

**TRANSACTIONS OF SOCIETY OF ACTUARIES
1960 VOL. 12 NO. 32**

BOOK REVIEWS AND NOTICES*

*P. P. Harbrecht, *Pension Funds and Economic Power*, pp. 328, The Twentieth Century Fund, New York, 1959.

Here is another work on the "bigness" of pensions. We have had Congressional inquiries, resulting to date in the Welfare and Pension Plans Disclosure Law; the Mills Committee has been re-examining the tax relief aspects and possible loopholes; the National Bureau of Economic Research is studying the impact of pension systems on savings and investment; Dr. Clark in Canada has studied the private pension systems as a backdrop for possible changes in Canadian social insurance; and a recent publication under the aegis of The Fund for the Republic is entitled "Pension Funds and Economic Freedom" which, except for the last word, is identical with the Twentieth Century Fund's title for the present work. Then, too, we have various study groups, committees, and so forth, busily working on the alleged drawbacks in our private pension plans with respect to lack of vesting and inadequate funding (or possibly legislated actuarial soundness), employee communications, etc. Inherently "bigness" seems to tempt recommendations for utilizing the bigness for collateral ends or forcing it into molds disparate from the original intentions; for example, some unions want to manage the funds and channel them into financing hospitals, rest homes, housing, etc., for union members; recently Governor Rockefeller proposed that the insurance companies participate to a much greater extent in public housing investments; pressure is building up to have OASI include medical benefits; and so it goes.

The author of this book, Father Harbrecht, a Jesuit, who has a Doctor of the Science of Laws degree from Columbia University, looks at the legal status of pensions in combination with the financial side. His book is a research study for the Twentieth Century Fund, but a fly-page statement says that the Trustees of the Fund "assume no responsibilities for the facts and opinions contained in research reports"; Mr. Adolph A. Berle, Jr., is Chairman of the Trustees.

Before I start my critique of the book, I should like to proclaim that it is well worth reading. It brings out many aspects we frequently forget are there, both in the makeup of pension plans and in their funding mediums, their place in the economy and their future. The book concerns itself mainly with the trust-fund medium for pensions. In brief, the book reviews the rise of pension trust funds, the components of the plan and trust, the impact of governmental policies on them, where the beneficiaries stand legally and in court, who really controls the funds versus who owns them (no one, apparently) and their likely

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

growth in the next decade or so. The author then goes on to propose various changes in them and the adoption of new viewpoints for them. Finally, he coins an appellation, "paraproprietal society," which seems to mean powers stemming from property, but lacking ownership thereof, and for an analogy he goes back to Charles Martel who conscripted the use (not the ownership) of the church lands by apportioning this use among his fighting men so that they could support troops of horse when called upon. When I try to think through this analogy—the owners, the controllers, the vassals, the serfs and the beasts of burden—I must confess to a certain amount of fuzziness as to "who is who" in the pension areas of today.

Control of Property

The book points to trust fund managers (mostly bank trustees) as a dynamic and powerful force. They control wealth highly concentrated both in aggregate amount and in the quality of securities. But the employer often has the final word on investments (overemphasized, I feel) and can shut off the stream of new money. Common stocks comprise some 25% of trust fund assets and take up over one third of new money contributions. Will the pension trustee have too much power in voting these shares? Will there be a conflict of interest when he votes the same kind of stock for Pension Trust A as for Personal Trust B? Through the personal trusts, the investment trusts (mutual funds), the non-profit foundations, the insurance companies (and more if variable annuities burgeon), (i) ownership is being taken away from individuals and (ii) individuals are reducing personal savings correspondingly.

As for (i), the magnitude of "ownership" at issue, the author points out that there is a long way to go before relative shares (ownership) in pension trusts become alarming. From correspondence with a far better authority than I on share market values, I have put together the following rough allocations of 1958 holdings (including unlisted and closely-held shares): \$10 billion by pension trusts; \$11 billion by insurance companies (all types); \$12 billion by foundations, nonprofits, etc.; \$13 billion by mutual funds; \$33 billion by personal trusts (much of it not voted by trustee); and \$370 billion owned by individuals as individuals; a total (rounded) of \$450 billion in stocks (excluding \$8 billion foreign-held). There is certainly still plenty of room for decentralization of choice in voting these shares (as Tilove found).¹ As for the total pension assets, figures a year or so old show an estimate of \$40 billion (\$25 billion trust funds, \$15 billion insured plans). Several projections have been made of these pension funds, all of them, I feel, considerably too high; e.g., Dearing (Brookings), \$6 billion net annual increase by 1960; Natrella (SEC), \$85 billion assets by 1965 (\$51 billion trust fund, \$34 billion insured); Father Harbrecht, \$79 billion by 1965 (\$46 billion trust fund, \$33 billion insured). It seems to me these lean too much on extrapolations from a period when new plans were springing up fast, when liberalizing amendments—long overdue—were rampant, when past service

¹ Robert Tilove, *Pension Funds and Economic Freedom*, The Fund for the Republic, Inc., N.Y., 1959.

funding was high, when benefit outgo was low; nor do these extrapolations allow enough for experience gains—investment, mortality, turnover, delayed retirement—being credited against new money contributions, nor allow for the years when an employer will pay the minimum (sometimes nil) instead of the maximum. Personally, I shall be surprised if the total of these funds is \$60 billion by 1965. The fact that the total *is* growing, however, adds force to Father Harbrecht's point of view, and stock ownership is growing faster than the total.

As for item (ii), individual savings, the evidence is lacking that individuals are saving less by reason of so much money being put into benefit programs. In fact, a current study conducted by the National Bureau of Economic Research seems to be finding evidence that individual saving and thrift are *not* being impaired by the build-up of pension and benefit fund contributions.

The control of all these assets by pension trustees without a channel of accounting for them to the employee beneficiaries makes the so-called trust company not a trustee, in his opinion, but an "agent" of the employer. This leads into the next topic for review.

Legal Rights of Beneficiaries

The author deplores the situation of trustees not being accountable to the beneficiaries; and that the assets are not fully recognized as employee money by the trustee who listens, instead, only to directions, pursuant to a written plan (please note), by the employer or a joint pension committee. Father Harbrecht seems to ignore the fact that this is what pension plans are, how they grew. Furthermore, the employee seems to have no closer ties to an insurance company under a group annuity contract—his group certificate is not a contract; and the same thing exists under group life insurance. The author here would have employees running around these documents like so many ants, to wit:

Finally, great social advantages may be derived from treating pension funds as the property of the pensioners. A property interest in the pension fund would return to the worker some of the economic independence which the pension system has taken from him. As acknowledged owners, employees would be given some share in the direction and control of the pension funds. This would mean that they should have some voice in the investment of these assets and an effective say in such matters as amendment and termination of the plan. A voice in investment policy would allow the employees to help direct fund investment into channels beneficial to them, such as housing and savings and loan activities. Furthermore, if the employees are considered the owners there is no justification for restricting a pensioner's activities after retirement.

It is curious that so many people—especially those not engaged in industry—want to do over what has served well. Employers wanted their employees protected in old age; they entered into programs—under government (IRS and Taft-Hartley) rules—for setting aside funds irrevocably in a trust fund or insurance company. What does Father Harbrecht want to do with the funds? He claims no one owns them, ergo someone must be named. Who? The employees, to do with them whatever they vote? It seems to me he is arguing against pro-

tection for the aged, against pensions, really. If these funds and contracts are doing the job intended, and cannot stray from it, does it matter that some legal technicality of "ownership" is unclear? I view the ownership of pension fund assets as being in the form of "potential energy" for the employees, becoming "kinetic energy" (ownership) when they come into benefit disbursement status, as specified in the plan (not in the trust).

If the beneficiary had greater access to the trustee or insurance company, what would it be about? The retirement plan document sets forth his rights and rules of procedure and conditions in a thoroughly equitable manner (for IRS qualification); the trustee or insurance contract (D.A.) could hardly override those rules to favor an appealing beneficiary. The author says courts have been slow to recognize beneficiaries' rights—but is it really "slowness," or paucity of complaints?

The author certainly overdraws the beneficiary's uncertainty by reason of employer's right to amend or terminate the plan and by reason of the "bad boy" clause for suspending or canceling pensions once started. He underplays the force of the employee's right to proceed against the plan (instead of the trust), the force of IRS dicta on irrevocable contributions, the force of union influence, of adverse personnel relations created by punitive interpretations, and the force of public opinion in general. In my experience employers have been eminently fair in interpreting pension plans in favor of employees and beneficiaries.

The author is dead right in wanting better communication and disclosure of plan and its operations for employees—but this won't be cured until employees take enough interest to read and think about the plan. For this reason it is not likely that the disclosure laws have, to date, been enlightening to the beneficiaries.

Vesting and Termination

Certainly, in statements (and they are numerous) like "Only a limited number of pension funds have this so-called vesting feature," the author greatly understates the prevalence of vesting provisions but—way beyond that—he seems to argue for 100% vesting on a mandatory basis. He implies mandatory funding to meet it. I believe this leads to mandatory pension plans (else employers would avoid mandatory funding by not setting up plans at all, or switching to pure profit-sharing types). This then leads to standardization of benefits (else mandated employers would set up only token plans). And this leads to a superimposed glorified social security system on top of the present "floor of protection," the euphemism for our present OASDI system.

But even the present OASDI does not have 100% vesting; unless you're in for one half the possible time, or for 10 years if less, you are not vested for benefits and can lose your contributions (taxes). Furthermore, who owns this \$20 billion trust fund; isn't this "potential energy" also? The author points out that pension expectations depend on the solvency and continued existence of the company, but he apparently would still have the company pay off the cases

who leave, ahead of said "pension expectations" for those that stay. On page 253 he comes to the peculiar conclusion that plans will terminate and drop the older, longer-service employees with no pension rights at all, and yet in his statistics he finds past, current and future funding of enormous magnitude. Since the employer can't recapture, where will the money of those terminated plans go? Finally, in his chapter, "A Policy for Pension Trusts," he really seems to be arguing against pension plans qua pension plans and in favor of turning them into a bank account.

Government Impact

In general the author wants more government activity in the field of pensions. He complains that the law now does not specify the type of investments for pension trusts, does not require full funding, does not supervise pension trust activities by state insurance departments (*i.e.*, there is no real regulation), and he believes that it will come about that the state insurance commissioner or state's attorney will be the one to plead for a beneficiary against a pension trust; in short, he wants more regimentation. He feels that the Internal Revenue Service now has the power to do a lot more regimenting of pension plans and feels that they should do so. In the area of the state and federal disclosure acts, he lauds them but seems to interpret them as being much more regulatory than they are, which is mainly "disclosure." He points out that mutual funds have the SEC to govern them, insurance companies have the state departments, personal trusts have the state laws and direct accounting to beneficiaries, but the trustees of the pension plans answer to no government authority or court as far as the interests of the beneficiaries are concerned. (I have discussed this one earlier herein.)

In setting out the inadequacies and shortcomings of governmental activity and control, the author is building up to his "punch line" of need for envisioning, understanding, defining, controlling and generally getting ready for what he calls the "paraproprietal society."

Paraproprietal Society

A composite photograph from Father Harbrecht's camera of the present character and operation of pension trust plans would so overemphasize the blemishes and underemphasize the basic profile that the resulting portrait looks rather ugly to the lay reader and rather unrecognizable to those in the trade. Perhaps he himself does not think of his picture as being as bad as this, but he wants to use it to prove a point, *viz.*, that restrictions in plans, rights to amend and terminate, incomplete vesting and lack of labeled employee ownership of the fund, create a new sort of property in society. This property, he submits, lies between true economic ownership and that of government. If economic power merges with political power, we have dictatorship. Let's avoid it by understanding and leashing this paraproprietal property. But the implications of the book for doing this seem to me to reduce still further our economic freedom and to add to government power.

The author's concluding concern is admirable—that if enough property or

its control is placed beyond individuals, it reduces their responsibilities and initiative, and generates pressure for wages, perquisites and security benefits far beyond the economic capacity to cope with them (outside of self-defeating inflation). The author has used the instant study of pension trust funds as the vehicle for articulating his concern in this area. But pension trusts hold only 5% or less of the country's total corporate securities, in which there is less than 3% of the country's corporate stocks, and there is no evident let-up in savings programs by individuals in funds and properties which they control as individuals.

In this reviewer's opinion, the final message of this book depends from dubious pegs: the one, that employees are in a bad way under existing pension plans, and the other, that the monetary aggregates, magnitudes and characteristics of the pension funds—now or in the foreseeable future—are bringing us to a new type of economic milieu, a paraproprietary society for which we had better make ready.

DORRANCE C. BRONSON

*W. C. Greenough and F. P. King, *Retirement and Insurance Plans in American Colleges*, pp. xvi, 480, Columbia University Press, New York, 1959.

This volume is the third in a series, of which the first, *College Plans for Retirement Income*, was written by Rainard B. Robbins and published in 1940, and the second, *College Retirement and Insurance Plans*, was written by Greenough and published in 1948. All three books are the result of studies by officers of the Teachers Insurance and Annuity Association. The present volume, however, is in many ways the most extensive of the three and the most informative. The authors are eminently qualified. William C. Greenough is President of the Teachers Insurance and Annuity Association (TIAA) and Francis P. King is its Research Officer. They have been closely associated with the problems of colleges in developing retirement and insurance plans, and their deep insight and knowledge in this field are evident throughout the book.

The book is divided into two main sections. The first is a general discussion of the elements of a retirement plan, and the results of a questionnaire survey of 1,377 public and private four year institutions of higher education in the United States. The replies to these questionnaires are summarized in a series of tables which are presented at appropriate points in the text. This part of the volume contains a scholarly discussion of the underlying theory and the reasoning associated with each element of a retirement plan. The second part, which occupies more than half of the total volume, contains a detailed analysis of the plan in effect at each institution. Four major areas of staff benefit plans are covered, namely, retirement, life insurance, medical expense insurance, and disability income insurance. The elements involved in each area are discussed and tables are presented to show how many of each class of institution have taken particular action with respect to each such element. The tables also show the number of teachers covered under each aspect of these staff benefit plans.

The book begins with a general description of the objectives of a college

retirement plan and the historical development of college pension philosophy. There follows a detailed discussion of the methods of administering retirement benefits and the provisions of the college retirement plans now in existence. Each discussion is a comprehensive analysis of the reasoning that a college or a committee should go through when it attempts to develop a staff benefit program.

Several paragraphs on the general subject of vesting in retirement plans provide examples of the scholarly approach of the authors:

Not many employers or employees would admit to the charitable and benevolent concept of retirement plans now. Retirement benefits for current service are considered an obligation, usually contractual. The amount for an individual, no longer discretionary, is usually related in some specific way to salary and service. In expressing thoughts about pensions the thesis is generally stated that an employee *earns* the amount set aside for him during the time he works for an employer; it is definitely a part of current compensation even though it is quite properly set aside for specific purposes.

But except in the educational world, semantics has advanced faster than practice. Lip service is given to the concept that part of the employee's earnings are paid in salary, part in staff benefits, whereas the actual treatment of the employee frequently does not work out that way.

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The subject of vesting and its concomitant mobility of the worker has come in for much attention in the last twenty years and there have been some improvements, as noted above. Likewise Social Security benefits are in a real sense vested; they are fully transferable among covered employments. And the trend is toward earlier vesting, toward accepting in practice the concept that contributions of the retirement plan are a part of currently earned compensation. But so much remains to be done that a number of writers refer to the current situation as one of job peonage inflicted by non-transferable, nonvested pension arrangements.

The above relates to employments in general. Colleges and universities have been far ahead of other employments in providing fully vested, transferable benefits, although there are still quite a few institutions that do not.

The chapter on financing and adequacy of benefits will probably be of most interest to actuaries. It not only deals with the methods of funding various benefits, but also discusses annuity and investment principles. Methods of funding current service benefits and past service benefits are described. An excellent discussion is given of the factors which must be considered in determining what is an adequate benefit for various income levels and how to finance such benefits. The chapter also contains a fine exposition of the authors' definition of a fully funded plan. Thus:

Under fully funded plans, for each portion of service rendered the institution by the employee, a sum is set aside to provide a retirement income related to that service. A fully funded plan might be defined as one under which, if it were to be closed out at any time, enough money would already have been paid into it to meet all the obligations for all benefits accrued under the plan from its inception to its termination.

Fully funded plans make the greatest use of investment earnings. A \$100 deposit made at a participant's age 35 will, by the time he has reached age 65, have increased to \$243 at 3 percent interest. And investment earnings are also made use of during the

period of retirement. Thus a fully funded plan generates increases in available funds, substantially reducing the number of dollars needed to purchase the benefits. Moreover, it discharges all obligations currently as the participants render service to the institution; it assures one and all that funds are actually in being to support their benefits, and it thereby provides the maximum amount of assurance to each individual that his ultimate retirement benefits will be forthcoming.

As may be expected in a book by these authors, there is a rather fulsome discussion of the College Retirement Equities Fund (CREF). This fund was established by the Teachers Insurance and Annuity Association to provide retirement allowances to college professors based partly on investment in common stocks. The philosophy underlying CREF is given in the following quotation:

Through the CREF arrangement, a further diversification of investment support through direct participation in the experience of the economy is made possible for retired professors. Through investments in common stocks and other equities, the actual growth of the economy, increases in productivity, and development of new products are reflected. The earnings of college teachers are generally limited to salaries paid by non-profit organizations; there is little or no chance for them to participate in the higher salaries, or the stock option, bonus, and profit-sharing plans found in industry. Through CREF's equity investments they can share in some of these advantages of other employments. Important values of this participation are reflected in increased protection from inflation and in participation in increasing standards of living, the latter of which may well be commented on at this point.

The per capita standard of living in the United States has been rising at an extraordinary rate for several generations and materially higher standards are expected for the future. It is important for the security and contentment of retired persons that they share in increases in living standards. But traditional types of retirement plans limit their retired participants to a fixed-dollar income and one that is related to standards of living prevailing during the individuals' working years. For the college faculty member, CREF breaks free from this unfortunate effect and helps to relate the retired professors' benefits to increasing standards of living reflected in common stock performance.

In giving the retired person a stake in the growth of the economy, the responsibility for giving him reasonable protection during periods when the economy is declining must not be forgotten. There should be a solid fixed-dollar base of traditional annuities to protect retired people during times of depression, and to protect them against swings of common stock performance which have always in the past considerably exceeded those of the cost of living both on the upside and the downside. The balanced retirement program of fixed-dollar annuities plus variable annuities is designed to provide over many years a more effective income in terms of purchasing power regardless of the direction in which the economy is moving at any one time.

Although this review has concentrated on the retirement phase of the book, the other subjects are given the same thorough and scholarly treatment as the material discussed above. For example, there is an excellent discussion of life insurance plans in connection with college retirement plans. There is also a discussion of basic hospital-surgical-medical insurance, as well as of major medical expense insurance and disability insurance. The authors are to be commended for a study of such scope and thoroughness.

MAX S. WEINSTEIN

“National Pensions: Memo to the Minister of Pensions and National Insurance by the Councils of the Institute of Actuaries and the Faculty of Actuaries in Scotland; An Appeal to Statesmanship (A Booklet Issued by the Councils of the Institute of Actuaries and the Faculty of Actuaries in Scotland),” *Journal of the Institute of Actuaries*, vol. 85, pp. 244 and 293, 1959.

This issue of *JIA* reprints three memoranda and a booklet that were prepared by the Institute and the Faculty in regard to various proposed changes in the British old-age pension system that were under discussion in 1958–59. The same material is reprinted in *TFA*, Volume 26. The discussion relates both to the Government proposal which, in essence, was finally enacted and to that of the Labour Party, more of which may be heard from later. Although much contained is rendered obsolete by the Parliamentary action taken, since most of the points were ignored by the Government, nonetheless the points are still valid in relation to the scheme finally adopted. Accordingly, this material is of great historical interest and value in setting forth predictions of future problems that may arise under the legislation enacted.

The first memorandum dealt with the financial aspects of the Government proposal. Concern was particularly expressed over the fact that the projected estimates run for only 20 years into the future, despite the fact that the proposal involves long-deferred costs that will by no means be mature at that time. Concern was also expressed that increased earnings assumptions were used for determining the contributions and the related benefits (much deferred) even though the plan itself—particularly the upper earnings limit subject to tax—was assumed to remain constant.

Besides commenting on the cost estimates, this memorandum took concern over the deferred-cost aspects of the program and the larger financial burdens in relation to earnings that would be placed on future generations than on the current generation which is doing the legislating. The very small supplementary graduated pensions payable in the early years of operation were also mentioned. This situation can lead to great political pressure for liberalization, such as to increase the maximum earnings base and to provide for larger “purchasable pension units” when the scheduled contribution rate increases occur. It was suggested that, as at least a partial offset, there might be gradual increases in the minimum pensionable age and a higher contribution rate in the early years so as to have a more level schedule rather than an increasing one. It was recognized that this would result in the buildup of a small fund, rather than having the financing be on a completely pay-as-you-go basis.

The second memorandum dealt with the problems arising from the proposed contracting-out provisions (which principle was considered in the United States when the OASDI system was established, but was not thought feasible). Various problems involved were examined, such as moving back and forth between the Government plan and the private ones, providing comparable benefits, and assuring the solvency of the contracted-out plans. Several alternatives to contracting-out that might be utilized by existing plans were given. Particular concern was expressed with the problem of how future changes in the Government

system will affect the plans that have been contracted-out, particularly if such changes are made retrospectively.

The second memorandum concluded with the thought that workable arrangements for contracting-out can be developed to be acceptable at the outset of the plan, but then gave a number of reservations as to what should be done in regard to future changes in the national system so as to make contracting-out continue to be feasible and practical. This reviewer has grave doubts that the national plan can be persuaded or compelled to follow these principles in all respects, so that it would appear that many contracted-out plans will have great difficulties in future years.

The second memorandum was also concerned that there will not be sufficient time within the 2-year period before the plan becomes effective for all the technical work to be done in adjusting existing private pension plans because there are only a limited number of qualified actuaries available.

The third memorandum dealt further with the problem of contracting-out, giving in detail what is believed to be the only feasible general solution. First, the basic fact is made clear that contracting-out cannot be allowed to lead to two "separate communities," or in other words, those contracting-out cannot avoid bearing their fair share of the redistributive element of the national scheme (*e.g.*, for the current aged and for low-income groups). The "feasible solution" proposed is merely that there should be approximate equivalence, on a broad group basis, between the governmental pension benefits forgone and the reduction in contributions to the state scheme. It is pointed out that retrospective changes in the national plan, either on an automatic basis or on an *ad hoc* basis, will create difficulties in successfully carrying out this solution.

Since it would seem that, in all fairness, contracting-out should not be done solely because costs for the given group are relatively low—at the expense of the contracted-in population—and since it is unlikely that contracting-out would be attempted under the reverse situation, it leads one to wonder whether it is really worth the effort involved. The various documents do not really answer this fundamental question, as perhaps it is not their duty to do so.

Even more important, however, in the opinion of this reviewer is the fact that the state scheme will undoubtedly change in the future, and retrospectively too (and, likely, with gratuitous increases for those on the roll at time of change). It would seem that this would impose great problems of all sorts on the contracted-out plans so as to produce equitable treatment between the contracted-out and the contracted-in. Will the solution of such problems be able to be accomplished without so much effort that it will not be worth doing? Once again, this reviewer concludes from this material that contracting-out will be a most complex matter and, in fact, one that will probably not turn out satisfactorily in the vast majority of the instances.

The short booklet gave the views of the two actuarial bodies on certain aspects of both the Government and the Labour Party proposals. It also made a specific recommendation to avoid what is believed to be a great danger in the future that would otherwise be inevitable if either of these plans were adopted. One major concern was in regard to the much more rapid increase in cost in rela-

tion to earnings over future generations under either of the proposals as compared with the present plan. The existing scheme shows a 50% relative rise in cost from the present to the ultimate condition (due primarily to the aging of the population), whereas the Government proposal shows a two-fold increase, and the Labour Party proposal has a $2\frac{1}{2}$ times increase. In both proposals—because of the deferred nature of the graduated benefits—the time until the ultimate condition would be reached is considerably further off in the future than under the present plan. This situation is magnified if there are increasing earnings in the future rather than level ones.

The booklet is also concerned that national pensions—particularly under the graduated basis—can easily become entangled in party politics. This is dangerous, the booklet stated, because one Government can tie the financial hands of its successors by overlarge pension commitments. The booklet also dealt with the great difficulties in the contracting-out provisions and pointed out that these can be workable only if future changes in the national system are carefully planned to this end.

The booklet concluded with a recommendation designed so that there should be some assurance that the proposed system will contain elements of financial discipline. It is asserted that the pay-as-you-go nature of such a system precludes any internal discipline because, with the proposed graduated pensions, the benefit load takes many years to mature. It is, therefore, recommended that an authoritative and independent group in the form of a National Pensions Council should be established to consider on a continual basis the financial, economic, and technical aspects of the program. This body would be established by the Parliament, necessarily with the full agreement of all political parties, and would have a high degree of independence and authority so that it can report whenever necessary.

To an American reviewer, this action of a professional body taking a position on a national matter, albeit one within its scope of competence, seems somewhat surprising—although not without its points of advantage. There can be no doubt that all parties involved would agree that the approach taken and the comments and suggestions made were on a high professional plane. It is unfortunate that so many of the points made were ignored by the Government. Perhaps, however, the views expressed about contracting-out will have a significant effect on the regulations drafted by the Government in this field.

ROBERT J. MYERS

B. Benjamin, *Elements of Vital Statistics*, pp. 352, George Allen and Unwin Ltd., London, 1959.

P. R. Cox, *Demography* (third edition), pp. ix, 346, published for the Institute of Actuaries and the Faculty of Actuaries at the Cambridge University Press, 1959.

These two volumes are complementary in providing an insight into the population characteristics and health situation in England and Wales, even though the emphasis in both is on method. Developments in demography have been

rapid since 1950, when the first edition by Cox was published. These necessitated considerable revision for the current edition and advantage was taken of this opportunity to introduce considerably more material on other countries, particularly the United States. Benjamin apparently had the more difficult task. What began as a revision of the classic *Vital Statistics* first published by the late Sir Arthur Newsholme in 1889 turned out "virtually as a completely new text," in the words of Benjamin. However, the new text retains some—perhaps too much—of the flavor of the classic which was prepared primarily for medical officers of health (public health officers in the United States and Canada) and others in the fields of public health and social welfare.

Benjamin, a Fellow of the Institute of Actuaries, writes from his experience as Chief Statistician in the General Register Office, his former position with the London County Health Department, and his participation in the Population Commission of the United Nations. The introductory chapter to *Elements of Vital Statistics*, which provides a brief historical setting, points out the present recognition of population statistics as a fundamental to sound social and economic planning. The next two chapters, on population censuses and the registration of births, deaths and marriages, describe the procedures and difficulties in gathering the basic data for vital statistics. There follow, in turn, a commendable chapter on fertility measures and trends, a chapter on general characteristics of mortality, and another on mortality indexes and life tables. The last chapter may require a little more mathematical sophistication than is usually expected of public health workers.

The wide scope of Benjamin's work is indicated by his remaining chapters. There are chapters on environmental factors affecting mortality (almost wholly from a British viewpoint), the measurement of morbidity, infectious disease, tuberculosis, maternity and child welfare, health of school children, and industrial and general incapacity (some of which illustrates the universality of certain disability characteristics). The closing chapters are concerned with hospital statistics, cancer, mental health, general practitioner statistics, and surveys.

An author is very often confronted with the difficult decision of whether or not to include certain material in his presentation. Benjamin undoubtedly found himself in this position at many points and a natural inclination toward comprehensive treatment may account for the great detail found on some occasions. There are a few misprints in formulas which will certainly be corrected in the next edition.

Although the book by Cox is designed, for the most part, as an actuarial text, it will have a wider appeal, especially to the demographer. However, as one of the Institute series of texts, it was necessary to omit some items of demographic interest covered elsewhere, the principal example being life table construction. Understandably, Cox gives a fuller treatment than Benjamin on the techniques of mortality analysis. Also, Cox devotes a lengthy chapter to population estimates and projections, as might be expected in an actuarial text, whereas Benjamin limits himself to a few pages on the same topic. Marriage is another topic of demographic interest treated more fully by Cox. It is perhaps

symptomatic of the current state of general interest in the mathematics of population analysis, initially developed by A. J. Lotka, that it was relegated to an appendix. There have been a few recent demonstrations of its utility by Professor Coale. In a brief chapter of 23 pages, Cox presents some highlights on world population and the demography of several countries.

MORTIMER SPIEGELMAN

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.

LIFE INSURANCE AND ANNUITIES

J. Gudmundsen, *In the Public Interest—One Hundred Years of Insurance Supervision in New York State*, pp. 46, published by the Insurance Industry Committee for the New York Insurance Department Centennial, 1960.

The author outlines the history and functions of the New York State Insurance Department from its founding in 1860 to its Centennial in January 1960. A century ago New York became the first state to create an insurance department which was separate from any other office or department. It has, since that time, maintained a leading role in the establishment of effective statutory controls which are in the interest of the insurance companies as well as the insuring public.

Mr. Gudmundsen briefly touches upon the more significant legislative changes and other important developments during the careers of the outstanding superintendents of the New York Insurance Department. He also traces the growth in the functions and jurisdiction of the Department and outlines its present organization to indicate the breadth of its duties and responsibilities. It is now the largest state supervisory body in the United States.

*F. J. Angell, *Insurance, Principles and Practices*, pp. viii, 894, The Ronald Press Company, New York, 1959.

This book presents, in summary form, analyses of the principles and practices of the whole field of insurance, both life and nonlife, and is designed for the student, the businessman, and the insurance-buying public.

The book is divided into six parts, the first of which deals with the nature of risk, the various methods of meeting risks, and the mathematical basis of insurance. Part II is devoted to legal principles, common policy provisions, and insurance company practices and procedures. Part III relates to fire and marine insurance, and Part IV to casualty and surety insurance. The latter includes a chapter on accident and sickness insurance as issued by both casualty companies and life insurance companies. The principles of accident and sickness underwriting and claim practice are summarized, as are the problems of noncancellation of policies and extension of coverage to the older ages. Part V deals with the broad field of life insurance by way of brief summaries. One chapter of this part relates to basic principles, including simple actuarial calculations and the considerations involved in underwriting. Other chapters describe various plans and kinds of life insurance and the provisions of the contract. Attention is given to annuities and various forms of pension plans and business insurance. Part VI deals with the organization and operation of life and other kinds of insurance companies and with their regulation by government. The historical development of state supervision is also traced.

ACCIDENT AND SICKNESS INSURANCE

Source Book of Health Insurance Data, 1959, pp. 80, Health Insurance Institute, New York.

This first edition presents "a compilation of statistical and other factual material charting the growth of health insurance through voluntary insuring organizations in the United States and its contribution to American life." It includes the results of a variety of surveys conducted by leading associations of insurance companies and other health insuring plans, government agencies, and hospital and medical groups. Numerous tables show the growth of various types of coverage, benefit payments, trends in health and medical costs, and statistical information on morbidity.

U.S. National Health Survey, *Chronic Respiratory Conditions Reported in Interviews, United States, July 1957—June 1958*, pp. 32, Public Health Service, Washington, December 1959.

The report calls attention to the distinction between reports of chronic illness obtained by a household-interview survey and reports based on medical records or examinations. Household-interview data for a sample of the general population are presented for asthma and hay fever, chronic sinusitis, chronic bronchitis, and a residual category of other chronic respiratory diseases. Numbers and rates are shown according to age, sex, medical attendance, restriction of activity, and bed-stay.

U.S. National Health Survey, *Heart Conditions and High Blood Pressure Reported in Interviews, United States, July 1957—June 1958*, pp. 36, Public Health Service, Washington, February 1960.

The report mentions that the data "measure the levels of these diseases in terms of cases which the people interviewed had been made aware of, have remembered, and

considered sufficiently important to report." Estimates of numbers of persons affected and rates per 1,000 population are shown for the total number with a heart condition or high blood pressure and also separately for those with a heart condition with no high blood pressure, for those with both a heart condition and high blood pressure, and for those with high blood pressure without a heart condition. Data are presented on the basis of age and sex, medical attendance, restriction of activity, and bed disability.

U.S. National Health Survey, *Dental Care: Interval and Frequency of Visits, United States, July 1957—June 1959*, pp. 42, Public Health Service, Washington, March 1960.

The data show that 23 percent of the population stated they visited a dentist within six months prior to interview, and 14 percent within a prior period six to eleven months; 18 percent reported that they had never been to a dentist. These proportions vary according to age, with practically half of those at ages 5–24 years having seen a dentist within the prior year. Further data are presented with regard to the number of dental visits during the year with detail according to age, sex, race, place of residence, family income, and education of family head.

U.S. National Health Survey, *Dental Care: Volume of Visits, United States, July 1957—June 1958*, pp. 45, Public Health Service, Washington, April 1960.

For the total United States within the observation period, there were 1.5 dental visits per person per year; the average is 1.3 for males and 1.7 for females. This frequency of visit is at a maximum for ages 15–24 years, namely, 1.8 for males and 2.6 for females. The source presents data, according to age and sex, for urban and rural areas, and also for four regions of the country. Further details are presented with regard to family income, education, type of service and race.

U.S. National Health Survey, *Veterans Health and Medical Care, United States, July 1957—June 1958*, pp. 52, Public Health Service, Washington, January 1960.

Comparisons are made of veterans and nonveterans, according to age, with regard to work status, days of disability per person per year, percent with chronic conditions, percent with one or more days of bed disability annually due to chronic conditions, percent with impairments, number of physician visits per person per year, and average annual length of hospital stay.

U.S. National Health Survey, *A Study of Special Purpose Medical-History Techniques*, pp. 27, Public Health Service, Washington, January 1960.

This report presents the results of a study carried out by the Survey Research Center of the University of Michigan under contract with the National Health Survey. The report describes "a methodological study preliminary to the development of a medical-history questionnaire and appropriate interviewing techniques for use in a health examination survey of adults in general population samples." Among the findings were that "it is feasible to construct a standard set of questions and probes to be administered with standard techniques to elicit information about symptoms and illnesses," and that "the self-administered form of questionnaire obtained about the same frequency of symptoms as did the closed-interview form. . . . However, the interview was necessary for follow-up probes as to the perceived cause of the symptom. . . . The evidence is that the symptoms reported in responses to the open questions were those which bothered or concerned the respondent most."

Allowances for the Totally and Permanently Disabled, Medical Statistics, April 1958 to March 1959, pp. 46, Research and Statistics Division of the Department of National Health and Welfare, Ottawa, September 1959.

This report presents selected data on applications for disability allowances under the Disabled Persons Act, reviewed by federal-provincial medical boards in the fiscal year 1958-59. It is a preliminary report, containing only a summary of cases reviewed and an analysis by disability and by province of cases granted an allowance. A final report, to be issued later, will provide supplementary data, including a classification of disability by age and sex.

SOCIAL SECURITY

U.S. Congress, *Administration of Social Security Disability Insurance Program, Preliminary Report to the Committee on Ways and Means by the Subcommittee on the Administration of the Social Security Laws, March 11, 1960*, pp. 51, U.S. Government Printing Office, Washington, 1960.

This Committee Print deals with certain problem areas in the disability insurance program of the Social Security Act that were investigated by its subcommittee. In particular, there were studied such items as Federal-State administrative relationships, processing time of claims, rehabilitation, confidentiality of administrative standards for determining disability, and the appeals process. The report sets forth the findings of the subcommittee and at various places, in italics, its views and recommendations. Although the investigation dealt primarily with the administrative aspects of the program, the concluding section of the report points out that it is possible from both administrative and cost standpoints to remove the age 50 requirement.

U.S. Civil Service Commission, *The Thirty-Eighth Annual Report of the Board of Actuaries of the Civil Service Retirement System for the Fiscal Year Ended June 30, 1958*, pp. 44, U.S. Government Printing Office, Washington, 1960.

The current report presents the results of the latest quinquennial valuation and includes an extensive listing of rates of various types.

The valuation indicates a normal cost of 13.83% of payroll and a deficiency cost (based on paying interest into perpetuity on the unfunded accrued liability as of June 30, 1958) of 7.42%, making a total level cost of 21.25% of payroll. Since the employees contribute 6½% and the employing agencies match this, there is left a cost to the General Treasury of .83% as the balance of the normal cost and the entire 7.42% of the deficiency cost, or a total of 8.25%. Although the matching amounts by the employing agencies are, in accordance with law, being paid in all instances, appropriations from general funds in the recent past have not been made to meet the appropriate balancing cost. This is one of the reasons that the unfunded accrued liability increased from \$9.9 billion to \$27.5 billion over the 5-year period 1953-58; other reasons include liberalization of benefits, increases in general salary scales, and a lower interest rate being earned than the 3% valuation rate.

The extensive tables of rates are given separately for males and females, and include select and ultimate withdrawal rates, mortality rates in active service, mortality rates after retirement (on a select and ultimate basis, separately for age retirants and disability retirants), remarriage rates for widows, disability incidence rates, age retirement rates, and a salary scale.

U.S. Department of Health, Education, and Welfare, Social Security Administration, *Social Security in the United States*, pp. 58, U.S. Government Printing Office, Washington, 1959.

This pamphlet outlines briefly and in a rudimentary manner the development of social security programs in the United States, covering old-age, survivors, and disability insurance; unemployment insurance; public assistance to the aged, blind, permanently and totally disabled, and dependent children; and maternal and child health and child welfare services. There is also a brief account of workmen's compensation, veterans' benefits, the railroad retirement system, and retirement systems for Federal, state, and local government employees. Events in the field of social security since 1785 are summarized in a calendar. A selected bibliography consists primarily of government publications.

The Cost of Medical Care, pp. 216, International Labor Office, Geneva, 1959.

The per capita expenditure for medical benefits to persons covered under social security medical care services is developed for a number of countries. The period covered is, for the most part, 10 years ending with 1955. The persons covered (ranging from 100% of the population in England and Wales to less than 5% in Mexico) and the divergent ranges of medical benefits provided by the social security plan in each area are outlined, together with a discussion of the effect on comparability.

Costs are shown separately for services of doctors outside hospitals, medicines and appliances, all services provided to patients in hospitals, and dental care. To eliminate the effect of monetary units upon comparisons, cost is expressed as a percentage of per capita national income, of income per economically active person, and of a reference wage (annual wage for an unskilled laborer in nonelectrical machinery manufacture). In addition to expenditures for medical benefits to persons covered, the "real" costs of their medical care, expressed in the same units, include medical benefits plus expenditures of public funds and costs borne by the patient. Per capita costs in the same units and with the same breakdown are shown for the total population of each area. As a benchmark the data include total private expenditures in the United States on medical care and voluntary medical insurance, as well as total hospital expenditures, expressed both in dollars and in the percentage units. It is concluded that the level of medical costs over the period has been fairly stable, with any change usually resulting from changes in the extent of benefits provided. Where a rise is noted, the cause appears to be an increase in the cost of maintenance and nursing care in hospitals and not an increase in the cost of medical care within or outside hospitals.

OTHER TOPICS

A. H. Gould, "Operations Research, Its Methods and Applications: A Review and Prospect," *Journal of the Institute of Actuaries*, vol. 86, pt. 2, September 1960.

This paper tells the history of operations research, describes the scientific methods employed, and surveys both military and civilian applications. A couple of pages are devoted to each of the most frequently used techniques, including the use of mathematical models, statistical analysis, linear programming, dynamic programming, the theory of games, operational gaming, queueing theory, and Monte Carlo methods. Each technique is briefly described, while a following section tells the classes of problems for which each technique has been found most appropriate. The paper includes a section on the relation of operations research to other branches of science and one on the operations

research scientist and his training. While reference is made to the growth of operations research in several countries, the primary emphasis of the paper is on its development in Great Britain and the United States.

N. E. Sheppard and D. C. Baillie, *Compound Interest*, pp. 203, University of Toronto Press (undated).

This text has nine chapters covering various topics in compound interest. Problems are included. The book does not contain a preface, table of contents, index, or topic headings.

M. F. Stone, *The Teacher Who Changed an Industry: A Biography of Dr. Solomon S. Huebner*, pp. ix, 393, Richard D. Irwin, Inc., Homewood, Ill., 1960.

Dr. Huebner, Professor Emeritus of the University of Pennsylvania, and founder of both the American College of Life Underwriters and the American Institute for Property and Liability Underwriters, has devoted a lifetime aimed at raising the standards of insurance service to the American public. Using a wealth of background provided by Dr. Huebner, Miss Mildred F. Stone, CLU, and an Officer of the Mutual Benefit Life Insurance Company, describes an era of great change in the insurance business.