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DIGEST OF DISCUSSION AT GENERAL SESSIONS

PAST AND FUTURE DYNAMICS OF NORTH AMERICAN RETIREMENT SYSTEMS

Important forces have influenced the evolution and development of retirement systems to date, and many new forces of change will be influencing those of tomorrow.

1. What have these forces been, and what conditions have created them and given them shape, strength, and direction?
2. What impact has each of these forces had in the shaping of today's retirement systems?
3. Can we learn from the past as a means of avoiding mistakes in the shaping of tomorrow's retirement systems?
4. Is the past a valid base from which we can extrapolate into the future?
5. What new forces of change can we anticipate, and how might such anticipation influence the directions in which tomorrow's retirement systems might move?
6. With the prospect of significant future changes, what is the ongoing role of the pension actuary?

MR. J. DARRISON SILLESKY: Our training as actuaries prepares us to deal with the pension needs of each client in terms of the particular needs of the specific situation. Examination of a sample of pension plans reveals a remarkable diversity of plan details and evidence of the application of considerable ingenuity. Yet newspaper and magazine articles, when speaking of these unique arrangements in a collective sense, refer to "the private pension system" as though the plans were a logical manifestation of a formalized master plan or scheme. We know that it is not that simple. Yet we also know that the rapid development of pensions during the last thirty or forty years was influenced universally by the powerful social and economic forces that have caused dramatic changes in other aspects of life in North America.

Out of the interacting complex of social and economic forces and counterforces, I propose to select those which appear to me to have had

the most fundamental impact on pension developments, to cut through many of the complexities, and by this simplification of the issues to identify a pattern of cause-and-effect relationships. Let us begin with a consideration of familiar social developments.

We have shifted from an agrarian rural civilization to an industrial urban civilization. Along with this change have come mobility of our population and rapid communication. With these developments have come significant changes in the basic nature of the home and the structure of family life. Youth may leave the home to find independence in a nearby apartment or in a distant city. With dispersion of the family, the aging members are likely in later years to find themselves paying cash for services that in a prior era would have been provided by younger members of the family living in the home or nearby. Furthermore, decreasing physical capacity with increasing age of workers is accommodated in industrial employment less easily than on the family farm or in the small family business. Therefore, retirement may be forced at an earlier age than in a prior era.

It may be inconvenient or impossible to reconsolidate a family group to meet the needs of a separated aging member of the family. Even where a reconsolidation is feasible, there may be strong personal preferences for mutual independence. In fact, if reconsolidation would require the older person to move into the home of one of his children, there may be serious psychological adjustments to be faced. Thus there have developed increasingly strong emotional as well as economic and social interests in pension programs that provide independent cash incomes to older persons.

Coincident with the developing need and desire for independent income has come an increase in the period of time over which the pension must be paid. Increasing life expectancy is a result of a complex interplay of public and private health factors and medical advances. But the length of time over which a pension must be paid depends also upon the age at which it commences. The development of both public and private means of transportation combined with excellent communication has made attractive the possibility of retiring at an age when one can enjoy travel and the well-publicized leisure-time activities.

Perhaps more subtle in its impact on the age of retirement has been the shifting concept of worker value. We have been moving from an emphasis upon the experience, maturity, and stability of age to admiration for the creativity, courage, and flexibility of youth. The result has been pressure on employers for convenient means to eliminate certain of their older workers. The obvious result is longer retired lifetimes for the terminated individuals.

The same forces that caused the lengthening period of retirement helped to create a desire for sufficient income to finance more than a rocking-chair existence. The rising standard of living of the general population added further pressures for income in retirement that would be well above subsistence levels. The blurring of distinctions between white-collar and blue-collar workers and the growth of the so-called middle class were forces operating in the same direction. Thus, developing social forces operated in the same direction on both employers and employees to build up pressures for the adoption and improvement of pension plans. On the employee side, the pressures were greatest on the older employees but were transmitted downward to the younger employees, as the retired segment of the population became an increasing percentage of the total population and the younger employees visualized their own futures in terms of living examples of retirement rather than merely in theory.

Economic forces also played important roles in the rapid growth of pension coverage. The ravages of inflation and burdensome taxes have been strong forces operating to increase the attractiveness of employer-financed pension plans. During the excess profits tax years of the 1940's, a large efficient corporation might be able to retain as little as 10 per cent out of a marginal dollar of profit. Under such circumstances the stockholders might gain more long-term advantage from dollars invested in the funding of a pension plan than from a small increase in current dividends. In closely held corporations it required much smaller forces of tax leverage for officers who were also shareholders to see that before-tax dollars invested in pensions for all employees might provide future pensions for themselves that exceeded the alternative of increased current dividends.

Meanwhile, the discretionary income of the rank-and-file employees was being squeezed by both inflation and high taxes, making it difficult to accumulate personal savings. It was natural, therefore, to welcome employer-financed pension benefits even at the expense of smaller increases in cash wages and at the risk of some loss of maneuverability in terms of the job market. During the 1940's, again in the 1950's, and again in the 1970's the United States government placed restrictions on the granting of cash wage increases that in the earlier periods encouraged employers and employees to allocate a larger portion of the wage package to deferred income in the form of pensions as opposed to current cash income.

With changing economic conditions, there were changes in pension funding practices. In the 1930's and early 1940's conservative funding practices made very little allowance for employee terminations. Inflation was not seen as a major threat, and the gains from nonvested termina-

tions plus conservative interest assumptions were considered adequate safeguards against future wage increases. In this period the most popular insurance vehicles were the deferred annuity contract for large groups and the individual retirement annuity contract for small groups. The low interest rates of the 1940's and labor turnover combined to push funding developments toward greater sophistication through more widespread use of turnover discounts and the spreading of past service costs over longer periods of time. Actuarial consulting firms grew to meet the expanded needs, and insurance companies developed the Deposit Administration contract and then the IPG contract to accommodate the demand for greater funding flexibility.

The 1950's and the 1960's saw great bull markets in common stock. The impact reached beyond the normal professional investment areas, and at times it seemed as though everyone was an expert in stock investment.

The most conservative pension fund managers began to recommend that some part of the assets that they managed should be invested in common stocks. The more aggressive managers, who had always invested a part of their funds in stocks, dramatically increased their percentages. The insurance industry developed separate investment accounts for pension funds. Actuaries and investment managers focused attention on mechanical means of determining book values of pension assets that would dampen the effect of fluctuations of the market. Inflation began to concern pension managers, and some felt that capital appreciation in the portfolio of common stocks would help to offset increasing pension liabilities in the event that wages increased more rapidly than provided for in the funding assumptions.

The classic appeal of the profit-sharing plan lay in the automatic relationship between the employer's annual cost and his ability to pay that cost, combined with the hope that the plan would result in increased worker productivity. With the long bull market in common stocks, profit-sharing plans took on additional glamor and their growth accelerated. Some corporations adopted profit-sharing plans as supplements to traditional pension plans. A variety of savings plans and thrift plans filled similar roles of providing a means of extending to rank-and-file employees a feeling of participation in the bull market.

Pressures continued to build for ways to keep the costs of pension plans from increasing as rapidly as benefits were increasing. The rising interest rates of the 1950's and the 1960's presented several such opportunities. As interest rates started to rise, actuaries began to revise their funding assumptions, very cautiously at first and then with increasing

confidence. Because of the leverage effect of existing plan assets, a change in interest assumption might permit an increase in the benefit formula without any increase in the planned level of employer contributions, at least for the near term. Controllers caught in a cash-flow squeeze might ask an actuary to use the same technique to justify reduction of pension contributions below previous levels or temporarily to eliminate them completely.

Competition sharpened among the various investment vehicles and among the individual investment organizations. More sophistication was brought to bear on the techniques of comparing investment performance. Large sums moved from one organization to another in the expectation of improved investment results. Insurance companies offered attractive prices for single premium annuities, taking advantage of attractive investment opportunities. It became possible to purchase single premium annuities for blocks of retired employees at a cost below the pension fund's actuarial liability for those same lives, thus freeing funds to support other pension liabilities.

While these social and economic forces were combining to produce rapid growth of pension plans, the attitudes of employees and employers toward the pension plans were changing in subtle but significant ways. Early pension plans evidenced strong paternalistic overtones. The employer might provide an income out of a sense of gratitude to faithful workers or out of pity for poor workers, or as the only socially acceptable means of firing an employee who would not be able to find another job and would become a welfare problem if no continuing income were provided. Traces of this early thinking may still influence some individual decisions, but pensions are now an acknowledged part of the wage package.

The shift toward the concept of a pension as a benefit that an employee had earned at retirement as a right rather than a gift began with the formalization of benefit formulas, followed by their documentation in trust instruments, annuity contracts, and employee booklets. The concept of pensions as a right flowing from employment drew strength in the tight employment markets of World War II and became enforceable as a bargainable issue with the Inland Steel decisions of 1948 and 1949.

Union employees bargained for pension benefits. Employers used pension promises as an attraction for employees with special skills and as an attraction for general labor in periods of tight employment. Employers' pension expenses were equated with wage costs for income tax purposes. In this climate it is not surprising that employees began more and more to associate their accruing units of pension benefits with their years of employment. Employees began to talk of pension accruals in terms of

their having been "earned" by years of employment. It is from these roots that the current interest in vesting and portability grows.

The importance of vesting has been driven home in the press by dramatic individual case histories. Many of the most recent examples result from the cutback of government contracts in the aerospace industry, when large numbers of well-educated and articulate engineers found themselves suddenly unemployed through no fault of their own and no fault of their employers. Thus there has developed a strong challenge to the traditional concept of pension plan design.

With whatever moneys are available to fund a new pension plan, it has always been necessary to choose between the immediate need to provide for the initial body of retirements and the longer-term needs of the younger employees. The traditional approach has been to put the main emphasis on the need to provide adequate benefit levels for the first retirements and to ensure that their benefits will be soundly funded. The history of the older pension plans is that they have been amended repeatedly over the years to introduce vesting provisions and to liberalize both the basic formula and the vesting provisions. At issue now is the question whether the benefit formulas in new pension plans should be established at lower levels that would permit the funding to include provisions for vesting from the very beginning of the plan. Under existing plans, which do not yet include liberal vesting provisions, it would not usually be possible to achieve a tradeoff between benefit formulas and vesting, and therefore a liberalization of vesting would involve an increase in cost.

The changing employee attitudes toward pensions have focused on the problems of vesting and portability without appearing to recognize as clearly the related importance of funding. This is particularly obvious in newspaper articles dealing with portability, where it is sometimes suggested that assets to support an individual's entire accrued pension credits be transferred from one plan to another without any apparent consideration of the relative equity as between the terminating employee and the continuing body of employees. Portability is essentially an aspect of vesting. We may face an issue of whether traditional methods of funding past service benefits will be adequate for the future or whether it will be necessary to use less liberal pension benefit formulas in order that benefits may be funded more rapidly to protect the interests of the younger employees.

The funding question has been recognized more clearly in cases in which entire plans have been discontinued due to business reverses. The example that is cited most frequently is the closing of the Studebaker plant

in South Bend, Indiana. The solution most frequently suggested is establishment by the government of some sort of arrangement to bail out such situations. This is sometimes referred to as "reinsurance," and the charges to be levied against all pension plans are then referred to as "premiums." The problems of such a scheme are formidable. However, the problem is very real and deserving of the most careful thought of actuaries in the pension field.

Expansion of pension plan disclosure requirements, recently proposed by the United States Department of Labor, may focus more attention on funding. The annual statement disclosure principles set forth in *Accounting Principles Board Opinion No. 8: Accounting for the Cost of Pension Plans*, if fully implemented, would increase the general awareness of the extent of the funding of corporate pension plans. In time this public knowledge could become an important influence on the employer's decisions about plan design and plan funding.

Thus, current pressures are for mandatory vesting formulas backed by adequate funding, for some form of portability of accrued credits, and for some method of guaranteeing that unfunded pension credits will not be lost when a business fails in whole or in part. All these things cost money and would add to the cost of pension plans at a time when employers face many other financial problems. This is of particular concern at this time when unemployment rates are high and the government looks to improved business conditions to solve the unemployment problems.

In spite of the strong growth of pension plans, large numbers of employees in small businesses, in self-employed status, and on farms are not covered by any kind of formalized pension plan. When a business that does not have any sort of pension plan fails, there is rarely any newspaper criticism of the failure. But when the Studebaker plant closed, that company received a good deal of unfavorable publicity because of the loss of pension credits by thousands of long-service employees. It would have been more appropriate to give thanks that a pension plan existed which provided benefits for other thousands of Studebaker employees who were at or near retirement.

Of approximately 35 million workers in the United States covered by private pension plans of one sort or another, more than 4 million are now receiving benefits. About 30 million are in the work force. Roughly an equal number of the workers in private industry, or about 30 million, have no pension coverage at all. Little attention has been paid to this gap in coverage. It would seem to be more meaningful to encourage the formation of modest plans for those who do not have coverage than to

force existing plans to improve their structures at a more rapid pace than will occur naturally.

Up to this point, we have been considering the forces that have affected the growth of pensions, but we have not considered the changing structure of benefit formulas. The private pension system in the United States began to evolve into its now familiar three-tiered arrangement with the enactment in 1935 of the Social Security Act. Since it was intended that social security benefits would provide a "floor of protection," private pension plans took on a supplementary position designed to assure the worker of an acceptable standard of living in his retirement years. It was expected that each individual would create his own third tier by achieving a balance between consumption during his younger years and savings to provide enjoyment in his sunset years. The impact of social security on plan design was minor at first, and its strongest initial effect was in standardizing the concept of normal retirement as occurring at age 65. As social security benefits were increased and the death and disability benefits became more comprehensive, integration of private benefit formulas with social security benefits became a critical part of the design of a pension plan.

The concept of a mandatory retirement age has developed into an area of conflicting forces. If the retirement age for one class of employee is different from that for another, each class can complain of discrimination. Those who retire at the younger age can protest that they are forced to leave the work force earlier than they wish. Those who retire at the older age can protest that they are not allowed to retire as early as they would like. Each class can point to the other as treated more favorably. Certain union groups have become interested in retirement after a fixed number of years of service, without continuing to age 65. Others feel that there should be more freedom to retire earlier than age 65. The delegates to the 1971 White House Conference on Aging took a stand for the right to work beyond age 65. All these variations criticize the social security system as having set too rigid an example.

Employers are playing a role of increasing importance in the over-all welfare of employees and their families. Pension plans have stretched out into many areas beyond the concept of a simple life annuity. Pensions payable upon proof of permanent and total disability are a natural development and are now found in many plans. Death benefits of one sort or another have also become quite common, the emphasis appearing to shift toward a life income for the surviving dependent spouse in lieu of a large lump-sum payment. Benefits to cover periods of unemployment

due to accident, sickness, or even layoff may be part of the pension benefit package.

Much has been written on the possibility of building protection against future inflation into pension benefits. This could be done directly by gearing the payments to some index that reflects either the cost of living or the standard of living of retired lives. The ideal index has not yet been devised, but this technicality is not the primary reason that such plans are rare in the private sector. Presumably employers are reluctant to underwrite such arrangements because of the open-ended nature of future costs. The most frequently suggested alternative is the variable annuity plan. Here again, however, employers have been slow to move. Essentially, the employer who adopts such a plan agrees to give the retired employee the benefit of all gains and losses in the stock market after retirement, even if it means that the amount of pension grows much more rapidly than is necessary to maintain the initial standard of living. The employer may fear that social pressures will compel him to augment the retired employee's pension if the amount of pension shrinks on either a short-term or a long-term basis and that the arrangement therefore may have some of the characteristics of a "heads you win—tails I lose" proposition. The question of how best to protect retired employees against inflation is one of the most difficult in the pension field at this time.

My comments this morning have been a personal evaluation of the manner in which social and economic forces have affected the growth and the shape of private pension plans. These are very complex interrelated matters, and I do not ask that you completely agree with my selection of critical forces or with my view of their precise impact on the history of pensions. However, I hope that I have given you food for thought. At this point of time I see the following most difficult stresses and strains.

There is a deep question as to the proper line of distinction between the employer's legal obligation to fund a pension program and his moral obligation not to mislead his employees with respect to their pension expectations. There is a question as to the most intelligent and equitable use of available pension dollars when choices must be made in designing a plan as between the immediate needs of the older employees and the long-term needs of the younger employees. There are moral issues revolving around the extent to which the provisions of a pension plan should in themselves control the freedom of an individual to move from one employer to another or to move from the active work force into retirement status. There is a very basic question of the true feasibility of the attempt of a private employer, through a pension plan, to protect a

retired employee for all time against the national economic stresses of inflation. There is a very pressing need for an efficient means of extending the benefit of private pension plans to the roughly 30 million persons who do not now have the benefit of formal pension coverage.

Private pension plans are a great success story. They provide a sense of security for about 35 million persons and are continuing to expand strongly. If we include plans for federal, state, and local government employees, we find that more than 40 million active workers are covered by formal retirement programs; more than an additional 6 million persons are receiving pensions provided by such programs. The total assets of these systems are in excess of $200 billion, and benefits are being paid at a rate of more than $11 billion annually. However, newspaper and magazine headlines cry out for "reform," the articles themselves devoting more attention to "weaknesses" than to strengths. It is obvious that there are strong conflicting forces at work, and it is likely that their interaction will force major changes in the structure of the pension systems in North America.

MR. E. ALLEN ARNOLD: The shifting of attitudes and the current rapid pace of social and demographic changes will continue. Their impact upon our economic system may be intensified. One likely eventual effect is a retirement system enlarged to provide adequate benefits to virtually all retired workers. The mere consideration of the development of an expanded pension system and its interaction with society should clarify our goals and help us find the way to achieve them.

We can neither predict with confidence that such a comprehensive pension system will develop nor anticipate just how it might develop, when it might mature, or which form or forms it might take. One thing we can predict: If such a greatly expanded system should develop, it would affect our society profoundly—the economic system, politics, family life, and the lives of the aged all would evolve differently. We already have seen that the present system of private and public pension plans, profit-sharing and thrift plans, and social security plays a major social and economic role. Its further development should make pensions an even more powerful force in transforming our society.

Let us imagine how various influences might operate upon pensions in the future and how these forces might interact with each other as one possible world of the future emerged. Then, when we examine a fully developed pension system, we should be ready to understand how pensions would fit into this future world.

We shall assume continuity with the present and gradual evolution.

By ignoring discontinuities and picking unique ways for current trends to unfold, however, we shall be looking at only one of an infinity of possible future worlds.

You might ask, "Why ignore such possibilities as technology which would put everyone on 'easy street,' or its opposites of chronic famine and economic collapse? What about arresting the aging process, political revolution, and world federalism? Why pick one particular future world, when so many events and combinations of events could invalidate any single projection?" I would answer that my purpose this morning is not to predict the future but to stimulate thought and to encourage the broadening of viewpoints. I hope to succeed in this effort by presenting an oversimplified picture of just one alternative future. Since this future world is on the same track as our present world, it provides the most sensible route to explore first. While I agree that we need Alvin Toffler's "multiplicity of visions, dreams and prophecies," we have time for only one this morning—but this one sample future may produce a little "future shock" all by itself.

Now let us get on with the examination of some of the main forces for change. The demographic changes which appear to be under way right now would have two opposing effects upon the extent of the economic burden of pensions. The trends toward zero population growth and greater longevity would create a larger aged population relative to the working population. The trend toward greater leisure, if it continued to reduce retirement ages, would augment these demographic influences upon the relative number of pensioners.

The favorable economic effects of zero population growth would go a long way toward providing the means for financing the increased costs of pensions. First, and obviously, the new, smaller families could afford to defer more income or to pay higher social security taxes. Second, all new investments are either economic investments, which provide for higher living standards, or demographic investments, which are required to maintain current standards for an expanding population. The money we now spend on demographic investments—for example, for new schools and highways—would become available to finance higher living standards for our aged population.

The trend toward smaller families should further increase the number of wives who work, and the more wives there are working, the greater is the likelihood of zero population growth. The development of child care centers would influence more women to take jobs and thus, paradoxically, would reduce the birth rate. These trends are mutually reinforcing.

The increasing participation of women in the work force should prove

to be a favorable factor in making greater old age security possible. While the result would be more retired employees entitled to pensions, the costs would be borne to a significant extent by the women themselves. Thus a much greater proportion of all the aged population would become covered by pensions on a sound basis.

Another phenomenon, entry into employment at higher ages, would be likely to reduce the proportion of workers to total population, as higher education continued to become desirable to more young people and as the technical demands of employment increased. Perhaps more education would pay off with enough added productivity to finance the costs of job deferment. If not, the economic base producing pension payments would have been reduced.

Demographic, vocational, and educational changes would affect not only pension coverage and financing but the attitudes of workers toward pensions as well. We have already seen, to the dismay of some employers, that one of the first questions now asked by highly educated job applicants is: "What kind of pension plan do you have?" We might expect more of that, as well as a deeper interest on the part of the majority of the workers, whose retirements would occur sooner and last longer. Toffler quoted Dr. Harold Leavitt, who said, "We may have to start planning careers that move downward instead of upward through time" (because of the rapid obsolescence of technical and managerial education). If so, we would have another pressure exerted for early retirement, perhaps toward gradual early retirement. Employers, unions, and legislators would continue to move toward satisfying these higher pension expectations.

Interest in retirement would become more pervasive—employer and union efforts to prepare employees for retirement would expand from just a few programs to fairly universal programs, sponsored by employers, unions, or governments. Governmental pilot programs and private programs for providing useful and fulfilling roles for retirees already are under way. Their number and scope may be expected to increase.

Project Serve, a private program in New York, is particularly interesting, in that it has created a new role, that of volunteer community service, for retired persons from economic classes that normally do not furnish volunteer workers at all. A federal program encourages older people to become "foster grandparents" to children in institutions; in 1968, 20,000 children were served in forty states.

By 1970, over 1,200 senior citizen centers offered recreation, counseling, and meeting places for older people. Private and public housing for retired people is expanding to offer an increasing proportion of the aged

anything from a minimum of decent comfort in their home towns to luxurious condominiums at resorts.

A nomadic or seminomadic existence attracts those who move in their campers or trailers from the desert or Florida in the winter to national parks, Canada, or their home bases in the summer. Others drive or jet between motels, hotels, and summer and winter homes, or travel extensively abroad. My own impression gained from talking with retired friends and relatives in their permanent, semipermanent, or quite temporary homes in the California desert is that many retirees of modest to comfortable means are really enjoying themselves.

The expansion of preretirement and postretirement programs, added to word-of-mouth reports from satisfied retirees, will further enhance the desirability of adequate, and early, pensions, in the minds of active workers. The notion that retirement no longer is an ending or the beginning of the end, but rather is a new beginning, will spread. The golden years culture and the senior citizen market might become as dominant as the youth culture and the youth market have been. We, or our descendants, might stop envying youth and start really believing in the golden years of retirement.

The economic forces which affect the development of pensions are those which affect nearly all economic activity. The principal factor which determines a nation's ability to support an adequate, comprehensive pension system is its productivity. The rates of inflation and the amplitude of the swings in the business cycle affect both the pace and the form of the system's development.

Rather than explore these economic factors affecting pensions separately, let us create in our minds a hypothetical situation—not a prediction but more of a "for instance"—to see what our economic system might have to come up with to finance one kind of full-scale retirement system.

We have to start with some assumptions, and the assumptions selected are improbable enough to dispel the idea of prophecy. They do have the advantage of producing results which relate to present-day scales of magnitude. Let us assume the following:

United States population stabilized at 1970 level
No immigration
Mortality according to the 1971 Group Annuity Table
Investment earnings of 6 per cent annually
All employees hired at age 25 and retired at age 60
Ninety-five per cent of the population (both male and female) working between these ages and obtaining benefits at age 60

No inflation
Social security benefits of $3,000 annually (at age 60)
Social security on a pay-as-you-go basis
Additional prefunded pensions averaging $3,000 annually
Prefunded benefits fully funded using the entry age normal method

The results are startling: 47.4 million pensioners would receive an aggregate of $284 billion annually, half from social security and half from prefunded sources. The work force would consist of 83.9 million people, about the same as now, but the ratio of retireds to actives would be 56 per cent.

The prefunded annual normal cost would be $22 billion, while the earnings of the pension funds would produce the additional $120 billion required to pay the total prefunded pensions of $142 billion.

Pension assets would amount to about $2 trillion! Currently, all the stocks and bonds listed on the New York Stock Exchange are worth only about $0.75 trillion. Total marketable securities are worth something like $1.5 trillion. The total "financial assets" of the United States, according to the Federal Reserve System, amounted to $3.8 trillion in 1968, but not all of these assets are pertinent.

The current contributions and taxes for this combined system of social security and prefunded pensions, after funding the latter, would equal about 24 per cent of total individual earnings, including both regular payrolls and the earnings of the self-employed. If all the benefits were paid by social security, then the proportion would be 41 per cent.

The annual transfer of sums amounting to 41 per cent of the earnings of all individuals would require a strong economy, regardless of the medium of transfer. Increased productivity would be needed to preserve living standards, and increased productivity means technological growth sufficient to overcome environmental problems, including resource depletion. High employment levels would be desirable to help provide financing of benefits, to avoid the burden of maintaining a large unemployed group, and to cover the largest possible segment of the population. Boom-and-bust cycles and persistent inflation, if not properly anticipated, would interfere with the healthy development of pensions.

The demographic conditions envisaged in our example should lead to greater economic stability, since the higher predictability of the demand for goods and services would reduce the overoptimism and the overpessimism of entrepreneurs. Money no longer would be required for demographic investments. The fluctuations in the size of the work force due to earlier fluctuations in birth rates would disappear. It would take

at least seventy years, however, to obtain the full benefits of demographic stability, and it might take much longer.

The larger the aggregate pension payments, the greater would be the feedback to the economic system in the form of stabilized purchasing power. Adequate, assured pensions would convert our aged population into potent consumers.

The existence of two breadwinners in the typical family of the future would also contribute to economic stability. The temporary loss of one job would certainly reduce purchasing power, but unemployment insurance added to the full earnings of the working spouse would maintain the economic viability of the family unit. The family's spending would constitute a fairly high proportion of its prior level.

Pension growth of the kind contemplated in our example almost surely would mean the complete dominance of the investment markets by pension funds. Alternate forms of saving might be drastically reduced because of a lack of investment opportunities and because of reduced individual incentives to save.

The pension investor's emphasis on equities might cause corporate long-term financing to shift mainly to stocks; if so, the resulting avoidance of fixed commitments should strengthen both individual corporations and the economic system. As common stock leverage became reduced, the earnings of corporations would not fluctuate proportionately nearly so much as they have in the past. Unprofitable years and bankruptcies would be at rates equal to a small fraction of the rates experienced so far. With virtually all stocks and bonds in pension portfolios, the advantages of stock leverage ultimately would disappear. Corporate tax laws might need to be changed to accommodate the new conditions.

If these extrapolations of current trends should prove correct, then our future economy should be conducive to the growth of pensions. The greater stability of aggregate purchasing power and of corporate structures should strengthen the economy generally, relieve inflationary pressures, and help maintain high employment levels. Productivity still would be the key to the maintenance of adequate standards of living.

When we look at this hypothetical future of ours, we see that prefunding of pensions can be the means for transferring a large share of the wealth of a country to its workers and retirees. If you doubt it, compare the assets of some existing, well-funded pension and profit-sharing plans with the net worths and total assets of the sponsoring corporations.

Tax laws are mainly responsible for channeling money into pension funds. Income taxes reduce the capabilities of individuals and other taxed entities to accumulate wealth, thus encouraging, if not mandating, the

development of pension funds. Inheritance taxes force the partial liquidation of individual estates, freeing assets for purchase by pension funds. The assets of the latter, however, are passed intact from generation to generation automatically as retirees die and new employees are hired.

While our laws respond to the dictates of the voters, sometimes laws embodying the desired responses have unforeseen effects. It is doubtful whether many voters, or even many legislators, are aware of the possible social, political, and economic effects of an expanded pension system. The implications of the indirect ownership and management of a nation's corporations by workers and pensioners probably have been ignored entirely. Perhaps if the ideological antagonists in the question of private prefunded versus pay-as-you-go socialized pensions thought enough about it, some of them might decide to change sides!

This is an appropriate point at which to consider the legislative crossroads that we have reached in the early 1970's. Some of the current controversy is ideological, some of it is based on disputed statistics and their interpretation, some of it involves choosing priorities, and the balance relates to correcting abuses, or alleged abuses, of private pension plans.

Perhaps the basic disagreement on how to improve private pensions involves the merits of maximizing incentives to increase coverage and benefits as against imposing restrictions to deal with certain specific questions, such as vesting and solvency. Both priorities and the means of creating change appear to be at issue.

The current research, legislative activity, and discussions ought to have as their primary objectives the setting and implementation of long-range goals. We should seek the answers to such questions as: What kind of pension system do we really need? What kinds of laws would encourage or force the development of such a system? What would be the side effects? What are the immediate priorities?

No one has yet undertaken the sort of long-range pension research required. A combination of economists, sociologists, demographers, and actuaries should co-ordinate their skills to produce a thorough, open-minded study of pensions in their context in society as a whole. Only then could we be free of the automatic acceptance of viewpoints based on partial knowledge, politics, and prejudice.

In the absence of such research, we must have at least a careful consideration of the total long-range effects of any legislation proposed currently, whether it be on vesting, portability, "reinsurance," social security, or related taxation. We would be in grave danger of drifting into a system of pensions which no one would have desired or even contemplated, if we adopted legislation on an unco-ordinated, piecemeal basis.

A great many of the world's problems are the result of the single-minded solution of other problems out of context.

A nation's pension system is more than just a set of benefits promised by employers, unions, and governments. Future changes in our pension system will constitute substantial parts of a complicated, long-term, profound change in our economic system and in our ways of life. Let us acquire the knowledge and understanding which will enable us to create a pension system which will respond to the real needs of society.

CHAIRMAN DONALD H. REID: On the basis of what our previous speakers have indicated this morning, as well as current books written on the subject of the future, we can quickly agree that there is every reason for us to anticipate increasing rates of change as we move ahead in time. Furthermore, the results of the accelerating forces will, according to author Alvin Toffler, be flashing past us in the following forms: further increases in the pace of life; a growing sense of impermanence relating to our place of residence, our place of work, our friends, and our material goods; new forms of business organization; tremendous pressures on the family unit; and a new range of decisions resulting from overchoice. All of these will place potentially serious strains on the limits of our adaptability.

With accelerating change, we as a professional body might logically ask, "What is the future role of the pension actuary?" I was happy to find that the Canadian Institute of Actuaries, at one of its recent meetings, included a panel discussion on "The Actuary in a Period of Change." Much of this discussion centered on the current role of the actuary, and the following thoughts seemed useful to our discussion today, because they identified the fact that the very nature of actuarial work involves predictions of the future.

One speaker suggested that two qualities peculiarly define an actuary: (*a*) by training, he is one of the very few people who take a very-long-term view of matters economic, and (*b*) he is accustomed to unraveling complicated financial problems. Another spoke of actuaries as being "engaged in assessing the long-term financial implications of risk."

In the panel's search for a definition of a future role, there emerged two basic schools of thought. One implied that waiting for others to identify problems was an actuarial role, while the other was characterized by confidence and a degree of aggressiveness, with comments such as: "Let's stop asking if it is actuarial, and just make it actuarial"; "We are problem solvers by training, and we must get out and help people to solve their problems."

Two other comments made during the discussion struck me as being particularly worthy of mention today, because they seemed to turn the discussion away from, "What does the future hold in store for actuaries?" to "What can actuaries do to ready themselves for a contributory participation in the future?" The first of these comments called for identification of new skills which may be essential to actuaries in the future: "rather than looking for new fields where we can apply skills that we have already, we would probably be better advised to inquire as to some of the skills that we do not have. Otherwise the skills that we have will become increasingly irrelevant in the future."

Finally, allow me to quote the remark that I felt got right to the heart of the matter: "In the face of new problems, if we step forward with the better people to solve them, those problems will become actuarial." Clearly we must "step forward with the better people" to face the challenges of accelerating future change, and to do this we must improve the skills we now have and set up a continuing process for identifying the new skills that we must acquire.

There are obviously many steps we could take to move in these directions, but I would submit that the following five are essential if our future role is to be one of increasing relevance, as I feel it should be:

1. We must step beyond our traditional role of professional scorekeeping in the pension field and take our place on the playing field as first-string varsity members of a planning and decision-making team which includes corporate executives, investment managers, marketing executives, and government leaders, so that we can become agents of change rather than those charged with measuring its dimensions.

2. We must step beyond the normal traditional bounds of our profession to exchange ideas and solve problems with other professions on a team basis, and this must be done with deliberation on our part. Tomorrow's problems are certain to be complicated and difficult, as Allen Arnold suggested earlier this morning, and the greater our awareness of developments in other fields, the better equipped we will be to consider the addition of new skills to our professional credentials.

3. We must consciously and systematically rid our syllabus of what Toffler, in speaking of education systems in general, has termed an "absolute dedication to yesterday." In my view, the absence from the syllabus of any measurement of computer capability is an anachronism that requires an early remedy, especially for actuaries in the pension field. Computer technology can free us from past limitations imposed by time requirements and, if used properly, can give us the time necessary to participate in the other areas I have suggested. Anything less than a conscious effort to keep riding the crest of the latest wave of computer technology should be regarded as dereliction of professional duty.

4. We must have the flexibility to be open-minded about potential present and future application of actuarial skills in areas where, although actuaries of the past might have been reluctant to participate, today's actuaries and those of tomorrow may become exceedingly well qualified. The whole field of investment is perhaps an example.

5. We must make continuing education, within the Society, an effective device for updating and upgrading the skills of our membership. As you know, this meeting is devoted to in-depth coverage of the subject of retirement systems, as one of the Society's efforts to make continuing education a meaningful, integral part of Society affairs. Clearly, more meetings of this type are required.

In summary, if we can march into the future confident of our capabilities, totally curious, flexible in our thinking, and dedicated to the tasks before us, there is no doubt that the ongoing role of the pension actuary will be one of fascinating fulfillment for the actuaries of today and for those who follow.

MR. ROBERT J. MYERS: Although I agree with many of the points made by the panel members about the desirability of strengthening and enlarging the protection furnished by private pension plans, so as to have the private sector play an important role in the provision of economic security instead of having an expanded social security program, I believe that the part that individual efforts can play has been understated. In other words, I still possess an old-fashioned belief in the analogy of a three-legged stool for furnishing economic security to the population of the nation—governmental programs, group programs sponsored by employers, and individual efforts.

I think that we should never denigrate the role and the desirability of individual effort in providing for a substantial portion of economic security after retirement. Certainly, a significant amount has been done in this direction, and will probably continue to be done in the future, in the area of homeownership. We should all guard against those critics of private efforts who incorrectly claim that homeownership is of negligible value and that the poverty status of individuals should be measured only on the basis of their cash income.

ALTERNATIVES FOR PENSION LEGISLATION

1. Several bills directly affecting private pensions are pending before Congress. The objectives of these bills and the means of accomplishing them differ. What about other legislative alternatives, such as the following?
   a) Expansion of social security
   b) Encouragement of private plans
   c) Minimum standards for private plans
   d) Universal mandatory private plan
   e) Other alternatives
2. Would the alternatives be expected to accomplish the objectives of the pending bills, or different objectives, in the following areas?
   a) Security of benefits
   b) Increasing private plan benefits
   c) Increasing private plan coverage
   d) Increasing participants' understanding
   e) Management of private plans in the interest of participants
   f) Minimizing complicated reports, extensive actuarial computations, and other administrative functions

CHAIRMAN RICHARD DASKAIS: Allen Arnold has pointed out the enormous size of the retirement problems the United States is likely to face in the future. We actuaries sincerely wish to help solve these problems. We tend to look first to the thing we know best—private, funded pension plans—as the vehicle to be used in solving the problems.

I believe that we can expect governmental pensions to play a larger part in meeting the economic needs of retired people. Last year's report of the Social Security Advisory Council suggested benefits for a regularly employed low-paid worker that "are sufficient so that he will not have to turn to public assistance to meet his regular living expenses." Last month Congressman Mills introduced a bill which would provide a 20 per cent across-the-board increase in social security benefits.

I believe that private pensions cannot be expected to provide a third to a half of what might be considered an adequate, not a subsistence, retirement standard of living for average employees. If private pensions are going to provide a third or a half of retirement income, there will be irresistible pressures for them to take on characteristics that we would probably ascribe to public pensions—that they be universal as to coverage and important benefit provisions, and that the payment be certain.

If we are going to have a private pension system as we know it, its role will have to be limited to supplementing the public system. Private pensions can provide small but meaningful supplements to workers with incomes near the average and provide a significant income for the small percentage of workers who earn much more than the average, whose desires and needs are not going to be met by a public system. We can keep more freedom in the private system if the public system provides much more than a subsistence income.

It seems to me that much of the choice between a greatly expanded public system and encouraging a more universal private system depends upon, as Allen Arnold suggested, the desirability of the institutional accumulation of more private capital through pension funds. As actuaries I believe that we can be very helpful in solving technical problems and clarifying real issues. These real issues are not actuarial even in the broadest sense. They are issues of economic and social policy.

One further comment on Mr. Arnold's discussion: I think we should consider a reminder that Jim Clare has often given us at Society meetings. If people stay in the work force longer, we will not only reduce the burden of providing income for retired individuals but will also increase the actively employed work force base which bears the burden. Again, I do not believe that this is a narrow actuarial problem of pension plan design. There must be jobs that older people want to do, and they must have the skills to do these jobs.

MR. GEORGE B. SWICK: About this time last year, the results of the first Senate Labor Committee questionnaire were released to the public through the press. It is hard to forget headlines such as the following: "Only 5 Per Cent to Get Pensions"; "Private Pensions Are Built on Human Disappointment"; "Private Pensions Are a Cruel Hoax on American Workers." The scientific validity of the statistics released has been questioned by a number of persons, including many actuaries. There is no need at this time to review these pronouncements.

There has been a slight improvement in the situation. Fred J. Cook, writing in the *New York Times Magazine* on March 19, made the following comment in an article entitled "The Case of the Disappearing Pension": "Such figures indicate that 92 to 96 per cent of the 30 million 'covered' American workers are not getting their retirement benefits (though it must be added that of those who forfeited their benefits, 85 per cent in one study and 80 per cent in the other had five years' service or less)." The parenthetical remark is, of course, a major con-

cession to those who take the time to analyze the statistics in a professional manner.

Shortly after the scare headlines of 1971 it appeared to me, and I am certain to many others, that legislation in the pension area is inevitable and would go beyond additional disclosure laws. In the early summer of 1971, twelve consulting actuaries met to contemplate two questions: (1) Did the participants believe that legislation is inevitable? (2) If so, could twelve consulting actuaries agree on a legislative proposal?

These actuaries came from many geographical locations. The group included actuaries with large and small industrial clients, actuaries with jointly administered union-management plans, and actuaries with state and local governmental plans.

With regard to the latter group—actuaries with state and local governmental plans—there was, and still is, uncertainty as to whether the proponents of federal legislation intend to include these plans under the legislative umbrella. Since that time, Revenue Ruling 72-14 has been issued, which makes it quite clear that the Internal Revenue Service fully intends to require these plans to "qualify" if the beneficiaries are to receive the tax benefits of "qualified" plans.

Even with these diverse interests, the group of consulting actuaries did agree that legislation appears to be inevitable, and the group was able to develop an outline for federal legislation after a series of meetings. One of the first conclusions was that there was still time to influence legislation. While the better part of a year has gone by, it seems to me that this is still true. Those of us in this room today represent the finest talent that can be assembled in the area of private pensions. We have the knowledge and experience to be of particular value to those designing such legislation. If we, as individuals or as a group of individuals, remain silent on the issues before the Congress, we deserve whatever legislation is ultimately adopted.

The primary purpose of this discussion is to present the proposals outlined by the group of consulting actuaries. It should be made perfectly clear at the outset that the group was not unanimous in all details. These proposals have been passed along to interested parties in the legislative process. I am not aware that they have been met with wild enthusiasm. I am also not certain that they have been completely understood.

Following the presentation of the proposal of the group of consulting actuaries, I will mention a few areas where I feel that education of those designing pension legislation is sadly lacking. There are areas where

actuaries, if they agree with my analysis, are in a unique position to provide that education.

There appears to be no question in the minds of those close to the private pension area that the lack of coverage is the major failure of the present system. A leading financial writer recently criticized the private pension system because only 50 per cent of those going on the social security rolls also receive private pensions. If you turn this statement around, it is a favorable comment, since only 50 per cent of the work force is covered by private pension plans.

The fundamental question is, then, whether coverage should be compulsory. If social security is inadequate, and higher compulsory benefits are required, the obvious approach would seem to be to merely expand social security. The conclusion of our group was that private pensions financed by employer contributions should not be made compulsory. My personal viewpoint is that, if this country is unable to legislate a minimum wage on the federal level in excess of $1.60 per hour, it does not seem possible that it could legislate compulsory employer-financed private pensions. This area would seem to form a part of the over-all social considerations with respect to welfare programs, negative income tax, and the like.

Is there an alternative to compulsory coverage? Our group felt that there is! Our proposal was to require every employer with five or more employees to establish a payroll deduction plan to enable employees to finance additional pension benefits if they so desire. Coverage would be voluntary. Benefits would, of course, be fully vested, fully portable, and fully funded. These employers would establish "qualified" pension plans using insurance companies, corporate trustees, or any of the other available funding mediums.

For those employees who did not wish to establish "qualified" funding mediums, an annuity pool, or a series of annuity pools, would be established on a quasi-governmental basis. These annuity pools would, however, invest in the private sector of the economy.

The annuity pool would also be used to provide portability of benefits. Upon termination of employment, the employee, at his option, could elect to have his accumulated contributions transferred to the annuity pool, if not already invested in the annuity pool, to purchase an annuity at predetermined premium rates.

It was suggested that such contributions would be tax exempt up to 5 per cent of social security–covered earnings. Furthermore, there would be no reduction for employer contributions. The term "tax exempt" is

used purposely, rather than "tax deductible." Since a large segment of the population uses the standard deduction, it would seem that little tax advantage would be available in the area of greatest need if the deduction route were used.

Now, what about employer-provided pensions? It seems to me that it is first necessary to define what a pension is. Pension plans today are far different from those of twenty years ago. Pension plans consist of single employer defined benefit plans, single employer money-purchase plans, multiemployer defined contribution plans, profit-sharing plans, savings plans, and state and local governmental plans. In addition to old age benefits (defined by Congress under social security to be benefits paid after age 65), we now have benefits payable as survivor benefits; in full on total and permanent disability; with less than a full actuarial reduction on early retirement; unreduced at age 62, after thirty years of service, and for many other combinations of age and/or service; and as supplemental benefits to age 65 in case of plant closing or permanent layoff. Except for disability and survivor benefits, these pre–age 65 benefits are not provided by social security.

In dealing with legislation, then, Congress must do more than refer to plans covered by section 401(a) of the Internal Revenue Code. It must decide whether benefits payable in areas not covered by social security are of social concern. Our group suggested that legislation should concern itself with old age benefits, that is, benefits payable at age 65. We also suggested that legislation should deal solely with a layer of benefits between social security and 50 per cent of social security–covered earnings. The benefits would not be compulsory, but, to the extent that employer-paid retirement benefits do not exceed this layer, they would be subject to legislated requirements as to membership eligibility, vesting, and funding.

Under the current Social Security Act, it was felt that an employer-paid layer of $2.50 per month per year of service after age 30 should be sufficient to achieve the desired level. To the extent that employer-paid benefits do not exceed this amount, membership eligibility could not be deferred beyond the later of age 30 or one year of service, full vesting would be required after three years of coverage, and full funding would be required. The benefits covered would be those earned after the effective date of the legislation only.

Money-purchase plans would meet the requirements on the basis of employer contributions not to exceed 2 per cent of social security–covered earnings. The same applies to profit-sharing plans or savings

plans. A more equitable arrangement might be to deal with lump sums at termination of employment having equal value to the accrued $2.50 pension amount. However, this was felt to be too complicated.

Employers having more than one type of plan, such as a defined benefit pension plan and a savings plan, could elect which plan, or combination of plans, would be used to provide the proposed layer of legislated benefits. Portability of the layer of benefits could be made available through the previously mentioned annuity pool, at the employer's option if the employer does not wish to retain the liability or administrative burden.

Essentially, then, the proposal deals with tax-exempt employee contributions; legislated eligibility, vesting, and funding of a layer of employer-provided benefits to the extent that an employer has established or establishes a retirement program; and an annuity pool to provide portability of the above benefits. It should be pointed out that the consensus of the group was that this proposal could be applied to all types of private retirement plans, whether they be single employer, multiemployer, or state or local governmental plans.

So much for the consensus of the group of consulting actuaries. There are areas of proposed legislation not covered by these proposals which should be given consideration.

Are there alternatives to funding and reinsurance? I believe there are! Under single employer fixed benefit plans, it might be required that *Accounting Principles Board Opinion No. 8* minimum expense charges be expensed in all cases, even though not deductible until contributed. The federal bankruptcy laws might then be revised so that any resulting book reserves would be applied for pension purposes with priority over all noteholders. The treatment would be similar to that of wages due.

Second, it might be appropriate to legislate plan termination priorities. An appropriate order of priorities might be as follows:

i) Employee contributions.
ii) Employer-purchased benefits for both retired and active members to extent of establishment of area of "social concern."
iii) Balance at option of employer, except that each amendment which increases benefits (in the aggregate) by more than 10 per cent must be distributed consecutively.
iv) No priority to any benefits payable prior to, say, age 60 in excess of actuarial equivalent of deferred benefits payable at age 60.

There is also the question of additional disclosure. *Accounting Principles Board Opinion No. 8* "vested liabilities" are disclosed to stockholders. Equal disclosure to covered employees would seem reasonable.

Liabilities similarly computed might also be disclosed with respect to benefits not yet "vested."

If liabilities are to be disclosed, then there must be some disclosure of assets. I am not satisfied with either book values or market values. I would suggest that consideration be given to a newly defined asset value for disclosure purposes. Any such figure should include any corporate book reserves previously expensed but not yet contributed. With regard to fixed income investments, perhaps maturity value should be used in lieu of market value where bonds are above a certain rating and are within, say, ten years of maturity. With regard to equities, perhaps a percentage of market value would be appropriate.

Finally, there is the area of fiduciary responsibility. Fiduciary responsibility is like motherhood: who can be against it? It must be remembered, however, that investment return is a balance of risk and yield. In my opinion there is, as yet, no widely accepted scientific measure of risk. I suggest that actuaries are uniquely trained to develop such a measure, and I would hope that research in this area would be carried out by actuaries. Actuaries should also be particularly concerned that disclosure of individual investments might inhibit desirable risk-taking, with an adverse effect on investment income.

In conclusion, I believe that actuaries, individually or collectively, can be particularly helpful in educating those responsible for the legislative process in the following areas:

"Going-concern" versus "termination" liabilities.
Importance of use of retirement rates in funding unreduced early retirement benefits as opposed to costs on the basis of 100 per cent utilization.
Basic difference between single employer fixed benefit plans and multiemployer fixed contribution plans.
Actuarial differences between social security and private pension funding.
Measurement of investment yield and risk.

The only advice I can give is to make your views known and your talents available.

MR. CHARLES V. SCHALLER-KELLY: I take it as axiomatic that we elect and pay politicians to decide on national priorities, and every so often we make them go through an ordeal called elections to prove that they are keeping their finger on the pulse of the nation.

I further take it as axiomatic that there will be pension legislation either this year or the next. When Senator Griffin starts jumping on a legislative bandwagon, we can assume that it is rolling. I do not know what you think of Wilbur Mills, who is sponsoring the administration bill

in the House, but who could describe President Nixon as an impractical dreamer or a wild-eyed radical?

Some of the possible legislation presents substantial technical and practical problems. If we continue to weaken our credibility as objective and expert advisers by refusing to accept that the national priorities as defined by the people we elect for this purpose will become legislation—if we continue to bury our collective head in the sand—we shall simply offer a good and tempting target to be kicked.

Let us try to distill out of the flood of proposals and comments on them the spirit, the objectives of the coming consensus. Perhaps I flatter myself if I see in the proposed legislation attempts to promote or maintain all those aspects of a good pension system which I mentioned in my youthful indiscretion of 1966 (*TSA*, XVIII, 324), as well as some others:

I see a concern with adequacy of pensions. The legislators want a man who has been covered by pension plans to accumulate an adequate pension and not lose it because he changes jobs occasionally. They cast their net wide so as to cover the overwhelming majority of plans and people.

I see a concern with security in the proposals on fiduciary responsibility and disclosure and in the pension reinsurance proposals as well as, in a different way, in the vesting proposals.

I see a concern with cost in the various proposals for transitional periods, provisions for exemptions, and accommodations for special situations such as multiemployer plans. This concern goes furthest in the administration bill, which does not provide for either mandatory funding or reinsurance. Questions on costs have persistently recurred at congressional hearings whenever there was a suitable witness.

I even see some totally misconceived attempts to retain flexibility, in the exotic alternative vesting formulas of the Dent bill (H.R. 1269). This may also be a reason for excluding funding in the Nixon bill.

Finally, especially in the Javits bill (sec. 5.2), there is a practical nod toward trying to minimize the administrative burden, at least for multiemployer plans. Perhaps the very gradual implementation envisaged under the Dent bill is to enable plan administrators to brace for the shock. The Nixon administration claims a particular interest in this aspect, but its disclosure proposals hardly bear this out.

We actuaries have very little influence on setting national priorities. But we will be heard with attention if we can help in any way to indicate costs and how to cut them without emasculating the proposals. We will be trusted if we perform this task conscientiously and if we constructively criticize the way chosen to achieve the national goals. The following suggestions provide some illustrations.

We should decide on our objectives within the given limitations.

We should attempt to maintain the ability of the private pension system to respond flexibly to various situations such as early retirement, survivor options, and so on.

We should resist those aspects of proposals which would deter the establishment or expansion of pension plans without a compensating benefit. I put mandatory amortization of past service liabilities in this category if there is also reinsurance.

We should foresee the situation in which a generally applicable provision which is reasonable for the average situation could cause genuine problems for a few cases. For example, even ten-year mandatory vesting is not very expensive in the vast majority of cases, but there will be some exceptions deserving special consideration, and the law should provide for this. Before I left the UAW, I studied records of 423 valuations done since 1964. Only about six would perhaps require special dispensation if they had no vesting before. Using such exceptional horror stories as if they were typical examples, as was done in *Business Week* of September 11, 1971, is to substitute impressions for demonstrations, if I may reverse Ruskin.

We should suggest ways of limiting the administrative burdens of employers, plan administrators, regulating authorities, trustees, insurance companies, and actuaries without sabotaging the aims of the legislation. We have the right to ask what use will be made of the masses of data which it is proposed to collect. I am thinking particularly of the proposal to require annual reports from all plans of the numbers and characteristics of employees terminating without vested rights. Will there, in fact, be annual studies done, and, if so, what for? In view of the experience with the administration of the present Welfare and Pension Plan Disclosure Act, it seems likely that actuaries and their computers would work overtime to produce very expensive garbage. Actuaries should stress the merits of competent supervision as preferable to detailed disclosure.

In 1969 I set out in some detail my feelings on what legislation of the kind at present in Congress should contain (*TSA*, XXI, D589). I have not changed my position very substantially, so I will only repeat the essentials and indicate where I have modified my position.

Needless to say, I favor fiduciary responsibility. All plans, including the smallest and present pay-as-you-go plans, should be covered.

Pensions for a substantial part of the work life should be vested. I am now inclined to favor earlier mandatory vesting where termination of employment is for reasons beyond the employee's control. The idea of concentrating on the later years through something like a "rule of 50" for voluntary termination is not bad, but the details are debatable. There should be a transition period for new plans and a way of exempting both new and existing plans from the vesting requirement in cases of hardship.

Reinsurance is the only item which can be provided only by legislation. I favor it over mandatory amortization of past service liabilities because it provides more security at less cost. It also lends itself well to self-enforcing legislation that is simple to administer if extra premiums are charged on any liabilities due to actuarial losses. The only minimum funding requirement should be to pay normal cost, plus enough where necessary to stop the unfunded past service liability from exceeding the sum of initial and subsequently created past service liabilities. This should be specified in the law instead of being left to a rather strange interpretation of an IRS ruling whose convoluted reasoning is too actuarial for the lawyers to follow and whose limitations and possible "ultra vires" character are not noticed by the actuaries who glibly talk of IRS minimum funding.

Concerning the cost of reinsurance, the figure 0.2 per cent of the unfunded liability or something of that order seems to have been reached independently by the anonymous hero who prepared the first version of what is now the Dent bill for the Johnson administration, by Dr. McGill, and finally by myself.

On the basis of this figure, reinsurance would be substantially cheaper for the company wanting to keep pension costs down than changing the minimum past service funding requirement from "interest only" to forty-year funding or from forty-year funding to thirty-year funding. For the company funding at IRS maximum it would be equivalent to raising past service liabilities by about 1.4 per cent.

The type of pension legislation proposed can, if properly drafted, achieve all the objectives except that of extending coverage to people not yet covered, and this seems to be the area which principally concerns my fellow panelists.

One of the suggestions is a minimum plan with voluntary coverage. It seems to me that it would merely add one more constraint on freedom in pension planning, one more law to supervise, one more bureaucracy to create, with no guarantee of improved coverage. Furthermore, if it covers only future service benefits, it does not make use of the most fruitful of all facilities offered by group pensions, the very essence of group pensions for a new plan, the possibility of borrowing from the young to pay for the old.

There are a number of variations on another sort of solution: the minimum plan with compulsory coverage. The most extreme form is found in France and its former colonies. For each type of employment (or in Africa for all non-civil service employment in the country) there is a single government-sponsored, supposedly private plan. This approach

does allow for a form of past service benefits even for retirees (called "allocations de solidarité" in Senegal). But to my mind it is simply another social security system with all that that implies. One such system is enough.

A second approach is the British one, with its new proposed variation. There we have a government system from which it is possible to contract out if a private plan provides certain minimum benefits; in the latest proposals the choice is between instituting at least a 1 per cent future service, private, career average plan with indexing, while, during any period not covered by such plan, 4 per cent contributions must be made to a government money-purchase plan. Such an approach requires both supervision of private plans and administration of a government plan with many small transactions, and contributions have to be accumulated with varying interest or bonuses. This is not quite as wild as Mr. Nader's brainchild, which has some of the same features plus freedom of investment choice, but even Mr. Grubbs's version would more than double the bookkeeping of the Social Security Administration. Apart from the administrative headaches, the plan does not provide for past service benefits and cannot do so compulsorily without either government subsidies to older industries or the risk of overburdening them. I consider this a major drawback.

The final version of this is the compulsory minimum private plan on the model of the original Ontario legislation. This again requires supervision and again cannot in practice require past service benefits. Furthermore, anything more complicated than salary deduction on the basis of a single table is just beyond the administrative capacity of the corner grocer or gas station.

Could one achieve more general coverage by further encouragement of private plans? This would have to be at the points which lead to problems. The first bottleneck is administrative talent: who is to provide it? Can the insurance companies, actuaries, and trustees provide it at reasonable cost? Can we devise more efficient vehicles? Alternatively, can the government do it more efficiently? In this connection, was abolition of the government annuities branch in Canada due to political and ideological reasons, or to practical reasons?

The second and greatest bottleneck is money. If there is not enough available, should the government supply it? Depending on your ideological orientation, I might ask you whether you want the bureaucracy and tight government control required; alternatively, I might ask whether private institutions should receive government money in these circumstances.

One bottleneck which can be attacked very simply and directly is lack of awareness among both employers and employees of the importance of pensions. This could be done by a government-sponsored publicity campaign.

Is there then any logical alternative? It has been decided by the legislators that everybody must have the right to a certain minimum retirement income in excess of present social security (who can live on the present minimum of $70.40 per month?—even the average of $133 per month single and $222 for a couple is surely not adequate by itself); if this is the decision of the legislators, then I can think of just one way that can provide past service benefits, requires no new administrative talent in employers, does not require the creation of a new bureaucracy, and does not require government subsidy but can be a convenient vehicle for it if desired. You do not recognize this paragon? Yes, the social security system has all these properties.

This is not the place for discussing the best scope and size of social security benefits. Since we are talking about minimum standards, we are only concerned with minimum social security benefits or at least the lower end of the scale, and this is, of course, the very area where the private system has the most difficulty expanding. Perhaps the Dutch are right to have kept a fairly generous flat government old age pension. I think I could justify such a system either to a socialist or to a realistic capitalist.

I feel that social security benefits should gradually be made subject to income tax and withholding at source. The Canadian experience proves that this approach is feasible but also that it either would have to be disguised or would need a campaign on the theme that this approach ensures that social security will not go to those who do not need it and will not become a tax loophole for the rich. Taxation of social security benefits might also be used as a source of revenue for the system.

One of the problems of increasing social security taxes is that they drain badly needed cash from the new but rapidly expanding employer who has to borrow at outrageous interest rates. The continued health of the economic system demands that this sort of employer be encouraged. He can quite properly postpone creating a private pension plan. It should be possible to develop criteria (e.g., concerning longest-service employees or proportion of long-service employees) allowing such employers to postpone some or all of their social security contributions but carrying them as a high-priority book debt at government bond interest rates.

In summary, the general approach of legislators strengthens the private system. They are wrong, sometimes very wrong, in matters of detail of a kind in which they should listen to us, provided that we do not reduce our credibility in their eyes by telling them that they don't know what they are doing.

It is rather an amusing change to be relatively the conservative on the panel, without any fundamental change in my opinion in the six years since, after my first remarks on the subject in Miami, one old actuary turned to his neighbor and asked, "Who is that brash young man?"

The following is a description of my study on vesting costs.

The UAW has been keeping records of calculations since about 1964, and I have analyzed these calculations to determine the percentage extra cost if a ten-year vesting provision had been included in these plans.

These percentages apply only if the plan was newly instituted, or if the assets exactly equal the liabilities for retired employees. If assets are greater, the cost of the plan is less, but the absolute cost of including a vesting provision would be the same, so that the percentage cost would be greater. Most plans have some vesting now, so costs would be much less.

The cost of vesting depends on whether the plan has a disability benefit. If it does, those whose termination of service after ten or more years but before early retirement age is due to disability will receive a benefit even without introducing vesting. On the other hand, if there is no disability benefit, then the effect of introducing a vesting provision is to give people whose termination of service after ten or more years is due to disability a benefit starting at age 65.

The result of my analysis, shown in Table 1, gives support to those who maintain that even ten-year mandatory vesting would generally not be a great burden, particularly bearing in mind that most plans already have some degree of vesting. It also shows, however, that there are a few exceptional cases which require some consideration because the burden of vesting would be unduly high. I personally checked the case with the highest percentage. It had a relatively low average attained age and many people with about ten years of service, leading to high vesting costs, but a thirty-year limit on creditable service and a benefit rate so low that we assumed an average retirement age of 67, thus keeping the normal retirement costs low.

The limitations of my study are that only one turnover table was used—that of the 1955 UAW study by the late P. Friedman, F.S.A., and Dr. J. P. Stanley, A.S.A. The data were not homogeneous as to limits on

length of service for credit, average retirement age, and interest ratse. A few cases appear more than once at three-year intervals. Past service costs are amortized over thirty years. The number of cases at various interest rates were as shown in Table 2.

TABLE 1

Vesting Costs as Percentage of Other Costs	Number of Cases	
	If Plan Has No Disability Benefit	If Plan Has a Disability Benefit
0.1–2	....	5
2.1–4	....	143
4.1–6	2	179
6.1–8	10	69
8.1–10	86	23
10.1–12	135	3
12.1–14	106	1
14.1–16	50	....
16.1–18	21	....
18.1–20	7	....
20.1–22	4	....
22.1–24	1	....
24.1–26	1	....
Total	423	423

TABLE 2

Interest Rate	Number of Cases	Interest Rate	Number of Cases
3½%	165	4¾%	45
4%	188	5¼%	8
4½%	14	6%	3

The following is an outline of my approach to determining pension reinsurance costs.

I believe that the most critical figure is the rate of termination of plans, which was assumed to be in aggregate about 1 per cent per year of total plans. This was derived from the Bureau of Labor Statistics study by Beier (*BLS Report No. 369*), covering the years 1955–65. Over the long haul, this period, which contained both good and bad years, is probably a reasonable measure, and for this type of program, whose benefits will be mainly deferred benefits, the long-term view can be taken. The probability that a plan will terminate in a given year of its life was obtained by further analysis of this study.

For plans with over 100 employees it was assumed that 75 per cent of terminations were of a kind that could cause loss; for smaller groups it was assumed that 85 per cent of terminations were of this kind. This recognizes that some terminations result simply from mergers of plans and the like. The very conservative assumption was made that the relative frequency of large and small plans as to total benefits involved was the same for terminating and continuing plans.

It was conservatively assumed that the liabilities of terminating plans were being amortized over forty years, while for continuing plans the liabilities, on which the premiums are assessed, were being more rapidly reduced and would be amortized over twenty years. This seems to be in line with the Griffin-Trowbridge study, *Status of Funding under Private Pension Plans* (Pension Research Council; Homewood, Ill.: Richard D. Irwin, Inc., 1969).

After funds have been accumulating for some time to amortize liabilities of a plan, the plan may be amended, and then, at first, no funds will yet have accumulated for the additional liabilities, so that the *average* period for which funds have been accumulating for *all* the liabilities will be less than the age of the plan on which Beier's termination study is based. It was assumed that for the first five years of the plan's existence the average funding period was equal to the age of the plan and that thereafter the average funding period increased by six-tenths of a year for each year of age of the plan. A number of other assumptions had been tried but had led to illogical results.

In determining the cost under the Dent bill or the cost of reinsuring only vested benefits under the other bills, it was assumed that the ratio of assets to liabilities (the benefit security ratio defined in the Griffin-Trowbridge study) increased according to the approximate formula used by Griffin and Trowbridge:

$$\text{Benefit security ratio} = \frac{\text{Average funding period to date}}{\text{Initial funding period}}.$$

It was further assumed that the value of the vested benefits would increase from 75 per cent of the value of the total benefits when the plan was started, to an ultimate stable situation of 95 per cent. This is compatible with the data in the Griffin-Trowbridge study. Finally, a very conservative interest rate of 4 per cent was assumed.

The probability that a plan will terminate in any given year after its inception was then multiplied by the expected remaining liabilities for a unit terminating plan after the corresponding number of years of funding, and the result was summed for all plans with more than the necessary

number of years of age of the plan required for inclusion in the program; the result was then divided by the sum of the remaining liabilities for unit continuing plans, assuming the unit to be the same for both groups.

This approach assumes that approximately the same number of new plans are created each year. This is a simple but liberal assumption. However, the more conservative assumption of an increasing number of plans would be true mainly in expansionary economic periods when the number of failing plans would be low so that no undue understatement of costs should occur.

On the basis of my calculations, and depending on whether only vested benefits or all benefits are to be insured, the premium rates are as follows:

Dent bill: 0.15 per cent of unfunded vested liabilities to cover only losses of vested benefits.

Javits bill:

Premium Basis	Coverage for Protection	
	Vested Liabilities	All Liabilities
All unfunded liabilities	0.10%	0.13%
Unfunded vested liabilities	0.13	0.18

Hartke bill: 0.13 per cent of all unfunded liabilities to cover only losses of vested benefits or 0.17 per cent of all unfunded liabilities to cover losses of both vested and otherwise unvested benefits.

I want to emphasize again that these are estimates of order of magnitude. They may be suitable for initial premium levels, but the legislation should provide for assessment of up to two or three times as much.

MR. DONALD S. GRUBBS, JR.: A recent news release from the office of one of the presidential candidates included the following statements: "Half the country's work force has no employer-financed retirement plan"; "Only 31 per cent of those participating in employer-financed pension plans have 'vested' rights to those plans"; "The laws governing administration of pension fund assets vary from state to state, and often are inadequate to safeguard these funds."

Which candidate made these statements? I would not be surprised to learn that every one of them has made similar statements, but these were made by President Nixon. It is no longer a few college professors and radical extremists who are pointing out shortcomings in the private

pension system. Leaders of government across the political spectrum are talking about the problems. Journalists are writing about them in our daily newspapers. And the man on the street is concerned.

Many who are involved with the private pension system spring to its defense. They point to the significant progress that has been made in bringing security to millions of Americans. They point out that most employers have met their obligations with a high sense of responsibility in developing soundly funded plans, and that many of these plans have liberal vesting provisions. They are correct in citing the great progress. In spite of the significant accomplishments, however, there are major problems. These problems are now widely recognized, and they will be solved.

Every American should retire with an adequate retirement income.

Many of us were nurtured on the idea that such an income rests on a three-legged stool of social security, employer retirement programs, and individual savings. This tripod does provide an adequate retirement for many Americans, but it fails for others. We need to examine the reasons why it fails and see what can be done about it.

First, it is unrealistic to assume that individual savings will amount to much for most people. In our society many people are not able to save any significant amount of money. No amount of exhortation or encouragement to people to save will alter this situation. Therefore, an adequate retirement income must be provided by the other two sources, and anything from individual savings will be supplemental to that.

Social security by itself does not provide an adequate retirement income. This is why most of us are advocates of an employer retirement program to supplement social security.

The first reason why many Americans will not receive adequate private pensions is that less than 50 per cent of them are covered under private pension plans. Some people cite slightly higher figures based on the nonagricultural work force, but I know no reason why farm laborers do not need pensions. While having half of American workers covered is an important accomplishment, the half that are not covered are a major problem.

A second reason why some employees do not have an adequate retirement income is that the benefit formula of some plans is too low. Under some plans the maximum monthly pension is less than $30. While these are better than no plan at all, when added to social security they do not provide what most of us consider to be an adequate retirement income.

The third reason why some individuals do not receive an adequate

retirement income is that they change jobs before becoming eligible for vesting or before meeting the requirements for early or normal retirement. The man who changes jobs every five years during his working career has as great a need for retirement income at age 65 as one who works for the same company for forty years, but he will probably end up with little or nothing. On the one hand, there are statements that almost everyone will lose his pension rights for lack of vesting, made by those who feel that they can correct the problem with almost negligible cost. On the other hand, some defenders of the private pension system imply that very few benefits are being lost through lack of vesting, but at the same time maintain that adequate vesting provisions might raise the cost of the typical plan by more than one-third. Both statements are clearly wrong. There is a definite relationship between the amount of benefits being forfeited and the cost of provisions to prevent their being forfeited.

The arguments will continue about exactly what percentage of people never receive a benefit because of lack of vesting and what percentage receive only a small benefit based on a small portion of their working careers. Without getting into the percentage arguments, I think we can agree that a significant number of persons either receive no pension because of nonvested termination or receive an inadequate pension based only on a few years of service with their last employer. For these people the problem is significant, regardless of the percentage that they constitute.

The fourth reason why some employees do not receive pensions is that some pension plans are not adequately funded. Studies show that the majority of pension plans are adequately funded. The percentage of covered employees who have lost their benefits through lack of adequate funding fortunately is quite small. Nevertheless it has happened, and it is very tragic where it has occurred. Much of the attention has focused on funded pension plans where the funding has been at a low level, whereas the greater problem is under those plans that are completely unfunded. One employer stopped paying pensions to 500 retired people in 1971. We can be thankful that this happens to such a low percentage of retired people, but to these 500 persons, many of whom had worked for this company all their lives and thought that they had a pension in their old age, this was a disaster. Steps must be taken to solve this problem. Arguments that we do not need funding legislation because the problem affects relatively few people would support the argument that we do not need a law against kidnapping because really very few people get kidnapped.

The fifth reason why some persons may not receive an adequate pension is involved with fiduciary responsibility. I am not aware of any case in which an individual actually failed to receive his pension because of inadequate fiduciary standards, but several union pension funds have had substantial losses, and because the contributions are defined in cents per hours, ultimately the level of benefits paid must be affected. As President Nixon has indicated, reasonable safeguards are necessary.

The biggest problem clearly is that 50 per cent of the people in the work force have no private pensions at all. No pension legislation will give employees adequate pensions unless it gets them covered under a plan.

Most of the bills currently before Congress do absolutely nothing about this problem. President Nixon's proposals take some steps in this direction by providing tax incentives for individual employees to establish their own plans and by providing increased tax incentives for self-employed individuals to establish plans. While these proposals would provide somewhat greater coverage, they certainly would not bring pensions to the majority of those not now covered. Tax incentives for employees to start their own plans may stimulate savings plans among the higher paid but will be meaningless to most lower-paid employees.

The only way we are going to have adequate coverage is to require that everyone be covered under a pension plan. Social security accomplishes this objective but by itself does not provide adequate pensions. One way of reaching this goal would be to substantially increase the level of taxes and benefits under social security so that everyone would receive an adequate pension from social security alone. A variation of this would be to establish a second layer of social security, so that the two layers combined would provide adequate pensions. One drawback of social security as compared with the private pension system is that social security is operated on a pay-as-you-go basis, while private pensions build up significant assets that provide the capital needed by the economy. To meet that problem, the second layer of social security could be a fully funded plan like a private pension. If the government invested this trust fund in corporate securities, however, we would have socialism by the back door, the government owning and controlling industry by purchasing its stock. That problem, too, could be solved by splitting up the trust fund for investment among all of the nation's banks, insurance companies, and mutual funds which meet certain requirements. The program could somewhat parallel Federal Employees Group Life Insurance. There are some specific problems in connection with this, but the problems have solutions.

Another major drawback to the expanded social security solution is that it fails to make use of the already well-established and well-operating private pension system. Half of America's workers are already covered under pension plans, most of which are functioning very well. The number of these plans continues to grow, and their growth should be developed. It would be extremely wasteful and inequitable not to make use of the good system we already have.

A second layer of social security is not the only way to get universal coverage. The second way is to require that every employer have his own pension plan. Universal coverage would also require that such plans cover all employees. This would solve the coverage problem. It would take full advantage of our present system and would greatly expand that system.

The third way to universal coverage is a combination of social security and mandatory private plans. We could follow the British example of having a second layer of social security, toward which every employer would be required to contribute unless he maintains his own plan providing at least equivalent benefits. This third course would appear to be the wisest. First, it would take advantage of our present pension system. Second, for the employer with two or three employees, for whom the administrative expense of establishing a pension plan would be a relatively high percentage of the cost, it would provide a reasonable alternative.

An employer who wants to have a waiting period of several years before having employees come into his own pension plan could cover employees not yet eligible by contributions to the second layer of social security. Self-employed individuals would be required to be included on the same basis as employees of corporations.

The required plans would need to have some minimum level of benefits. Minimum required benefits should be related to future service only, since otherwise employers with long-service employees might be inequitably required to take on much higher pension costs than younger firms. The absence of any required past service benefits would mean that this proposal would only gradually begin to resolve the existing problems. While I acknowledge that this would be only a gradual solution, not one of the proposals currently before Congress provides any hope whatsoever of providing pension coverage for the majority of the workers not now covered.

The employer might have a choice of a minimum benefit formula or a minimum contribution under a money-purchase plan, comparable to the original Pension Benefits Act of Ontario. The social security alternative

should be on a straight money-purchase basis, so as not to discourage the hiring of older employees. Employers should be allowed to amend profit-sharing plans or to adopt new profit-sharing plans with a minimum required annual contribution unrelated to profits in order to meet the requirements.

The compensation base should be total compensation. In designing private pension plans, most of us advocate pensions related to pay. We recognize that social security fills more of the needs of lower-paid employees than of higher-paid employees, so we design integrated pension plans to provide relatively larger pensions for highly compensated employees than for those earning under $9,000. For the man earning $25,000 or $50,000, no pension related solely to the first $9,000 of earnings will be adequate. I suggest that the minimum pensions be related to total compensation, or at least to compensation up to $50,000.

There is no clear-cut right or wrong about what the minimum level of pensions should be. I suggest money-purchase contributions of 3 per cent of pay, perhaps advancing to this level in steps over a three-year period. Alternatively, the employer could provide a final pay benefit per year of service equivalent to what the 3 per cent contribution level would provide for the average employee nationally, or a somewhat higher unit credit benefit formula of equivalent value.

While this would only gradually solve the problem for those following the minimum standard, many employers would, as now, have benefits related to past service and have benefits on a higher level than the minimum standard.

How can the vesting problem be solved? One reason employers are reluctant to adopt early vesting is to be found in the administrative problem and cost. Particularly if vesting begins at a very early duration, the cost of administering the vested benefits can be large in relation to the value of benefits. To solve this problem, a national pension clearinghouse is needed to which the employer can transfer his pension obligations. The pension clearinghouse could be administered jointly with social security, so that when a man's social security benefit became payable his various accumulated annuities would be paid automatically. This recommendation stands independently and would be desirable whether or not the universal mandatory pensions are adopted, and whether or not any of the current proposals for vesting requirements are passed. Many employers would voluntarily establish earlier vesting if such a pension clearinghouse were available.

Under the proposal for universal mandatory pensions, the minimum

required future service pension should be immediately and fully vested. This is the only way to ensure that employees will receive pensions related to all of their years of service and that the employee who shifts jobs frequently will get an adequate pension.

There is a basic misunderstanding on the part of many people about the cost of vesting. We all recognize that the cost of each employee's benefit is the sum of benefits paid to him and that in the aggregate the costs for all employees are increased by expenses and decreased by investment income. Some employers think that they have a pension plan which, for example, now costs 7 per cent of pay for all their employees, and that if immediate vesting were required the cost might jump to 10 per cent of pay for these employees. It may be closer to the truth to recognize that the present plan already costs 10 per cent of pay for the 70 per cent of employees who will get benefits under it and costs absolutely nothing for the remaining 30 per cent of employees. An employee who gets no benefit has no cost. What vesting would do would be to add a pension cost for those employees for whom there is absolutely no pension cost now.

The cost of a vesting requirement related to required minimum pensions would fall fairly evenly upon all employers. One of the criticisms of the present vesting proposals is that they add a cost to the employer who already has a pension plan, and add more cost the more generous the plan is, while the employer who has no plan whatsoever can continue having no cost. It has been argued that some of the vesting proposals will discourage the establishment of new plans. Full vesting of the mandatory minimum pensions suggested certainly will not discourage the establishment of any new plan.

The required minimum level of benefits for future service should be required to be fully funded. Because it would be fully funded, there would be no need for any kind of reinsurance with respect to these benefits. Because the requirement would relate to the minimum pensions, its cost would fall relatively equally on all employers.

Regardless of whether the minimum mandatory pensions are adopted, minimum funding standards for all promised pension benefits are desirable. Current funding of the current costs and forty-year funding of the unfunded past service liability are modest and reasonable requirements. They do not increase the ultimate cost of a pension plan by one cent if the plan is not discontinued.

Not only would such minimum funding requirements be without any ultimate cost whatsoever to any employer who does not discontinue

his plan, but, in addition, they would not affect the current pension outlay for the vast majority of employers who are already funding their plans at this level or better.

It is argued that employers should have flexibility in pension contributions to meet their cash-flow needs. Why do employers need pension plans for meeting cash-flow problems? Almost all their other costs of doing business are fixed, and companies large and small have learned to meet their cash needs through credit.

Minimum fiduciary requirements to prevent abuses are needed. But these should not inhibit investment flexibility in arm's-length transactions and should not use for unnecessary administrative expense dollars that would be better applied to larger benefits.

These proposals are not a radical new infringement on the free enterprise system; they are only an extension of long-established practices in our economy. We have long had minimum wage laws. We have long required employers to provide minimum levels of workmen's compensation and unemployment benefits through federal- and state-regulated systems. Minimum mandatory pensions are only an extension of this principle.

At the outset I pointed out that many Americans do not receive adequate pensions because of lack of coverage, too-low benefit levels, lack of vesting, and inadequate funding. The American people are demanding that these problems be solved. Therefore, they will be solved in one way or another. None of the present proposals before Congress do solve those problems. Ultimately the problems will be solved either by a drastic expansion of social security or by requiring adequate private pensions. I prefer the latter course.

MR. HOWARD YOUNG: I am in general agreement with the points raised by the panelists, but two important aspects have not been discussed. First, concerning vesting, not only should the employee retain a right to the pension, but the pension should be adequate. Even if an employee retains his pension accruals from several plans, they will generally not be related to his earnings immediately before retirement or otherwise updated subsequent to his termination of each employment. An employer cannot take the risk of protecting these benefits against inflation. The possibility of government-issued "cost-of-living bonds" has been mentioned and could be a solution to this problem. Second, social security taxes should be tax deductible, if the principle of tax deductibility is generally applied to pension contributions.

MR. JAMES F. A. BIGGS: There is a publicly financed supplement to the pension system in the form of tax subsidies for persons over age 65. These include multiple exemptions under federal income tax and full or partial exemption from real estate taxes. Does the panel propose to dismantle this structure if their suggested reforms are enacted?

MR. GRUBBS: If there is adequate income, there should be the same taxation.

MR. SWICK: We should not necessarily take away such exemptions, but they should be taken into account.

MR. SCHALLER-KELLY: If we can increase retirement income to adequate levels, there should be no advantage to the aged. For example, social security could be taxed, but only after an increase in social security benefits.

MR. ROBERT F. LINK: Mr. Arnold's suggestion of $2 trillion of pension reserves shows how little we understand the implications of the many proposals that have been made for pension reform. Perhaps we should develop a computer model of the economy, in order to project the results of various assumptions as to pension arrangements, population growth, and other factors. As one example, we might discover that zero population growth implies zero inflation, which could be significant for long-range planning purposes.

ACTUARIAL PRINCIPLES AND PRACTICES FOR PENSION PLANS

MR. JOHN K. DYER, JR.: There are apparently two reasons for my having been invited to appear on this panel today. First, since I am the immediate past chairman of the Society's Committee on Pensions, the new Chairman, Jim Attwood, felt that I was entitled to one more opportunity to appear on the platform as a pension actuary before finally fading into relative oblivion as an elder statesman. Second, Jim and I agreed that I should be given a final chance to discuss the project that has constituted the principal activity of the Pension Committee during my chairmanship, and perhaps even to explain why the project has during this period shown so little actual progress.

Let me say first of all that I do not appear before you as an uncompromising advocate of the idea that there should be a guide or statement of generally recognized and accepted actuarial principles and practices in relation to pension plans. I see important arguments in favor of the alternative courses considered in our discussion paper. I also see in our experience of the last six years some evidence that it may be virtually impossible ever to complete such a project.

Therefore, I shall devote the few minutes allotted to me to an effort to extend the definition of alternative C, hoping that I can make it clear just what this is and what it is not. I shall try to summarize the merits and the shortcomings of this course of action, as well as my own present views of the desirability and feasibility of attempting to carry it through to completion.

Alternative C is referred to in the discussion paper as a "Statement of Generally Recognized and Accepted Actuarial Principles and Practices" —a title too cumbersome for easy reference and too brief to be fully descriptive. I might add that we have in past discussions generally used the word "guide" rather than the word "statement." We have not argued the question whether "generally recognized and accepted" is preferable to "professionally accepted" or some other variation. I think we should first write the book and then decide upon an appropriate title.

I believe that the format and concept of the guide we have visualized are quite well illustrated by the draft chapter on actuarial assumptions that is included in our discussion paper as Illustration A. I hope that any of you who may not have reviewed this draft carefully will do so before either accepting or rejecting the idea of a guide or statement.

Whatever it may be called, the end product that I have visualized—and I believe that most of the committee members with whom I have worked in the last five years or so would agree—is a guide somewhat analogous to *Accounting Principles Board Opinion No. 8*. It would not specify the principles that an actuary must follow but would indicate broadly the principles he should observe. It would not stipulate that certain actuarial cost methods are acceptable and others not; rather, it would describe the available alternatives and the considerations that an actuary should have in mind in arriving at a proper choice. It would not prescribe the actuarial assumptions that an actuary should employ in any particular circumstances but would indicate the ways in which the most appropriate actuarial assumptions are arrived at by experienced and responsible pension actuaries. It would not require that certain information must be contained in an actuarial report but would describe the types of information and advice ordinarily found in such reports and indicate how the actuary can determine what to include and what to omit in specific circumstances.

Various "considerations" surrounding the type of guide under discussion are mentioned on pages 7–10 of the discussion paper. The main arguments in favor of developing such a guide might be resummarized as follows:

1. It would encourage and assist all actuaries to achieve certain uniformities of practice, without hampering their freedom to deal with any particular situation on its individual merits. This, in turn, should enhance the over-all credibility of actuarial reports and recommendations and the ability of actuaries to have these accepted and acted upon.
2. It should provide some insurance against undue encroachment into decision-making areas properly belonging to the actuaries, by tax and other government agencies, by the accounting and other professions where our responsibilities overlap, and by those employer-clients who are prone to second-guess actuaries in some of our areas of expertise.
3. It might help to forestall or limit federal or state legislation on minimum reserves and such other matters as have long been applicable to life insurance. If, as appears not unlikely, we have minimum funding standards in the United States, these could not operate without fairly detailed regulations as to actuarial cost determinations. At that point the question will be whether the government or the actuarial profession will produce the regulations. The Canadian attempt to handle this problem simply by requiring actuarial certification is apparently running into some snags.
4. Finally, this form of guide might well be helpful in the continuing effort to find a basis for the accreditation of actuaries by government agencies.

The alternative of a compendium of actuarial practices was mentioned among the "considerations." I cannot visualize this as serving the same

purpose as a guide, in part because I feel that too many borderline practices are too generally employed already. A compendium would tend to reveal such practices as more acceptable than most of us would be willing to concede.

I should like to close by commenting very briefly on the two positive alternatives that have been proposed to the type of guide I have been discussing: further Opinions interpreting the Guides to Professional Conduct, and the textbook approach. While I am favorably disposed toward both of these, I cannot avoid the impression that as full substitutes to the guides approach they are, respectively, too little and too late.

Opinions based upon the Guides to Professional Conduct, while very useful up to a point, are necessarily limited by the content of the Guides themselves. As long as we are talking about disclosure—either the substantive or the procedural aspects—as in Opinions S-3 and S-4 and also in the suggested Opinion X, we find ample authority in the Guides to Professional Conduct for interpretative Opinions. But to attempt to find in the Guides, for example, something upon which to base an opinion relating to actuarial cost methods or assumptions, or upon the costing of ancillary benefits, would require the exercise of a great deal of imagination and would produce a result correspondingly lacking in credibility. Yet I believe that the guides to practice and procedure that I am discussing should include these areas.

An incidental aspect of the Opinion route is the question whether further interpretations of the Guides to Professional Conduct in relation to pensions should come from the Committee on Professional Conduct. I intend no reflection on this important committee, upon which I served for many years, in suggesting that perhaps any further guidance on pension principles and practices might prove more broadly acceptable if it came from a group consisting predominantly of pension actuaries.

Turning finally to the textbook route, I am fully sympathetic to the idea of any improvements in our educational materials in the pension area. Both new materials and consolidation of those already in existence are badly needed. But the effect of such improvements must necessarily be long delayed; their full effect in terms of improved actuarial practice cannot come to fruition for a generation. Let us hope that our successors in the pension actuarial field will do a much better job than we are doing. Meanwhile, however, let us try to do a better job—now!

MR. BLACKBURN H. HAZLEHURST: The purpose of my talk to you today is to outline certain professional concerns in preparing and transmitting actuarial reports and opinions relative to pension and other em-

ployee benefit plans, "in accordance with generally accepted actuarial principles and practices."

I also want to set forth some positive suggestions in this area by way of stimulating debate; as part of an effort to increase awareness of existing Opinions S-3/C-3 and S-4/C-4 of the Society of Actuaries and the Conference of Actuaries in Public Practice; and as a part of a test of the acceptability of, and possible enlargement of, these Opinions.

The American Academy of Actuaries was organized in 1965 and incorporated in 1966. The first President's Report of the Academy includes the following statements:

> While a professional association of actuaries has existed on this continent since 1899, when the Actuarial Society of America was founded, there has not been official recognition of the actuarial profession in the United States at any governmental level—federal, state, or local. There are at present no standards that an actuary must meet in order to practice and no licensing, certification, registration, or other requirement, in any state. In this respect the actuarial profession differs from such other professions as medicine, law, accountancy, architecture, and so forth, where the practitioners have to have a state license or certificate to practice.
>
> The seemingly obvious need for legal recognition for actuaries had been discussed from time to time, but it was not until the late 1950's that there was organized activity to obtain such recognition. It soon became clear that, despite the fact that most of the practicing actuaries in the United States belong to one or more of the four actuarial societies (namely, the Casualty Actuarial Society, the Conference of Actuaries in Public Practice, the Fraternal Actuarial Society, and the Society of Actuaries), not one of these could speak for the whole profession.
>
> The organization of the Academy is the first step toward accreditation of actuaries and official recognition of the profession.

In setting up the Academy, actuaries moved down a path similar to that followed earlier by accountants. Also like the accountants, the Society and other actuarial organizations embarked upon a course of elaborating on their Guides to Professional Conduct to the extent that, for example, the Committee on Professional Conduct named by the Board of the Society recommends new and revised Guides to Professional Conduct and also issues interpretive Opinions on the Guides. It is noted, though, that while this Committee is prepared to answer inquiries relative to general and particular situations, it is *not* prepared to answer inquiries about the conduct of named members (which inquiries are to be directed to the President).

In 1965 the Committee to Study Pension Plan Problems of the Society put in hand a project that was intended to result in a book. Whether the

book was to be for actuarial students or whether it was to set forth accepted ways for practicing actuaries to go about their work, or both, was to be determined as part of the project. Several versions of this book were drafted. *To date, each draft of this book has been tabled.* It is extremely difficult for actuaries to agree on detailed discussions of acceptable and, by implication, unacceptable working procedures.

Meanwhile, a similar Committee to Study Pension Problems of the Conference both assisted with preparation of the book drafts referred to and also moved along a related path. The latter approach was motivated by a feeling that actuaries could agree to disclosure of what they had done (and not done) more quickly than they could agree as to exactly what to do (or not do). The result of this two-year effort was the adoption of Opinion S-4/C-4 by the Society and the Conference. Opinion S-4/C-4 is technically an interpretation by the Society's Committee on Professional Conduct of Item 4 of the Guides to Professional Conduct.

Several Canadian provinces already impose funding standards through legislation. The legislation relies, at least to some extent, upon certification of an actuarial valuation of the pension plan by a Fellow of the Canadian Institute of Actuaries. However, the propriety of some certifications has been questioned by Canadian regulatory bodies, and the Institute has been asked to review anonymous reports for reasonableness (without the privilege of discussing the reports with the certifying actuary). The matter is of concern to the Institute.

In the United States the Internal Revenue Service has not recognized any particular actuarial body, and, while there is certainly a continuing dialogue between individual actuaries and district IRS personnel, the IRS (and the Treasury Department) have from time to time come up with regulations (such as those relating to co-ordination of occupation-related plans with social security) which are at least puzzling to some actuaries.

Further, the United States seems to be moving toward more pension legislation, some of which requires actuarial insight for its effective implementation. In fact, some of the proposed legislation might well be improved with qualified actuarial assistance, even assuming that the underlying intent of the legislation is accepted. Actuaries might also be able to help in debates relative to the merits and effectiveness of alternative intents.

Indeed, the credibility and viability of the entire private pension industry is being questioned. There are a number of people who feel that the private pension industry is inefficient and might better be replaced by extended or supplemental forms of social security. Among the complaints leveled at the private pension system is the suggestion that pen-

sion "promises" go unfulfilled for many if not most of those who are covered by pension plans at one time or another and that the funding and investment of pension assets may reflect the business needs of the plan sponsor more than the retirement needs of the plan members.

Beyond this, the business community occasionally has its attention drawn to the fact that differing actuarial reviews of the same set of circumstances may produce widely differing cost conclusions, casting doubt upon the validity and usefulness of any actuarial report.

Since the term "actuary" is not defined in law in most of the United States, anyone can call himself an actuary, and a variety of people do. In fact, sometimes whole organizations make members of the profession wince by calling themselves "actuaries."

Perhaps related to these matters is the fact that some firms are prepared to produce actuarial cost reports simply and inexpensively, using virtually any assumption they are requested to use—usually performing a "computer" rather than an "actuarial" service. Sometimes such reports are resold or given away by third parties, so that there is little or no rapport between the maker and the ultimate user of such reports. One must wonder what really constitutes a professionally prepared actuarial report. With over $130 billion in pension funds covering nearly 30 million employees, the matter deserves more than idle wonder.

Against this background, the American Academy of Actuaries continues to seek recognition of actuaries in the various states. The Academy is also considering establishing some sort of committee to promote adherence to actuarial principles.

Meanwhile, we have, as of this year, Opinion S-4/C-4 of the Society and the Conference. However, this Opinion is not yet widely followed or even understood. Nor is there yet any effective mechanism to insist upon adherence to this Opinion, even if it is generally agreed (which is yet to be shown) that it should be followed.

This paper proposes several goals:

1. To have a set of standards to be followed by actuaries engaged in advising others.
2. To make these standards clear and visible to concerned nonactuaries as well as to actuaries.
3. To give the qualified actuary the freedom he needs to offer effective counsel in the variety of specific circumstances he finds.

To achieve the goals referred to, the following suggestions are made:

1. The standards should lean more heavily upon disclosure than upon mandates as to actuarial methods, factors, and assumptions.

2. Actuarial valuations should become more self-contained and more complete reports, as opposed to more abbreviated summary opinions.
3. Enforcement of the standards should begin by debate, become a reality by consent, and in due course be enforced by the actuarial body concerned, as a matter of public interest.
4. This process should be carried forward on a continuing basis.

The first two of these suggestions have already been followed. Opinion S-4/C-4 clearly calls for and relies upon disclosure with limiting actuarial technique. Opinions S-3/C-3 and S-4/C-4 together call for more complete reports and their effective transmission. It is step 3—debate, common consent, and enforced adherence—which is missing. In this process, existing Opinions and perhaps all the above suggestions may yet need to be altered.

Jim Attwood's committee report includes an outline of Opinion X, which enlarges upon Opinions S-3/C-3 and S-4/C-4. Opinion X may materialize in any form; however, it should at least promote debate of Opinions S-3/C-3 and S-4/C-4.

It is suggested that the Society and the Conference (and/or the Academy) form standing committees to relate to government and other matters of public interest (surely the debates of actuaries as advisers to sponsors of retirement security for so many persons involve such matters). Specifically, such groups could do the following:

1. Act as informal sounding boards for concerns and tentative proposals of the various branches and levels of government.
2. Explore and promote debate and understanding of timely issues. For example, one large group effectively assigns task forces to research moot issues and to list all the significant points for and against proposals. Such a listing could be circulated for criticism and suggestion. A revised listing of alternatives could then be circulated for an expression of opinion, although it would seem of the utmost importance to clearly state the proportion of those holding the minority view so that their expression of opinion would not be lost.
3. Arrange for special-purpose seminars and meetings to update and advance the knowledge of actuaries and to provide a forum for timely exchange of views and experience. The present Society meetings already accomplish much of this, of course. However, in fast-moving fields there might be merit in considering
   a) Routinely having the spring meetings organized by field of specialty rather than geographically (the 1972 New Orleans meeting is an example by exception).
   b) Holding such additional special-purpose seminars as may be appropriate to the problems and concerns of the day.

4. Arrange to revise and extend the Guides to Professional Conduct and the pertinent interpretative Opinions from time to time, keeping public interests in mind.

Debate and orderly resolution of the issues raised in this paper are urged. In general, it may be necessary now to decide whether the actuary is an "advocate" or an unbiased "auditor." Perhaps there should be some compromise, such as having the actuary prepare some reports which are classified as "public," with respect to which quite complete unbiased disclosure is made.

In connection with disclosure, at least in the case of "public" reports, it would seem desirable to reach some kind of consensus as to whether the actuary should, as a matter of routine in connection with preparing a report in accordance with generally accepted principles, disclose such things as benefit security ratios on both an ongoing and a plan-shutdown basis; implicit as well as explicit assumptions; the market value as well as the actuarial value of security; periodic disclosure of the relationship between merging experience and the assumptions used; some indication of the anticipated movement of costs in the future as a percentage of pay or other reference and/or in absolute terms; and whether certification of the report as being prepared in accordance with generally accepted actuarial principles should be made.

Certainly actuaries will wish to retain as much flexibility as possible in assisting plan sponsors with the program design and funding problems. Perhaps the best way to retain a great deal of freedom in the face of naturally increasing concern on the part of plan members, the government, and others is to accompany the freedom of action with fairly substantial amounts of disclosure.

In short, debate is urged to determine whether actuaries feel that it is reasonable to require certain things of themselves (e.g., disclosure), to offer to co-operate with the government through liaison committees, and, further, to debate timely topics on a continuing basis—all in an effort to maintain as much flexibility and effectiveness as possible in the face of naturally increasing concern on the part of plan participants, government, and others.

Pension actuarial problems are multiplying rather than diminishing, and our arcane concerns deserve closer self-inspection and clearer interpretations to plan sponsors, plan participants, and regulatory groups, as more and more people rely upon us for their future security.

This seems especially true if the actuary is to maintain in each case the flexibility he ought to have to meet the special circumstances he finds

with all the insight and thoughtfulness he can command to assist in implementing effective benefit programs.

In short, the actuary really does have something special to offer. However, to retain the privilege of exercising his full knowledge and skill, it would seem that he must go out of his way to clarify what he has done and otherwise to assist government and other interested parties—not the least of whom are the plan sponsors and the plan participants.

MR. WILLIAM F. MARPLES: I want to make my philosophic position clear to you at the beginning. At the risk of reminding you of a little bit of American history, I am an unreconstructed Putnamite. Perhaps you have forgotten that Israel Putnam was one of the generals under George Washington. When he got back from the war, he found that his home area, which is now Connecticut, was completely under the domination of Congregational ministers. After languishing under their rule for a bit, he said, "Hell! You have to ask the minister's permission to blow your nose and kiss your wife!" So he upped stakes, piled all his belongings on the wagon, and went over the Forbes trace to Fort Duquesne. He floated down the Ohio River, and in Marietta today you can see Israel Putnam's wagon and Israel Putnam's house preserved.

My request to you today is to preserve the individualism that is typified by Israel Putnam in these activities that we are concerned with today. He was an individualist, and so am I. Alternative A relies on the individualist. It relies on his education, on his expertise, on his freedom of action, on his flexibility in meeting all conditions as they arise, and on his judgment as to what measures he will propose to meet the circumstances of the case.

We have correspondence in the Committee on Pensions very strongly urging that those flexibilities in individual activities still be preserved. A textbook is good—a dynamic textbook continuing to record formulas and actuarial methods is excellent as a storehouse of the mental activity of actuaries who have gone before. We are lucky to have a book, for instance, from the brain of Harry Gershenson. We still need this sort of thing. But we also need desperately the individualism that goes with the complete freedom of the man to act according to the circumstances of the case. I am here to advocate to you that we look at alternative A and alternative B and retain them as far as we possibly can in whatever is done.

Now I do not believe that the Guides will ever do very much for us. I can discern in the pension field at least eight strata of pension activity in which expertise in one would not necessarily produce expertise in another. For instance, I believe that some of my colleagues are talking in terms of

the philosophy of a big, big pension plan. If you lay down guidelines as to what you should do with a big pension plan, a very big pension plan, are you going to insist that the same approach be utilized and developed and followed out when you are dealing with the professional corporation, where you have to work with one dentist and one nurse and one secretary? If so, you cannot meet the circumstances of the case—the approach becomes overwhelmingly unwieldy.

Thus you have to think of all these strata of cases in determining what you are going to do. The big plans, the medium plans, the little plans, the insurance plans (there are still group annuities about, I believe), and plans that are wholly funded by insurance contracts; the single employer and multiemployer defined contribution plans—each is a law unto itself, a peculiar type of thing. There are national, state, and municipal governmental plans; what you do with them is something entirely different from what you do with a small employer with 150 employees. How can you possibly produce guidelines that are going to cover all these circumstances? Then, finally, with all due respect to our President, what about the top one of the lot? What about social security and the Railroad Retirement Act? They are entirely different from anything else.

Thus I believe that the idea of producing guidelines for all these types of plans is going to be an immeasurably massive project which really does not work; once it has failed to work, the results are just going to be relegated to the bookshelf, stuck in the *Transactions* of the Society, comfortably squeezed in between the other volumes there and never even taken out—in a fine state of preservation. In due course they will become antiques. You know what the definition of an antique is, don't you? Something that has been useless for so long that it's still in a good state of preservation.

Now take your peer review. What does "peer review" mean? Who is going to review? Which of you is prepared to do jury duty on the peer review? Which of you is going to render an unfavorable verdict on your brother actuary? There will always be some mitigating circumstances, something that urged him to do what he did do, and you will find it very, very difficult to condemn him. But suppose you do condemn him; suppose you bring in an adverse verdict. What is the penalty? There can't be any penalty. The only penalty arises if a client complains; the penalty is an accelerated or decelerated funding, and it can be caught up within a few years. There is really basically no penalty in an actuarial report which misstates or underestimates or overestimates the actuarial contribution. Now this is one of the reasons why I really do not think that the guidelines are any good.

In my own case, I once found myself involved in a very, very difficult situation—a *very* difficult situation—gross underestimation of costs. It was not my fault, and I got myself out of that hole by blandly ignoring all the guidelines—to the satisfaction of my client, who still thinks that I am one of the best actuaries that he has ever come across. So, where are we? You could not put what I did in a guideline. (I'm not going to tell you, either.)

What is the answer to all this? I do not think the guidelines are the answer. I think they are nice things to have on the shelf. I do not object to having guidelines like this floating around; they are useful to show to senators. But I think that there is an answer. The answer is in both a "how" and a "when" to do something that impresses on your people how to tackle these problems as they arise. When is an actuary most susceptible to information or instruction? Certainly not after he has his Fellowship. "Once I'm a Fellow of the Society, you can't tell me anything"—this is what they say—"I will not be instructed as to what I do or don't do." To a certain extent they are right. But there is a time when you can tell them, and you can get a reaction from them; you can even teach them to say black is white, and you do. The time is when they are anxious to acquire the Fellowship designation—before they have their F.S.A. At that stage they are malleable.

So the "when" is before they become Fellows, and my answer is, teach them right. You know the old saying, "Catch them young and treat them rough, and you can get them to eat out of your hands." This is what we have to do. The Society is not teaching pension funds; it is allowing its students to scratch up the information on pension funds off the floor. There is no real instruction on pension funds being disseminated at all, as modern teaching goes. There are study notes, of course, but this is not modern teaching, in the sense of using videotape, tape machines, examples, questions of work, study classes, and all the general techniques of modern education. Our present teaching allows the students to scrape up what information they can in the hope of passing the examination.

Therefore, my suggestion to you, gentlemen, is that the Society should get down and teach, *really* teach, for once. Get these young fellows as they are struggling to complete their Fellowship examinations and really teach them the subject of pension funds—how to meet the circumstances, how to do the necessary things, how to produce their reports—and then you will have an emanation of the sort of reports that you want.

Now, as regards the Fellows who are already through, that is water over the dam; they are gone. You can't influence them. You can produce some guidelines. Jack, you can have the guidelines (he's retired, and I'm

working). Nothing you can do will alter my opinion. I am already doing all that they prescribe. I have been doing it for thirty years, with due respect to B. Hazlehurst. My old partner, Duncan Frazier, taught me, back in England. He laid down what should go into the report and got me to accept it.

This is the thought I want to leave with you. The guidelines are nice to have in print so that you can wave them about in front of officials, senators, congressmen, and others. But the time to catch the men is when they are struggling to get their Fellowships. At that stage you can really teach them, because they want their Fellowships, and if you are going to fail them if they don't produce the right answers, they are going to learn the right answers, and once they learn them they are not going to forget them.

MR. F. EUGENE SMITH: I am a new member of the Society's Pension Committee—so new that I will be attending my first committee meeting tomorrow. Who knows—after some of my comments this morning, it may well be my last meeting!

The point is that the detailed arguments for the various approaches suggested are just about as new to me as they are to most of you. Like me, you have probably found yourself swinging from one to another, as you have listened to the eloquent presentations which have been made. Despite the persuasiveness of some of the arguments, I find myself going back to the position which I had developed before reading the Discussion Paper. Essentially, that is a modification of alternative C.

Let me give you a little Canadian background. In 1965 the Province of Ontario started regulating pension plans, requiring full vesting after completion of ten years of service and attainment of age 45, portability (locking in of at least 75 per cent of vested benefits), fairly tight limitations on qualified investments, and substantially full funding. Future service costs must be met in full currently, whereas new past service liabilities must be fully funded within fifteen years. An actuarial deficiency found on triennial valuation must be funded within five years. Currently suggestions are being made for a complete review of the regulations. Among other things, there has been a suggestion that 100 per cent vesting be required after five years of service and attainment of age 40—not far from the "rule of 50" proposed in this country. Laurence Coward was one of the consultants who helped draft the details of the plan and was the first chairman of the Ontario Pension Commission which administers the relevant act. I believe that it was largely because of his influence that neither the act nor its regulations establish any standards for valuation

of assets or liabilities. Rather, there is a requirement that there be a triennial valuation certified by a Fellow of the Canadian Institite of Actuaries. (Excepted are money-purchase plans and some fully insured plans.) Needless to say, Canadian actuaries were happy with this approach, particularly when it was repeated in comparable legislation in the Provinces of Quebec, Alberta, and Saskatchewan, as well as in a federal act covering corporations (particularly in the communications and transport fields) which fall under direct federal jurisdiction. But this professional freedom may be subject to attack in any complete review of the operation of these acts.

About a year ago the Ontario Pension Commission referred a couple of pension valuations to the Canadian Institute of Actuaries Committee on Private Pensions, requesting advice on the appropriateness of the reports. One of these was assuming an 8 per cent interest rate—justification, in the eyes of a nonactuary with a reasonable knowledge of pensions for questioning the validity of the assumptions. What was not appreciated, apparently, was the effect of combining this 8 per cent interest assumption with a 5 per cent salary projection. Of the five pension benefit acts in force in Canada, only one administration has available direct actuarial services: the Federal Act is administered by our Federal Department of Insurance. The volume of work requiring actuarial judgment in any one of the four provinces would not be great enough to justify maintaining a qualified actuary on staff full time. I, at least, as a taxpayer, would object to the unwarranted expense—not that any taxpayer's objections necessarily carry much weight when governments are spending his money. At the same time, I can understand a government's being reluctant to hire a consulting actuary for advice on matters such as this. The possibility of a conflict of interest would always be present. Possibly the best solution for this particular situation would be an intergovernmental agreement under which our Federal Department of Insurance acted as consulting actuary for the concerned provinces.

In any event, the Council of the Canadian Institute of Actuaries decided after lengthy debate that it would not be appropriate for that body to provide advice as requested, essentially supporting Alternative A. In advising the Ontario Pension Commission that the Institute could not perform services such as had been requested, it was stated that "once admitted to the Institute, members must be prepared to conduct themselves as true professionals and to defend their professional opinions if need be." This is not an unreasonable position, but I do not think that it goes far enough.

Undoubtedly you have often heard the saying that it is not enough to be right—one also has to appear to be right. Pension administrators are asking for more information on actuarial principles. Politicians are clearly riding the consumerism bandwagon. The pension industry has even been honored by an attack by Ralph Nader—and he has some valid points. It is too late to sit back and say, "We are qualified actuaries, so you must accept what we say about pension plans without question." I know how I feel when I have a stubborn car and have to take it to a garage. The mechanic can tell me anything, and I can't even discuss the problem intelligently, let alone argue. I can imagine how most employers feel when confronted with a bunch of actuarial mumbo jumbo. Last year in the Province of Quebec a report to the government on health and medical services recommended that all professions should be subject to the same general rules, making professional associations into public bodies supervised jointly by the government and the universities. This recommendation basically stemmed from a rather messy situation in that province, where there are four separate medical associations, but the end result was to involve all professions. It can't happen here? Don't bet too much on that.

Pension legislation in the United States is still in the formative stage, but perhaps not for much longer. Pension legislation in Canada may be at a turning point. I believe that we have to move, and move fast, or run the serious risk of being put in a legislative straitjacket that will convert us from pension actuaries to pension mathematicians. I think that we need two things. First, we need a pension manual which is basically a statement of generally recognized and accepted actuarial principles and practices for pension plans. It should be written primarily as a "standard" which, hopefully, would be recognized by government and by the various sectors of our particular public as authoritative. I would hope that it could be fleshed out enough to make it useful to the new or part-time pension actuary in co-ordinating his basic reading in the field, but not with any idea of making it a full-saale textbook. Contrary to the implications of some of the arguments in this area, I do not believe that "generally accepted" means "universally accepted by all actuaries." The latter is a practical impossibility. At the same time, I do not believe that an actuary should be required to prepare reports in accordance with generally recognized and accepted actuarial principles and practices if he can defend his report to his client and to any other appropriate authorities.

Second, I think that we need a "popular" version of this manual—in lay language and much briefer format—to be used for educational pur-

poses with our public. It is essential that we establish public confidence in our profession, and the only way I can see to do that is to explain what we are doing in words that the public can understand. Granted that many actuaries are doing just this with individual clients every day, on a broader scale far too many employers and government officials are not being reached effectively. This type of "popular manual" certainly cannot do the whole job, but it should be an invaluable tool in the struggle.

A two-pronged attack such as this should give us a good chance of maintaining a large degree of independence of action. I am seriously afraid that anything less will leave us fighting a continuous rearguard action, reluctantly giving way to public and government pressures.