissions, overgeneralizations and involuntary bias, if not error—especially as the editorial responsibility rests solely with the author, whose experience is primarily in the areas of economics and social work. There is, for example, no indication that she benefited from the counsel of anyone in the insurance business or the medical profession, or any representative of employers as such, though all three lines of activity are intimately involved in certain aspects of social security, and their roles therein are critically discussed in the book. Inasmuch as the author's social and economic viewpoint has great educational value for those whose backgrounds differ from hers, it seems a pity that she does not evince a more sympathetic appreciation of the social security aims and accomplishments of persons active in these other fields.

Be that as it may, the present reviewer is convinced that the reader who exercises reasonable caution can safely proceed to profit from and enjoy this passing of social security "problems" (rather than "programs") through the crucible of a mature and inquiring mind. Mrs. Burns pulls no punches. She follows the argument wherever her logic and analysis may lead, regardless of where the chips may fall. At the same time, to the best of her great ability, she strives after even-

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

handed justice as between one viewpoint or policy and another. If at times a bias can be discerned, it is certainly not a conscious one. Where she feels that the analysis is inconclusive, she is willing to suspend judgment pending further investigation. Regarding, for example, experience rating in unemployment compensation, she observes:

Until more factual data are available, it is impossible for the responsible citizen to decide whether, on balance, the social and economic advantages of experience-rating outweigh its very evident disadvantages.

Again, with reference to the social effects of the Federal-State program for aiding dependent children:

The precise extent . . . to which the growth in the numbers of children benefiting from ADC means that the program operates as a stimulus to antisocial behavior (desertion and illegitimacy) or instead reflects merely the fact that the community is now meeting more adequately a need for income that existed much earlier and is discovering for the first time how important is family breakup as a cause of income loss—this question must remain a matter of speculation pending the outcome of further research.

To attempt to catalogue the many excellencies of this work would be a space-consuming task. The thoughtful reader will readily discern them for himself. Less evident, but perhaps more valuable to note, may be some sins of omission or commission as they appear to this reviewer.

In discussing the use of State per capita income as a basis for variable Federal matching of State assistance payments, Mrs. Burns notes a number of advantages and then considers two shortcomings. The latter comprise failure to allow for differences among States arising from the higher incidence of Federal taxation in the wealthier States, and failure to allow for the unequal distribution of incomes as between one State and another. To this reviewer at least it seems that the list of shortcomings could well have been considerably enlarged. Thus, other differences among the States which might well have significance in this connection relate to State taxation (especially income and sales taxes); to the effect of climate on living costs (housing, fuel, clothing, food); to the degree of industrialization and urbanization, which, while influencing per capita income also influence living costs in the same direction; to the proportion of farmers, who in reporting income may include only cash income or, if they include the value of consumption on the farm, may do so at farm rather than retail prices; to the age composition of the population—a larger proportion of children and young persons tending to lower per capita income, but with no "welfare" implications, since the income requirements of this group are presumably lower than those of older groups—a large proportion of old people also tending to lower per capita income, but again without "welfare" implications, since to a large extent this group depends on savings, investments or other capital set aside in their younger years for the very purpose of support in their old age.

The least convincing portion of the book, as this reviewer sees it, is the discussion of "Private Underwriting of Social Security Costs" (pp. 177-84). This section leaves the reader with the distinct impression that both workmen's compensation insurance and State temporary disability insurance should be provided

through a governmental monopoly, to the exclusion of private carriers and self-insurance. Many would no doubt take vigorous issue with such a conclusion, and it does seem that the author has done less than justice to the question. Members of the Society are familiar with arguments on the other side and there is no need to list them here. This section of the book clearly indicates a lack of understanding of the underlying issues and of the fact that different considerations are present for the different types of social security (*e.g.*, old age and temporary disability).

More than once in discussing medical care does the author compare the situation of the medical profession with that of the teacher or clergyman, with the implication that there is a virtual identity between them and that what obtains for the latter should likewise hold good for the former. We read for instance (p. 119):

Other professions, such as teachers and clergy, may find very strange the medical profession's fear that good professional-client relationships will be disturbed if the professional renders a decision dictated by his scientific knowledge and judgment but which is disliked by his client.

Referring later (p. 148) to "the adjustments the medical profession has to make to the new public policies affecting the organization, remuneration and supply of medical services" she observes:

He [the doctor] will have to learn, as the teacher has already learned, how to maintain a good relationship with his clients even though he denies their requests for improper service, supplies, or certifications.

However teachers and clergy may view this comparison with the medical profession, most doctors will certainly find "very strange" the implication that professional-client relationships in their case are virtually identical with those prevailing between teacher and pupil or pastor and parishioner. For one thing, unless the doctor is a salaried public servant, his relations with his patients include a direct financial consideration which is intimately affected by the individual patient's attitude to him, much more so than is the teacher's material concern with the attitude of any individual pupil. Nor does a teacher (or clergyman) have to deny "requests for improper service, supplies, or certifications" in anything like the sense or to the degree a doctor may be called upon to do.

Again, referring (p. 130) to the absence of direct financial transactions between the recipient and the donor of medical care as characteristic of a public medical service, the author continues:

For the persons covered, who in some countries, such as Great Britain, may be the whole population, the system is in all respects similar in operation to the public educational service, for access to the service is conditional neither on the passage of a test of need or income nor on the prior payment of contributions.

However correct this identification may be in respect of "the persons covered," it can hardly be true in the case of the medical profession in Great Britain, since the doctor's remuneration, under the capitation system there prevalent, is directly dependent on his ability to attract clients to his panel. He must therefore consider his client's likes and dislikes in a manner and to a degree a salaried

teacher is rarely if ever called upon to do. Even for the persons covered, the claim that a public medical service is "in all respects similar in operation" to a public educational service seems farfetched. The need for public education is very largely predictable. The individual or family knows pretty well how much to expect. No individual can foresee how much medical care he may need in a particular year. Surely this is an important difference between the two types of public provision, which could have an important bearing on public policy.

In discussing medical care the author's sympathies clearly lie in the direction of a nationwide public plan to assure the provision and meet the costs of comprehensive care. This she presumably feels to be the path of progress, the inevitable wave of the future, so to speak, for this country. Hence, no doubt, her failure to convey at all adequately the phenomenal progress America has made in recent years through voluntary channels, or the advantages of that approach. Nowhere does one find any presentation, much less appreciation, of the advances in coverage and benefit types made by the voluntary health insurance movement (including Blue Cross and Blue Shield) within a couple of decades, or the rapidity with which progress is continuing. Rather do we find reference to:

prevailing dissatisfaction with the over-all results of purely private provision, as measured by mortality and morbidity statistics, the limited extent of constructive services, such as rehabilitative and preventive programs, and the non-availability of some types of high-quality care in certain geographical areas.

On page 147, it is stated:

The American voluntary health insurance plans meet only a part of medical costs, the percentage being estimated at 17.4 in 1952 and 19.5 in 1953.

These estimates, as indicated in a footnote, are derived from an article which, this reviewer is convinced, presents a greatly distorted and unfair picture of the realities and accomplishments of voluntary health insurance. For one thing, it tacitly assumes (as does the author in the above quotation) that voluntary health insurance ought to meet *all* the "potentially insurable" medical costs of ill health and implies that so far not very much has been accomplished in this direction. Thus, while the article makes a further deduction (one-third) from its "potentially compensable income loss," no equivalent step is taken in the case of medical care costs. Yet it is widely held, and surely reasonable, that people should meet a portion of their medical care costs out of current income or savings rather than insurance, as for example dental bills (at least minor ones), costs of inexpensive illnesses, and costs of luxury or quasi-luxury services. Again, the article includes in the total "potentially insurable medical costs," to which the insurance benefits are related percentagewise, the overhead costs of insurance (*i.e.*, the "retention" of the insuring organization). Such inclusion implies that these costs must be paid when the individual is sick or in connection with his sickness, instead of when he is well, as is normally the case. Yet another criticism of the article's approach is its failure to take account of the effects of Federal income tax on the costs of ill health. Uninsured medical expenses are tax-deductible and tax refunds often substantially reduce the financial burden of sickness on the individual.

There are no doubt other areas in which a reader may want to take exception to the author's viewpoint or emphasis. If the book only serves to challenge him to do some thinking on his own, it will have served a worth-while purpose. It should, however, accomplish much more than this. It is one of a series of Economic Handbooks designed for students and the informed general reader. If used to stimulate rather than to crystalize thought, it should prove valuable to these groups, and in particular should afford a liberal education in social security to actuarial students, for whom, whether they like it or not, familiarity with this field is becoming more and more of a *sine qua non*.

G. W. K. GRANGE

O. W. Anderson and J. J. Feldman, *Family Medical Costs and Voluntary Health Insurance: A Nationwide Survey*, pp. xix, 251, McGraw-Hill Book Company, Inc., New York, 1956.

This book analyzes the financial aspects of personal health services in the United States as reported by a representative sample of families throughout the nation. The survey, under the technical direction of the National Opinion Research Center, University of Chicago, was made possible through the generosity of the Health Information Foundation and the American drug industry which supports it.

Information was collected in July 1953 through single "depth" interviews of 2,809 families in their homes. This sample of families was randomly selected by "area-probability" techniques familiar to most actuaries; elaborate statistical analyses subsequently indicated that characteristics of the sample and of the parent population were essentially the same. An Appendix written by the Senior Study Director, Mr. Feldman, describes the methodology in interesting detail.

The only previous nationwide survey of family medical costs related to the period 1928-31. Since that time voluntary health insurance has become a major factor in medical economics and now insures more than 106 million Americans against one or more types of medical expense. It is natural, then, that the current study should devote a major part of its attention to the impact of insurance on spreading costs and on the utilization of services. This impact is shown by comparing insured and uninsured families by age, sex, residence and other factors. One of the major findings is that the presence of insurance in comparable families influences utilization of health services to a substantial extent. This differential should not be attributed entirely to abuse and overuse. The need for medical care is usually a matter of judgment; criteria emerge from patterns of practice of many physicians in the community and from the desires and needs of their patients. It is clear that any attempt at insurance claim cost control must involve a long-range process of education as to the true nature of insurance.

No attempt has been made to determine the possible effect that health insurance has exerted on the level of health of insured families. However, it is interesting to surmise that some of the steadily lengthening span of life may be

attributable to earlier and more effective medical care available when economic restraints are lifted.

Two broad and profound problems will be facing voluntary health insurance for some time to come: one is expansion in terms of people covered, and the other is expansion in terms of benefits offered. The first problem is nearer solution than the second: over two-thirds of the population outside institutions have some form of voluntary health insurance coverage and the proportion continues to grow as more attention is paid to individual enrollment of farm groups and of the self-employed in urban areas.

The second problem is a more complex one, raising the question of what medical expenses should be insured and what services and costs should be handled directly by the individual family as regular budgetable items. In the former category may fall specified services which are unpredictable for any given family rather than complete health service embracing both curative and preventive services. Even on this restricted basis, there is considerable room for expansion. The Health Information Foundation study develops that 41% of insured families have less than 80% of their hospital charges paid by insurance and the proportion is even higher for surgical and other medical charges. The question of broader coverage is being approached on a wide front in the development of major medical expense insurance. In the final analysis, however, the extent to which voluntary health insurance is expanded depends upon many factors: competition for the consumer's dollar, philosophies of government and private enterprise, the level of public information and knowledge, to name only a few.

The Health Information Foundation study fails to consider that segments of insurance other than health insurance contribute importantly toward meeting medical costs. Thus a large portion of our employed population has insured weekly indemnity benefits payable in the event of disabling accident or sickness; life insurance pays for the cost of many terminal illnesses; policy loans and surrender values on life insurance are available for all emergencies including pressing medical bills; workmen's compensation benefits, automobile and other types of insurance add to the total.

The authors have appended 108 statistical tables covering many phases of their study. Unfortunately these statistics are not directly suitable for use by insurance company actuaries, the reason being that the family rather than the individual is the unit. However, the material can serve as a valuable indication in many problems and has been particularly helpful in testing the adequacy of major medical expense premium rates developed by other means.

ARTHUR G. WEAVER

*K. W. Herrick, *Total Disability Provisions in Life Insurance Contracts*, pp. xvii, 212, Richard D. Irwin, Inc., Homewood, Illinois, 1956.

This book, one in the series of studies of life insurance and allied fields sponsored by the S. S. Huebner Foundation for Insurance Education, relates to disability benefits issued by United States life insurance companies on their Ordinary business. The Society's 1952 Disability Report and the renewed interest

manifested by life insurance companies in disability income coverage as a result of that report make a text of this kind useful at this time.

The sections in the study devoted to nonmathematical topics are so uniformly excellent that, in comparison, the treatment accorded some of the aspects of disability which are of special interest to actuaries will be somewhat disappointing. The author disclaims any intention of writing for actuaries but does give a brief nonactuarial explanation of the computation of disability premiums and reserves. Unfortunately, he combines the probability approach with the method of determining the value of future benefits in a manner that is likely to confuse the nontechnical reader. If the present value of future benefits concept had been followed exclusively, the description would perhaps have been longer but much clearer. Except for the treatment of disability premiums and reserves, this volume might be compared in its scope with Actuarial Study No. 5 (Hunter and Phillips, *Disability Benefits in Life Insurance Policies*).

The author falls into a common error in discussing the active life reserve accumulation. He correctly points out that the net level premium is greater than the yearly cost of the benefit during the early years of the policy, as a consequence of which the reserve increases. The text then indicates that, when the probability of becoming disabled equals the net annual premium, the reserves will begin to decrease. Actually, because of interest increments to the reserve, the reserve will generally increase for several years after the product of the increasing probability of disablement and the decreasing value of the benefit after disablement becomes less than the net level premium.

In the course of discussing disability premiums the following statements appear: "Premiums are calculated on the assumption that all premiums may have to be waived. However, the first premium is never waived. . . . It would also be to the insured's advantage to cancel the waiver of premium benefit just prior to paying his last annual premium on a limited payment contract." To the extent that the first premium is never waived, the author might have pointed out that no charge is made therefor. With regard to the second point, it should be obvious that the full complement of premiums is needed to provide the benefits granted. If policyholders were to follow the procedure indicated, larger premiums for the shorter period would, in theory, perforce have to be charged.

This study is comprehensive, up-to-date and well documented. It covers all areas of its subject and has appended a bibliography of over 160 books, papers, articles and citations. The chapters devoted to legal aspects, claim administration and underwriting are succinct and informed summaries of these practical phases of disability insurance. An excellent historical survey compresses into thirty pages the developing pattern of the disability provision from its origin among German mutual aid societies and insurance companies in the mid-nineteenth century to its present-day form. The experience of the thirties and forties, which is punctuated by tabulations of the financial results experienced by the industry, leads the author to the conclusion that, with suitable controls, the disability income benefit can be offered profitably. Dr. Herrick expresses the opinion that:

Private life insurance companies can and should provide insurance protection against the financial losses entailed by long-term total disability. Past failures in this regard stem from unrestrained competition and a lack of experience. The evidence would seem conclusive as to the propriety of issuing total disability income providing \$10 monthly income, if it is administered with discretion.

The author mentions two objectives of his study: first, to analyze the total disability provision issued by life insurers and the various techniques employed in connection therewith; and second, to bring together in a single document the many facets of total disability benefits in life insurance policies. The book fulfills these aims and it should become one of the standard reference works on total disability coverage.

LOUIS LEVINSON

*O. D. Dickerson, *Long Term Guaranteed Renewable Disability Insurance*, pp. 126, Health and Accident Underwriters Conference, Chicago, 1955.

This book was written for the Health and Accident Underwriters Conference, a predecessor organization to the current Health Insurance Association of America. The author, Mr. O. D. Dickerson, is an instructor in insurance with the Wharton School of Finance and Commerce and thus his background is that of a student of his subject.

The book deals specifically with the various problems involved in writing long-term disability insurance under individual accident and sickness policies issued on a noncancelable and guaranteed renewable basis. For the purpose of his book, the author has defined "long-term disability insurance" as insurance that provides benefits after a waiting period of ninety days of total disability and which provides a maximum period of benefits of at least 100 months. However, much of the text is also applicable to short-term individual accident and sickness disability coverages and to income disability benefits offered in conjunction with life insurance.

Mr. Dickerson has made a very comprehensive review of the available literature on his subject. One of the valuable contributions of the book is the 14 pages of bibliography which are presented at the end of the text. Not all of the material noted in this bibliography is directly applicable to the author's subject, but most will be of interest to a person concerned with accident and sickness insurance or the income disability benefit issued with ordinary life insurance.

The author has chosen well from the available literature and he quotes liberally from such literature throughout the text. The text covers the need for long-term disability insurance; the history of such insurance; statistics on the causes and frequency of disability; the calculation of premiums and reserves; underwriting and claim administration; policywriting; marketing. None of these subjects is covered in as complete detail as would be required for a person who is unfamiliar with the subject and who is confronted with the problem of developing the type of policy under discussion. For such a person, the many references cited throughout the book would serve as sources for more detailed information. However, the book would admirably serve the purposes of the person who merely wishes to obtain an over-all view of the subject.

Many of the papers to which the author has referred in the text were published several years ago and are now of primarily academic interest. The development of the text has been supplemented with helpful citations of published statistics. While tables of volume of business and aggregate loss ratios have been derived from experience with accident and health policies, which is the subject of this book, the rates of disability and annual term premiums included therein have been derived from experience under disability benefits issued in conjunction with life insurance policies. However, it is not the author's fault that he has been unable to cite morbidity statistics derived from experience with guaranteed renewable accident and health insurance. No such data have as yet been published. However, it is hoped that this void in actuarial literature will be remedied in the near future by the studies undertaken by the Society's Committee on Experience under Individual Accident and Sickness Insurance.

It should be noted that Chapter 7 which deals with reserves makes no reference to the change in reserve requirements which will probably result from the work currently being done by Task Force 4 which was established by the Joint Committee on Health Insurance. It is improbable that the NAIC will recommend new minimum reserve standards at its Fall, 1956, meeting.

JAMES T. PHILLIPS

A. M. Niessen, *Sixth Actuarial Valuation of the Assets and Liabilities under the Railroad Retirement Acts as of December 31, 1953*, pp. 69, Railroad Retirement Board, Chicago, May 1956.

According to law, a valuation of the Railroad Retirement system must be made every three years. The present report presents the sixth such valuation, made as of the end of 1953 (because of the time lag involved in collecting and analyzing the data), but relating to the provisions of the law in effect at the end of 1955. A major part of the report consists of the technical presentation of the Chief Actuary of the Railroad Retirement Board, but there are also included brief statements of the Actuarial Advisory Committee and of the members of the Railroad Retirement Board.

In summary, the valuation indicates that the level-premium cost of the benefits and administrative expenses is 15.95% of payroll as against the level-premium equivalent of the existing level tax rate (of 12½%) and the existing funds on hand, amounting to a total of 14.32% of the payroll. As a result, an actuarial deficiency of 1.63% of payroll is indicated.

This situation is, in the opinion of the reviewer, quite serious, since the valuation necessarily could not take into account the effect of amendments made in 1956 that increased the benefit level by 10% in most cases, without making any corresponding provision for additional income. Accordingly, the actuarial deficiency is now close to 3% of payroll. Moreover, under the 1956 amendments, effective in July 1956, the current rate of outgo will represent more than 13% of payroll, or slightly in excess of the tax income, but this deficiency will, at least for a few years, be made up by the interest earnings of the accumulated fund, which are equivalent to about 2% of payroll.

ROBERT J. MYERS

SELECT CURRENT BIBLIOGRAPHY

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

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

ACTUARIAL AND OTHER MATHEMATICS, STATISTICS, GRADUATION

T. N. E. Greville, "Laws of Mortality Which Satisfy a Uniform Seniority Principle," *Journal of the Institute of Actuaries*, vol. 82, part I, no. 360, p. 114, 1956.

Defining a uniform seniority principle in a rather general way, it is shown that the "laws of mortality" satisfying such a principle are those and only those for which the force of mortality satisfies a second-order differential equation of the form

$$p\mu_x'' + q\mu_x' + r\mu_x = s,$$

and the various possible solutions are catalogued. Since the publication of the paper, H. L. Seal has pointed out that this proposition can be deduced from a more general theorem of M. Hochart (*Bulletin Trimestriel de l'Institut des Actuares Français*, no. 113, p. 72, June 1923).

C. Carpmal, "Temporary Selection," *Journal of the Institute of Actuaries*, vol. 82, part I, no. 360, p. 123, 1956.

The author seeks a "law of mortality" broad enough to include both select and ultimate mortality, based on the theory that "persons living at any age may be divided into two essentially different groups, *viz.*, those who are in their usual state of health (or are perhaps temporarily unwell) and those who have contracted a fatal illness." He finds it sufficiently accurate to take mortality in the latter group as depending only on the duration of the fatal illness (and thus independent of age).

Sir William Elderton, "Can We Express $\ell_{xxx} \dots (n)$ and $1/\mu_x$ by the Ordinates of Frequency Curves?" *Journal of the Institute of Actuaries*, vol. 82, part I, no. 360, p. 85, 1956.

It is shown by specific examples that frequency curves of the Pearson family (or combinations of such curves) can be satisfactorily fitted to the joint expectation of life for a number of lives of equal age and to the reciprocal of the force of mortality.

S. Ridderström, "On Ratio Estimates in Simple Random Sampling with Some Practical Applications," *Skandinavisk Aktuarietidskrift*, 1955, Parts 3-4, p. 135.

The author sets out first the mathematics involved in making ratio estimates from random samples. The mean, variance, bias and confidence intervals of such estimates are discussed. A number of applications are described in the remainder of the paper. They were obtained, as noted by the author, mostly from work at the Metropolitan Life Insurance Company previously unpublished except for that reported by George C. Campbell, "Problems with Sampling Procedures for Reserve Valuations," *Journal of the American Statistical Association*, vol. 43, p. 43, 1948.

*G. J. Stolnitz, *Life Tables from Limited Data: A Demographic Approach*, pp. xii, 164, Office of Population Research, Princeton University, Princeton, New Jersey, 1956.

This book describes "a way of constructing life tables when conventional methods cannot be applied and primary reliance has to be placed on the information found in a single enumeration. More specifically, it is assumed that data on deaths by age are not available and that substitute measures cannot be deduced from successive censuses." Sample applications of the method to test situations in which the correct results were known seem to justify its use to obtain reasonable approximations under the circumstances stated.

LIFE INSURANCE AND ANNUITIES

*D. M. McGill, editor, *The Beneficiary in Life Insurance* (revised edition), pp. xx, 314, Richard D. Irwin, Inc., Homewood, Illinois, 1956.

This book was first published in 1948 under the editorship of the late David McCahan. The revisions from the first edition are minor for the most part. The greatest change was made in the sections on taxation, which have been rewritten and expanded to include the recent significant changes in this field.

W. E. Van Eenam and M. A. Penman, *Analysis of 157 Group Annuity Plans Amended in 1950-54*, *Actuarial Study No. 44*, pp. 48, Social Security Administration, Washington, D.C., July 1956.

This study presents an analysis of amendments made to 157 group annuity plans following the extensive 1950 amendments to the OASI system. At the same time, the provisions of the amended plan are compared with those of new plans established during 1946-50 (as analyzed in more detail in *Actuarial Study No. 32*). The amended plans studied are predominantly of the definite benefit type (90%), contributory (67%), and with vesting provisions (93%). The great majority of the plans (83%) integrate future service benefits with OASI; the averaged employee contribution rate (by number of plans) is 2.5% on the lower portion of earnings and 4.2% on the higher portion, and the most common future service benefit formula is 1% of the first \$3,000 of annual earnings (despite the increase in the OASI wage base to \$3,600 in 1951 and to \$4,200 in 1955) per year of service, and 2% on the excess earnings. The most interesting characteristic of the revised plans is that benefits have been considerably increased, while the cost to the employee was decreased or not changed (or at most raised only slightly). This is all the more noteworthy and impressive since OASI benefits had been increased substantially shortly before the plans were revised.

"Industrial Pension Plans in Canada," pp. 23, Economics and Research Branch of the Department of Labour, Queen's Printer, Ottawa, 1955.

Reprinted in this pamphlet are a series of four articles that originally appeared in the April 1954, September 1954, January 1955, and July 1955 issues of *The Labour Gazette* of the Canadian Department of Labour. The first article deals with the various types of contribution and benefit formulas; the second with age of retirement and other aspects of retirement policy; the third with vesting provisions; and the fourth with the number of Canadian workers covered by pension plans. It is reported that, in 1936-37, a survey by the National Employment Commission showed that 8% of Canadian business establishments had pension plans. Shortly after the termination of World War II, it was estimated by the Dominion Bureau of Statistics that this ratio had risen to 25%. By 1951, the Department of Labour reported the proportion to be 37% and, in 1954, to be 45%.

Pension and Other Employee Welfare Plans: A Survey of Funds Held by State and National Banks in New York State, pp. xxxviii, 161, New York State Banking Department, New York, December 30, 1955.

Private Employee Benefit Plans—A Public Trust: A Report on Welfare and Pension Funds in New York State, pp. xviii, 392, New York Insurance Department, New York, February 20, 1956.

Welfare and Pension Plans Investigation, Final Report Submitted by Subcommittee on Welfare and Pension Funds of the Committee on Labor and Public Welfare, Report No. 1734, 84th Congress, 2nd Session, pp. xii, 365, Washington, D.C., April 6, 1956.

These three reports present a comprehensive review of the establishment, growth, operation and problems in the field of nongovernmental employee pension and welfare funds.

The first work summarizes a study by the New York State Banking Department, under the supervision of the Superintendent of Banks, Mr. George A. Mooney, of trustee, pension, deferred profit-sharing, thrift and other employee welfare funds held by state and national banks in New York. The particular significance of such a study by New York State lies in the fact that about 60% of all such trustee funds in the United States are located in New York banks. The material, which is presented in 136 tables and a section of textual analysis entitled "Significant Facts Disclosed by the Tabulations," will prove of interest to both the actuary and others concerned with this rapidly growing and significant field.

The second study, by the State of New York Insurance Department, is the product of Mr. Martin S. House, Special Counsel, and staff, who were appointed by the Superintendent of Insurance, Mr. Lefiert Holz, to conduct "a welfare fund inquiry." It is a follow-up to the study "Whose Welfare?" previously prepared by Mr. Adelbert H. Straub, Jr., Deputy Superintendent of Insurance of the State of New York, dealing with many of the same problems, which was completed and made public in December 1954.¹ This study is broader in scope than that of the Banking Department in that it is directed to group insurance as well as the problems related to self-administered pension plans. Considerations relating to commission and fee practices, agent and broker relationships, adequacy of existing state and federal supervisory legislation, and many other considerations vital to the operation of group insurance and pension plans are

¹ Reviewed in *TSA* VII, 556.

analyzed. This study, unlike the preliminary report by the Superintendent of Banks, primarily addresses itself to the particular problems of malfeasance or maladministration of funds which have been the subject of much public discussion in recent years. The study advances several solutions to these problems after an examination of the various alternatives.

The third study represents the final report and recommendations of the Senate Subcommittee on Welfare and Pension Plans under the chairmanship of Senator Paul H. Douglas, Illinois. It represents the third published report by this subcommittee. A first interim report was submitted on January 10, 1955, by the subcommittee, which was then under the chairmanship and direction of Senator Irving M. Ives, New York. A second interim report was published July 20, 1955, as a result of public hearings of the subcommittee in March and April 1955, under the chairmanship of Senator Douglas. The subcommittee's final report covers somewhat the same fields as the study by Mr. House. The subcommittee report was not unanimous. For example, Senator Gordon Allott, Colorado, filed a supplementary report indicating his opinion that the recommendations should have been applied to a narrower field than those of the majority. Draft legislation was subsequently introduced in the Senate by Senator Douglas (S. 3873, 84th Congress, 1955) and others.

The three reports furnish extensive material upon which an evaluation of many developments in the "employee welfare plan" area can be made. In addition to the technical material of importance found therein, several significant policy considerations found in this area are extensively explored.

*O. Pollak, *The Social Aspects of Retirement*, pp. xiv, 47, Richard D. Irwin, Inc., Homewood, Illinois, 1956.

This is the second publication of the Pension Research Council of the Wharton School of Finance and Commerce, where the author is Associate Professor of Sociology. The monograph contains a bibliography on the social aspects of retirement. The impressions acquired during its compilation are subjected by Professor Pollak to a cultural analysis, the purpose being a tentative effort to create orientation for further work. The cultural analysis includes an examination of the pros and cons of chronological age as a basis for retirement, the problems of retirement—that is, the role of occupation during retirement, changes in family relationships, residential arrangements, mental health—and efforts at alleviation of the discomforts of retirement—that is, preventive and curative efforts, and individual and societal efforts.

The idea is advanced that fruitful research in the future may be directed to finding ways for establishing greater harmony between the retirement experience and the principles of living generally held important in our culture. The following are suggested as deserving research priorities:

1. Arrangements which permit a real though limited continuation of a person's work in his line of competence after formal retirement.
2. The experience of women in their own retirement and that of their husbands; consideration of their impact on planning; and the potential of their involvement in company plans of preparation for retirement.
3. The adjustment value of retirement migration compared with that of continued stay in one's pre-retirement community.
4. The philosophy of life and activities of people who in their own opinion and in the opinion of their associates have achieved a successful retirement experience.

President's Commission on Veterans' Pensions, *Veterans' Benefits in the United States*, p. 415, Washington, D.C., April 1956.

An executive order of January 14, 1955 created a President's Commission on Veterans' Pensions with the duty of preparing a survey of Veterans' nonmedical benefits and making recommendations thereon. General Omar N. Bradley was appointed Chairman. The report describes existing legislation in detail and gives a history of past legislation. Extensive statistics with many graphs on the operations of the Veterans' Benefit programs are given.

In 1955 there were 21.9 million living veterans of all wars, of whom 2.1 million were drawing compensation for service-connected disability (another 1.5 million had service-connected disabilities too slight to be compensable or from which they had substantially recovered) and 0.6 million were receiving non-service-connected pensions. Direct federal expenditures for all veterans' benefits were about \$4.4 billion in fiscal year 1955. Under existing legislation it is estimated that a peak of about \$6.0 billion a year will occur near the end of the century. This estimate was based on the assumption that half of the aged wartime veterans would receive the non-service-connected pension of \$78.75 a month. Some of the other half would receive pensions for service-incurred disability, but most of the remainder would be ineligible because of income above the limits. On the other hand, if veterans' benefits are liberalized by following the traditional pattern of providing general pensions, the outlay could soar to \$14.9 billion annually some 45 years hence. Non-service-connected pensions to veterans and dependents—now amounting to \$800 million a year or 18% of total outlay—are estimated at \$12.8 billion annually ultimately, or 86%. Interesting projections are also given as to living veterans and potential survivor cases.

Seventy recommendations are made. The report emphasizes repeatedly that veterans' benefits should be directly related to needs arising from military service and that priority should be given to adequate compensation and services for service-connected cases. Regular contributory OASI coverage is recommended for the armed forces, together with adjustments in veterans' benefits and in the military retirement system so as to produce reasonable total benefits. For peacetime veterans the commission recommends that benefits should consist almost entirely of benefits for death or disability incurred in service. For wartime veterans it approves, in general, of readjustment benefits such as provided by the GI bills for World War II and Korean veterans. It is recommended that pensions should be paid only for disability or death resulting from military service or to meet minimum needs in cases where OASI benefits or other income fall below a stipulated amount. Under present legislation, non-service-connected pensions are payable on an "all or none" basis to wartime veterans with less than a specified income; the report recommends instead a "sliding scale" basis.

H. H. Marks, "Mortality Among Impaired Lives," *Trends and Differentials in Mortality*, p. 98, Milbank Memorial Fund, New York, 1956.

The author reviews the several types and sources of studies on mortality of impaired lives, the advantages and limitations of each, the kinds of impairments included, and the procedures used in evaluating the data. An extensive bibliography is appended.

ACCIDENT AND SICKNESS INSURANCE

*C. A. Kulp, *Casualty Insurance* (third edition), pp. xii, 635, Ronald Press, New York, 1956.

Among the chapters on casualty insurance in this text, greatest space is given to that on accident and health insurance, where some of the most recent developments are described.

J. Andrews, Jr., and B. B. Kendrick, "The Contribution of Voluntary Health Insurance," pp. 35, Health Insurance Council, 1956 (available without charge).

This is a reprint of three articles from the *Journal of Chronic Diseases*: "Health Insurance Fundamentals," vol. 3, January 1956; "The Customary Forms of Protection," vol. 3, February 1956; and "New Protection Against Major Expenses," vol. 3, April 1956.

M. J. Schwartz, *New York Disability Benefits Law Insurance Experience 1951-54*, Proceedings of the Casualty Actuarial Society, vol. 42, p. 8, May 1955.

By covering the experience for 1951-54, the author brings up to date an earlier paper on disability benefits under the New York law. The present paper describes the experience under Precisely Statutory coverage, which provides the exact coverage required by the Disability Benefits Law, and also under Substantially Statutory coverage, which provides a somewhat broader coverage than that specified by the law. The experience data reported to the New York Insurance Department are analyzed and compared with the 1947-49 intercompany group morbidity study for the same kind of benefits. The combined New York Statutory Benefits experience was only 60% of the intercompany group experience. A number of factors are proposed to account for the difference. Thus, the former reflects the experience among smaller size groups with 100% employee participation, as compared with larger groups and a 75% participation requirement therefor, as a result of which some healthy young employees may elect to stay out. Also, the benefits provided under the Statutory requirement are limited to 13 weeks within every 12 months and benefits are not paid until 8 days after the termination of any continuance of salary; the group benefits are generally more liberal in this respect. Detailed analysis of the Statutory experience shows that the annual claim cost per employee has been increasing steadily during the period covered, principally because of liberalizations in the law and inflationary tendencies. This claim cost reflects the frequency of claim, the average duration of benefits, and the average amount of benefits. Although the relative frequency of claims has been fairly stable within the period, the average duration per claim increased somewhat. The primary reason for the more favorable experience under Statutory coverage, as compared with the intercompany experience, was the very much lower frequency of claims. Claim costs were somewhat higher under Substantially Statutory coverage than under Precisely Statutory coverage because of the more liberal benefits in the former.

Health Insurance Council, "Surgical Procedures: Classification and Nomenclature," pp. 58, New York, 1956.

This booklet is intended for the use of lay persons concerned with the administration of surgical expense insurance plans, particularly in the handling of claims. Part I contains a two-digit code of general classification according to body systems. Part II sets forth a detailed classification of surgical procedures, using accepted medical terms; opposite each term is an approximate description in nonmedical terminology. Part III contains an alphabetical index of the procedures keyed to the classification system.

Department of Health, Education, and Welfare, "Some Information About the National Health Survey Program as of October 1, 1956," Memorandum from the Staff of the National Health Survey Program, Division of Public Health Methods, Public Health Service.

Public Law 652, entitled *The National Health Survey Act*, was signed by the President on July 3, 1956, and an appropriation for the first fiscal year of operation was made

in late July. Under the major provisions, the Surgeon-General of the Public Health Service is authorized "to make, by sampling or other appropriate means, surveys and special studies of the population of the United States to determine the extent of illness and disability and related information." Authority is also given to develop new methods to obtain current data on illness and disability and to publish the results of surveys. Although cooperation with other departments of government is authorized, private agencies may also be used. Present plans are for: "(a) a continuous sampling of households on a national basis, information being collected in each household by carefully trained and supervised interviewers; (b) a series of special studies to gather auxiliary information of a type that the interview with household members is not capable of providing, based either on subsamples of the national household sample or separate samples; and (c) a series of methodological studies designed to improve the techniques of measurement of illness and to check the validity of data collected in the interview survey and special studies."

The current survey will consist of a relatively small core of queries that will remain on the questionnaire at all times. However, these will be supplemented by a continuing series of special inquiries varied from time to time to meet the particular interests of different consumers of the data. A Policy Advisory Committee will consist of persons representing the viewpoints of professional, business and state governmental associations.

Study of Consumer Expenditures, Incomes and Savings: Volume VIII, Summary of Family Expenditures for Medical Care and Personal Care, pp. xxxii, 505, University of Pennsylvania, 1956.

This report is based upon data collected in the Survey of Consumer Expenditures in 1950, conducted by the U.S. Bureau of Labor Statistics. The tabulations were prepared in cooperation with the Wharton School of Finance and Commerce under a grant from the Ford Foundation. The volume consists of 21 tables of data, each of which contains a classification to show family characteristics (averages for money income after taxes, family size, full-time earners, age of head, education of head, and percentages of nonwhite and of home owners), average family expenditure in dollars (medical care, separately for group plans and insurance and for direct payments for medical services and for personal care), and lastly percentage of families reporting expenditures for medical care (separately for total medical care, group plans and insurance, and direct payments for medical service) and for personal care. Medical care group plans and insurance include group hospitalization and medical care membership fees, and disability, health and accident insurance premiums. Direct payments for medical service include services of physicians, specialists, surgeons, dentists, chiropractors, faith healers, oculists, optometrists, etc.; also X-ray and other laboratory fees, hospital rooms, nursing and ambulance fees, prescription and nonprescription drugs, and appliances and other medical care supplies and services. Also, each of the 21 tables shows details separately for the urban population in the North, South and West regions of the United States; within each region the data are subdivided for three categories consisting of large cities, suburbs and small cities. The tables are as follows: (1) detail for 91 representative cities for all families combined; (2) corresponding detail for families of two or more persons; (3) by annual net money income class; (4) by family size; (5) by race; (6) by age of family head; (7) by education of family head; (8) by occupation of family head; (9) by number of full-time earners in family; (10) by home tenure of family; (11) by length of residence in city; (12) by sex of family head;

(13) by family living arrangements; (14) by family type, size and income class; (15) by race, family size and income class; (16) by occupation of head, family size and income class; (17) by family size, age of head and income class; (18) by education and occupation of family head and income class; (19) by home tenure, age of family head and income class; (20) by age and occupation of family head and income class; and (21) by home tenure, occupation of family head and income class.

A. W. Brewster and D. McCamman, *Health Costs of the Aged—a Source Book on the Use of Hospital and Medical Services and on Health Insurance and Other Methods of Financing Medical Care among the Aged*, pp. x, 126, Division of Research and Statistics, Social Security Administration, Washington, D.C., 1956.

This volume is a collection of data relating to the medical care problems of the aged drawn from many sources. Data are presented relating to the social-economic characteristics of the aged population, indications of the health status of the aged, their utilization of hospital and physicians' services and, lastly, their medical costs, insurance ownership and other topics relating to financing medical care. The tables of data are shown on the right-hand page; the facing left-hand page contains the explanatory text. Among the sources used are the experience of OASI beneficiaries, the Rhode Island experience, publications of the American Medical Association and Blue Cross records. Because of the wide variety of sources used, the data are not intended to be representative of the medical care problems of the entire body of aged in the United States.

S. D. Collins, J. L. Lehmann, and K. S. Trantham, *Surgical Experience in Selected Areas of the United States*, pp. iii, 47, Public Health Monograph No. 38, Public Health Service, U.S. Department of Health, Education, and Welfare, Washington, D.C., 1956.

Following a very brief account of the early history of surgery, a chapter is devoted to time trends of surgical operations, related procedures, and deaths from selected causes, based largely upon data from United States Navy reports. Subsequent chapters are based upon data from several periodic canvasses of households, the earliest dating from 1928. A separate chapter describes the history of tonsillectomy and appendectomy among children. Among the details presented are data showing the age and sex variation rates for specific surgical operations.

H. A. Rusk, J. E. Silson, J. Novey, and M. M. Dacso, "Hospital Patient Survey," pp. 146, The New York Foundation, New York City, 1956.

The municipal hospitals of New York City supply medical care to those of its residents who are unable to pay for it. The present survey was undertaken to ascertain the number and characteristics of their patients who had no medical reason for remaining in the hospital. It was found that almost 20% of the patients were not in further need of hospital care. Most of the patients in the survey were elderly persons with chronic diseases of long duration. They had exhausted their savings and had few close relatives to help them. The authors of the report point out that "the steadily increasing popularity of hospitalization insurance and the addition of so-called 'medical catastrophe' policies will undoubtedly cause an even further shift" in the direction where persons seek "medical care in the municipal hospitals only when their conditions have become chronic and their resources exhausted."

Department of National Health and Welfare, "Volume of Health Care for Selected Income Groups (National Estimates)," Report No. 9 of the Canadian Sickness Survey, 1950-51, pp. 62, Queen's Printer, Ottawa, February 1956.

This is the ninth in a series of reports based on the Canadian Sickness Survey, 1950-51, reference having been made to the eighth in *TSA VIII*, 113. This latest report presents national estimates of the amount of the various categories of health care received by Canadians, the principal breakdown being by income group. Some of the more common categories—physicians' care, in-patient hospital care and dental care—are further subdivided by age group and sex.

SOCIAL SECURITY

C. I. Schottland, "Social Security Amendments of 1956: A Summary and Legislative History," *Social Security Bulletin*, September 1956.

In this article the Commissioner of Social Security summarizes the Social Security Amendments of 1956, by which a number of important changes were made in the old-age and survivors insurance program as well as in the public assistance programs. The various changes are outlined and then described in considerable detail. Following this, a legislative history is given of the differing actions of the House of Representatives and the Senate, along with the compromised version agreed to by both Houses.

Summary of the Old-Age, Survivors, and Disability Insurance System as Modified by Amendments to the Social Security Act in 1956, pp. 8, Division of the Actuary, Social Security Administration, Washington, D.C., August 1956.

This summary presents the more important provisions of the OASDI system following the two important amendments enacted in 1956. One amendment provided for coverage of members of the Armed Forces on a regular contributory basis beginning in 1957. The other amendment made a number of changes, the principal ones being (1) reduction of the minimum eligibility age for women from 65 to 62 (with benefits reduced, on an approximate actuarial basis, for women workers and for wives, but with no reduction for widows), (2) introduction of monthly disability benefits payable to persons between ages 50 and 65 after a 6 months waiting period, and (3) an increase in the combined employer-employee contribution rate of $\frac{1}{4}\%$ in all future years beginning with 1957 to finance the disability benefits. The various sections of this summary deal with the benefit categories, the insured status provisions, the computation of the primary benefit and of dependent's and survivor's benefits, the "disability freeze," the retirement test, the types of employment covered, and the contribution rates. Copies of this summary are available without charge from the issuing office.

R. J. Myers, *Actuarial Cost Estimates for the Old-Age, Survivors, and Disability Insurance System as Modified by Amendments to the Social Security Act in 1956*, prepared for the Committee on Ways and Means, House of Representatives, pp. 14, U.S. Government Printing Office, Washington, D.C., July 23, 1956.

This report contains the long-range actuarial cost estimates for the Old-Age, Survivors, and Disability Insurance system in the form following the important amendments made in 1956 (namely, coverage of the military forces on a regular contributory basis, lowering of the minimum eligibility age for women to 62, and adding disability benefits, along with an increase in the tax rates).

The report first sets forth the financing policy that has been followed by Congress, namely that the system should be self-supporting from the scheduled contributions according to the intermediate-cost estimates. The report next presents briefly the basic cost assumptions used and then shows the results of the cost estimates on a range basis and on the intermediate basis. Separate cost estimates are shown for the progress of the

trust fund for the old-age and survivors insurance benefits and for the new trust fund established for the disability insurance benefit.

Considering the system as a whole, there is a lack of actuarial balance of only .13% of payroll, or a relatively negligible amount considering the range of variation of the cost estimates. Moreover, this figure is slightly lower than the corresponding one for the 1954 Act based on the same cost assumptions. Considering only the disability benefits, a slight actuarial surplus (.07%) is shown in the intermediate estimate, but, as the report states, this occurs because the $\frac{1}{4}$ % tax allocated for this benefit is slightly in excess of the estimated level-premium equivalent of the benefit disbursements and administrative expenses combined. The report recognizes the wide variation possible for the future disability experience and states that the small actuarial excess "is certainly no more than a moderate safety factor."

According to the intermediate-cost estimate, the Disability Insurance Trust Fund grows steadily in the future, reaching about \$6 billion by 1975, at which time contribution income and benefit outgo are both at a rate of about \$1 billion a year. On the other hand, the OASI Trust Fund is shown to grow rather slowly in the next few years, but eventually, some 50 years hence, it reaches a peak of more than \$100 billion.

An article summarizing this report is contained in the *Social Security Bulletin* for September 1956. Copies of the report are available without charge from the Division of the Actuary, Social Security Administration, Washington 25, D.C.

A. M. Niessen, "Life Insurance in Force as Survivor Benefits under the Railroad Retirement Act, 1956," *Actuarial Note No. 1*, pp. iii, 17, U.S. Railroad Retirement Board, August 1956.

This study is to some extent patterned after *Actuarial Study No. 43* of the Social Security Administration (digested in *TSA VII*, 565). The concept of "life insurance in force" differs somewhat from that of the insurance in force under insurance company contracts, as conditions for benefit receipt are based not solely on life contingencies but also on elements wholly or partly under the control of the beneficiary, such as marriage, employment, and offset of benefits under other retirement systems. The "net" estimates given attempt to take these and some other factors into account. On this basis, the net amount of life insurance in force under the Railroad Retirement Act is estimated to be about \$10 billion as of the beginning of 1956.

It is pointed out that, for a typical young railroad worker with a wife and two young children and a level monthly compensation of \$300, the amount of life insurance in force reaches a maximum of \$27,200. The average net amount of insurance in force per insured worker is found to be \$8,400 in January 1956, as compared with about \$4,900 under OASI. It is stated that the higher per capita amount under RRA is due in large part to the small proportion of women in railroad employment.

*"National Insurance Act 1946: Fifth Interim Report by the Government Actuary for the Year Ended 31st March, 1955 (together with a Report on the Sickness Experience of Insured Persons in the Years 1949 to 1952)," pp. 42, H.M. Stationery Office, London, May 7, 1956.

Sir George Maddex, the Government Actuary, has taken the opportunity presented by the routine reporting of a year's experience with National Insurance to make available a statistical investigation into the sickness experience of the British insured population during the years 1949-52.

This experience, it is pointed out, does not represent the sickness of the whole population of Great Britain. "All children up to age 15 and those above that age who are still at school or university or are unpaid apprentices are excluded, as well as most persons over the pensionable age of 65 (men) or 60 (women). Sickness benefit is limited to the employed and self-employed classes and the statistics therefore exclude the sickness of housewives and persons living on private means." The report, too, is concerned only with the total of sickness (as defined) from all causes. There was no very significant trend in sickness claims during the period since the start of the National Insurance Scheme. "Apart from the effect of epidemics in the first quarters of 1951 and 1953 the average numbers absent from work owing to sickness have ranged from 800,000, or rather less, in the summer quarters to about 1,000,000 in the Jan.-March quarters."

A comparison of rates under the National Insurance Scheme with those under the old National Health Insurance System, based upon a limited experience, indicated that "on the average the sickness rates for men in 1949-50 were only about 5% above those for the period 1936-38, which was generally regarded as a fair prewar average, whilst those for single women were about 10% above. In the case of both men and single women, however, the moderate over-all increases conceal larger increases at the younger ages coupled with smaller or negligible ones at the older ages."

Appendix I deals with the sampling and exposure procedures adopted. Tables A to E of Appendix II permit comparisons of average number of weeks of sickness benefit per insured person by quinquennial age groups (ranging from 15 to 64 for men, 15 to 59 for women), for the respective years 1949-1952 inclusive. These tables relate in turn to employed and self-employed men, employed and self-employed single women (spinsters, widows and divorced), and (omitting 1949) employed married women. A final table, Table F, gives figures for elderly employed men contributors at individual ages 65 and over as the experience emerges by calendar year.

OTHER TOPICS

*H. W. Snider, *Life Insurance Investment in Commercial Real Estate*, pp. xvii, 136, Richard D. Irwin, Inc., Homewood, Illinois, 1956.

This study, which was published for the S. S. Huebner Foundation for Insurance Education, traces the development of life insurance investments in real estate from the mid-19th century to the present and also reviews in detail the philosophies which have influenced its extent and type. The regulatory pattern, as set out by both statute and discretionary control by insurance commissioners, is described, with attention to the investment policies which have developed within the limits set by such regulations. The administrative problems of real estate investments are discussed, along with a comparison of how such investments measure up to desired standards of safety of principal, liquidity, and yield. Also set forth are the various methods of real estate acquisition and the provisions which are usually found in leases are examined. Special emphasis is placed on the effect of investment philosophy on the terms and conditions of the lease.

The Significance of Life Insurance in the Canadian Economy, pp. vi, 81, The Canadian Life Insurance Officers Association, Toronto, March 1956.

In June 1955, the Canadian Government established a Royal Commission on Canada's Economic Prospects and, among other things, asked it to study and report upon the following matters:

- a) developments in the supply of raw materials and energy sources;
- b) the growth to be expected in the population of Canada and the changes in its distribution;
- c) prospects for growth and change in domestic and external markets for Canadian production;
- d) trends in productivity and standards of living; and
- e) prospective requirements for industrial and social capital.

Representatives of The Canadian Life Insurance Officers Association appeared before the Commission in March 1956, and their submission is reproduced in full text in this booklet. The early chapters of the submission deal mainly with the past and the present; they describe the place of life insurance in the social and economic life of Canada and how the business has developed down through the years. The later chapters relate more particularly to the future and deal with the economic prospects for the further growth of the life insurance business; included in these chapters are projections to 1980 of such items as premium income, life insurance in force and the asset holdings of life insurance companies.

I. M. Moriyama and L. Guralnick, "Occupational and Social Class Differences in Mortality," *Trends and Differentials in Mortality*, p. 61, Milbank Memorial Fund, New York, 1956.

This study is based upon the 1950 mortality of total males and nonwhite males at ages 20 to 64 years in the general population of the United States. The occupations reported on death certificates and in the Census of Population in 1950 were grouped into five levels: I. Professional workers; II. Technical, administrative and managerial workers; III. Proprietors, clerical, sales and skilled workers; IV. Semi-skilled workers; V. Laborers, except farm and mine; and a category of agricultural workers. Death rates are shown for five-year age groups in each occupational level. Students, members of the Armed Forces, and persons who never worked were excluded from the experience. Compared with the average age-adjusted death rate for all men at ages 20-64 years, the level of the rates rises from 84% for Class I to 100% for Class IV; Class V had a ratio of 165%, but agricultural workers a ratio of 88%. The results are compared with those reported by the Registrar-General of England and Wales for 1950 and reviewed in TSA VI, 628.

U.S. Department of Health, Education, and Welfare, Public Health Service, National Office of Vital Statistics, "Life Tables for the Geographic Divisions of the United States, 1949-51," *Vital Statistics—Special Reports*, vol. 41, no. 4, July 26, 1956, and "State Life Tables: 1949-51," *Vital Statistics—Special Reports*, vol. 41, Supplement, pp. vii, 460, Washington, D.C., 1956.

The first report contains complete life tables separately for white and nonwhite persons of each sex for the nine geographic divisions of the United States. The second report contains life tables by sex for the white population of each state and for the nonwhite population of 15 Southern states and the District of Columbia. These tables were prepared in the Statistical Bureau of the Metropolitan Life Insurance Company from mortality and population data supplied by the National Office of Vital Statistics and the United States Bureau of the Census. The method of computation was that used by the National Office of Vital Statistics for the "United States Life Tables: 1949-51."

U.S. Department of Health, Education, and Welfare, Public Health Service, National Office of Vital Statistics, "Death Rates by Age, Race, and Sex, United States, 1900-1953," *Vital Statistics—Special Reports*, vol. 43, nos. 1-31, pp. 1-494, various dates, January 9 to August 23, 1956.

Age-adjusted death rates and death rates by age, race, and sex are given for the death-registration states for each calendar year from 1900 to 1953 for all causes (no. 1 of the series) and for 30 other important groups of causes of death.

U.S. Department of Health, Education, and Welfare, Public Health Service, National Office of Vital Statistics, *Vital Statistics—Special Reports*, vol. 45, nos. 1-7, pp. 1-100, various dates, July 27 to August 30, 1956.

Each of these seven reports presents mortality data for a particular age group by age, race, and sex, and by state. The data include deaths and death rates for the death-registration states for each year from 1900 to 1950, for regions and states for 1930, 1940, 1950, and 1949-51 (total) and by "metropolitan" and "nonmetropolitan" counties within each region and state for 1949-50 (2-year totals).

Dominion Bureau of Statistics, "Mortality by Detailed Cause of Death, 1950-55," pp. 29, Reference Paper No. 65, Queen's Printer, Ottawa, 1956.

The purpose of this report is to indicate the frequency with which specific diseases are recorded as causes of death in Canada. Using the Detailed List of the International Statistical Classification of Diseases, Injuries and Causes of Death (6th Revision, 1948), it shows the number of deaths in each category occurring during each of the years 1950 to 1955 for Canada as a whole.

Dominion Bureau of Statistics, "Canadian Vital Statistics Trends, 1921-1954," pp. 55, Reference Paper No. 70, Queen's Printer, Ottawa, 1956.

This report presents an analysis of the leading characteristics of Canadian population development in the period from 1921 to 1954. Among other things, it includes statistics of birth, marriage, death and natural increase, together with a comparison of Canadian vital statistics with those prevailing in a selected group of other countries.

M. Spiegelman, "Recent Trends and Determinants of Mortality in Highly Developed Countries," *Trends and Differentials in Mortality*, p. 51, Milbank Memorial Fund, New York, 1956.

Following a brief survey of mortality trends in countries of western and southern Europe and English-speaking countries elsewhere, the author considers the factors related to recent trends from the point of view of: (1) Scope, quality and quantity of health services; (2) Personnel in the health services; (3) Financing the costs of medical care; (4) Consumers of health services; (5) Economic progress.